TRIBHUVAN UNIVERSITY
FACULTY OF EDUCATION
OFFICE OF THE DEAN

Revised Curriculum of M.Ed.
Second Semester

2078 (2021)

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Core Subject

Ed. 521: Curriculum Practices

Course no.:	Ed. 521	Nature of the course: Theoretical
Level:	M. Ed.	Credit hours:3
Semester:	Second	Teaching hours:48

1. Course Introduction

This course has been designed to provide fundamental knowledge and understanding of various concepts of curriculum, different curriculum development models, taxonomy of educational objectives, curriculum designs, and theoretical perspectives on analyzing a specific curriculum from indigenous and gender points of view. On completion of this course, the students are expected to have basic knowledge and skills of examining different concepts of curriculum critically; design a curriculum by reflecting the needs and aspirations of particular context; formulate specific instructional objectives based on the revised taxonomy; analyze the curricula from school to university levels from different design, dimensions, perspectives and examine the prepared curriculum from indigenous and gender lenses. Furthermore, this course will familiarize the students with practices that have been made in references to Nepal to plan, disseminate, implement, and evaluate the curriculum especially from school to university levels. It also provides ample opportunities to the learners to review school level curricula from multiple lenses and then enables them to find out a number of alternatives for further improvement of the reviewed curricula based on the theoretical underpinnings that they received under this course.

2. General Objectives

The general objectives of the course are:

- To make the students familiar with the various concepts of curriculum and enable them to assess these concepts critically so as to broaden their horizon of knowledge;
- To acquaint them with different types of curriculum development models so as to enable them to devise relevant curricula with reference to Nepal;
- To enable the students to formulate specific instructional objectives by integrating both knowledge and cognitive process dimensions incorporated under the revised taxonomy of educational objectives;
- To enable them to assess different curriculum designs encompassed within this course critically and to provide them with ample opportunities to analyze different curricula through the lens of design dimensions; and
- To enable them to examine the school level curricula critically from indigenous and gender perspectives.

3. Course Details

<table>
<tr><td colspan="3">Unit I: Conceptualizing Curriculum (6 hours)</td></tr>
<tr><td>Specific Objectives</td><td>Contents</td><td>Content Coverage</td></tr>
<tr><td>• Illustrate different concepts of the curriculum.
• Examine diverse concepts of the curriculum through multiple lenses.
• Explore the implications of various concepts of the curriculum.
• Analyze the concept possessed by school-level curricula in Nepal from a critical perspective.</td><td>1.1. Various concepts of curriculum
1.2. Critically analyze the concepts of the curriculum.
1.2. Implications of various concepts of the curriculum in Nepal</td><td>1.1 Various concepts of curriculum
1.1.1Curriculum as subjects and subject matter
1.1.2 Curriculum as experiences
1.1.3 Curriculum as objectives
1.1.4 Curriculum as a plan
1.1.5 Curriculum as a technological system of production.
1.2 Strengths and limitations of these concepts
1.3 Implications of various concepts of the curriculum in Nepal</td></tr>
<tr><td colspan="3">Teaching Learning Strategies</td></tr>
<tr><td>Teacher’s inputs (6 hrs.)</td><td>Students' efforts (12hrs.)</td><td>Tasks for assignments</td></tr>
<tr><td>• Distribute learning resources such as papers, books, links, and PowerPoint slides containing the concepts of the curriculum.
• Ask discussion questions in relation to concepts, strengths, weaknesses, and implications of various concepts of curriculum, and then summarize the discussion result.
• Encourage students to participate in cooperative learning activities to provide them a chance to learn from each other.</td><td>• Access to the learning resources (papers, books, recorded video, and PowerPoint slides or email).
• Engage in discussion of conceptual questions asked by the instructor and respond to these questions by following instructions given.
• The student will review the school-level curricula in Nepal and assess how these concepts are reflected in them.
• They will participate in group activities and complete the assigned tasks by playing a determining role.</td><td>• The whole class will be divided into different groups and each group will be asked to access at least 10 teaching staff attending from school to university levels through different modes (direct contact, telephone, mail, messenger, etc.) to investigate how they conceptualize curriculum. Then they will be asked to share their findings among their peers by relating the results with the narrower to wider concepts of curriculum discussed under this course.</td></tr>
<tr><td colspan="3">Unit II: Curriculum Development Models (12 hours)</td></tr>
<tr><td>Specific Objectives</td><td>Contents</td><td>Content Coverage</td></tr>
</table>

• Define model and exemplify the continuum of a curriculum model. • Explain different types of curriculum development models with their fundamental process. • Examine different types of curriculum development models with their strengths and weaknesses. • Design an outline of a curriculum for a particular context by following a specific model of curriculum development. • Assess curriculum the development process in Nepal by applying theoretical orientation provided under this unit. • Elucidate curriculum dissemination and implementation practices in Nepal.	2.1 Concept and continuum of models of curriculum 2.2 Curriculum development models 2.3 Curriculum development process in Nepal 2.4 Curriculum dissemination and implementation practices in Nepal	2.1 Concept and continuum of the curriculum model 2.2 Representative curriculum development models (concepts, strengths, and weaknesses) 2.2.1 Tyler model 2.2.2 Taba model 2.2.3 Nicholls and Nicholls model 2.2.4 Walker model 2.2.5 Stenhouse model 2.3 Curriculum development process in Nepal (school and university levels). 2.4 Curriculum dissemination and implementation practices in Nepal. 2.5 Implications of these models withreferences to Nepal.
Teaching Learning Strategies		
Teacher's Inputs (12 hrs.)	**Students' Efforts (24 hrs.)**	**Tasks for Assignment**

• Distribute reference books, concise reading materials and slides related to this unit. • Provide enough opportunities to all learners to discuss concepts, characteristics, strengths and weaknesses, similarities and differences of models included in this chapter. • Give a curriculum of a specific subject that has been prepared for a grade at school level to review critically.	• Study the distributed materials to get mastery of curricular contents encompassed within this unit. • Gather essential resources from various sources such as the library, internet, mentors, etc. • Draw the implications of these models to develop curricula in the Nepalese context.	• The students will be classified into different groups each having 4/5 members and they will be asked to prepare an outline of the curriculum for a specific group of learners by encompassing curricular goals, contents, teaching methods, and evaluation. Then each group will be asked to present their project work in the class through poster presentation, and finally, participation of all students will be ensured to identify strengths and weaknesses of the curriculum outlines prepared by different groups for
Glasstone, S. & Lewis, D. *Elements of physical chemistry*. India: McMillan and Co. Ltd. Gurtu, J. N. &Gurtu, A. (2006). *Advance physical chemistry*. Meerut: Pragati Prakashan Kapoor (1992). *Textbook of physical chemistry*. India: McMillan India Ltd.	Glasstone, S. & Lewis, D. *Elements of physical chemistry*. India: McMillan and Co. Ltd. Gurtu, J. N. &Gurtu, A. (2006). *Advance physical chemistry*. Meerut: Pragati Prakashan Kapoor (1992). *Textbook of physical chemistry*. India: McMillan India Ltd.	Glasstone, S. & Lewis, D. *Elements of physical chemistry*. India: McMillan and Co. Ltd. Gurtu, J. N. &Gurtu, A. (2006). *Advance physical chemistry*. Meerut: Pragati Prakashan Kapoor (1992). *Textbook of physical chemistry*. India: McMillan India Ltd. giving appropriate feedback.

Unit III: Revised Taxonomy of Educational Objectives		**(10 hrs.)**
Specific objectives	**Contents**	**Content Coverage**
• Introduce Bloom's taxonomy in brief and describe the need for a new taxonomy. • Elaborate different dimensions of knowledge with examples. • Exemplify cognitive process dimensions of revised taxonomy briefly. • Formulate specific objectives by integrating knowledge and cognitive process dimensions. • Develop a taxonomy table and formulate at least one objective from each cell of the table. • Assess the taxonomy of educational objectives through a critical perspective.	1.2 Recapitulation of Bloom's Taxonomy 1.3 Need for a revised taxonomy 1.4 Knowledge dimensions 1.5 Cognitive process Dimensions 1.6 Use of a taxonomy table 1.7 Criticism of the taxonomy	3.1 Recapitulation of Bloom's Taxonomy 3.2 The need for a revised taxonomy 3.3 Knowledge dimensions 3.3.1 Factual knowledge 3.3.2 Conceptual knowledge 3.3.3 Procedural knowledge 3.3.4 Meta-cognitive knowledge 3.4 Cognitive process dimensions 3.4.1 Remember 3.4.2 Understand 3.4.3 Apply 3.4.4 Analyze 3.4.5 Evaluate 3.4.6 Create 3.5 Using the taxonomy table 3.6 Criticism of the taxonomy
Teacher's inputs (10 hrs.)	**Students' efforts (20 hrs.)**	**Task for assignments**
• The teacher will provide reference materials, articles, and slides related to Bloom's taxonomy and the revised taxonomy. • The teacher will divide the students into different small groups and ask them to work on objective formulation representing different knowledge and cognitive process dimensions. • The teacher will ask the students to develop a table of the revised taxonomy and then to make at least one objective from each cell of	• The students will study all materials provided by the teacher in a group and share in the class the ideas that they learned from the materials. • Formulate at least one specific objective from each cell of the taxonomy table on the individual basis. • Find out any curriculum from the school level and identify the knowledge and cognitive process dimensions applied to each objective formulated in the	• The whole class will be divided into 6 to 10 groups, each composed of 5 members and then they will be asked to prepare 24 specific objectives representing each cell of the taxonomy table and then each group will be asked to present their group work in the class. Then feedback will be provided as required.

the table.	curriculum in a group composed of 4/5 students.	
Unit IV: Curriculum Designs (12 hours)		
Specific Objectives	**Contents**	**Content Coverage**
• Describe curriculum design with its major components. • Find out the relationship between various dimensions to be considered while devising a curriculum design. • Epitomize different types of curriculum designs. • Assess different types of curriculum designs with their strengths and weaknesses. • Analyze how design dimensions are maintained in the Nepali curriculum. • Compare and contrast various types of design with examples. • Analyze the school level curricula through various sources and designs perspectives.	4.1 Curriculum designs 4.1.1 Meaning 4.1.2 Components 4.1.3 Sources 4.1.4 Dimensions 4.2 Different curriculum designs	4.1 Meaning of curriculum design 4.1.1 Components of curriculum design 4.1.2 Sources of curriculum design (philosophy, learner, society, knowledge, technology) 4.1.3 Design dimensions (continuity, sequence, scope, integration, articulation, balance). 4.2 Curriculum designs (concept, characteristics, strengths, and weaknesses) 4.2.1 Subject-centered (discipline, broad-field, correlated) 4.2.2 Learner-centered (experience-centered, radical) 4.2.3 Problem-centered (reconstructionist) 4.2.4 Postmodernism-influenced
Teaching learning Strategies		
Teacher's inputs (12 hrs.)	**Students' efforts (24 hrs.)**	**Tasks for assignment**
• Essential references, books and handouts will be provided to develop intended competency on curricular contents. • The teacher will ask students to work in pairs/groups to provide	• Study different materials provided by teachers as per their role assigned to them. • Prepare slides based on the contents given to them and deliver the assignments by each	• The students will be classified into different groups composed of 4/5 members in each and they will be asked to find out a school level curriculum related to their major subject and then they will be asked to analyze the

mastery of curricular contents. • He/shewill provide feedback on a required basis on the presentation made by different groups as well as individual students so as to ensure their full access to curricular contents.	group through PowerPoint presentation. • Comment the contents delivered by each group in a rational way for additional clarifications.	curriculum through the lens of design dimensions. Then, they will be asked to share their findings in the class simultaneously. Finally, the teacher will clarify how different dimensions of a curriculum design need to be considered while preparing a curriculum for a particular group of children. • Each student will be asked to find out a school level curriculum from any subject and then they will be asked to identify which camp (subject-centered, learner-centered, and problem-centered for examples) this design belongs to with justifiable arguments and then opportunities will be provided to some students randomly to present their findings in the class.
Unit V: Curricula from Gender and Indigenous Perspectives (8 hours)		
Specific Objectives	**Contents**	**Content Coverage**
• Assess the centrally controlled curriculum critically from the local needs perspective. • Justify the need for bridging the gaps between planned curriculum and local needs. • Clarify the significance of integrating indigenous knowledge into curricula. • Analyze local, integrated, STEAM curricula from indigenous and gender perspectives.	5.1 Nature of centrally controlled curricula 5.2 Rationale of bridging the gaps between curriculum and local needs 5.3 Integrating indigenous knowledge in curriculum 5.4 Gender sensitivity in curriculum 5.5 Analyzing curricula (local, integrated, STEAM curricula) from indigenous and gender perspectives	5.1 Nature of centrally controlled curricula 5.2 Rationale of bridging the gaps between curriculum and local needs 5.3 Ways of decolonizing curricula 5.4 Integrating indigenous knowledge (IK) in curricula (curricular goals, contents, instructional process, instructional materials, extra-curricular activities, assessment) 5.5 Gender sensitivity in curricula (content, instructional process, instructional materials, extra-curricular activities,

		assessment) 5.6 Analyzing curricula (local, integrated, STEAM) from indigenous and gender perspectives
Teaching learning strategies		
Teacher's inputs (8 hrs.)	**Students' efforts (16 hrs.)**	**Tasks for assignment**
• The teacher will provide essential references and supplementary materials to ensure students' access to curricular contents. • He/shewill encourage students to share their indigenous knowledge and gender sensitive issues in the class and then play a supportive role to justify the needs for integrating indigenous knowledge into the curriculum and making the curriculum neutral from the gender perspective.	• The students will identify some limitations of centrally devised curricula through brainstorming and then derived ideas will be shared in the class. • They will review all of the references and other supplementary materials provided by the subject teacher to get mastery of the specified contents. • They will select different curricula (integrated, STEAM for examples) related to their major subjects from the school level and then analyze them from indigenous and gender perspectives.	• The students will be divided into different groups consisting of 4/5 members in each and then they will be asked to select any curriculum (local, integrated, or STEAM) to analyze it from indigenous and gender perspectives. Finally, they will be asked to share their findings in the class and then the teacher will provide feedback as required to develop the behaviors as intended by this course.

Note: **The** subject teacher can assign these activities as part of the internal assignment and then s/he can determine grade as per the quality of the product.

4. Evaluation Criteria (internal 40%, external 60%)

The students' learning will be evaluated on the basis of the internal assessment (40%) and the external written examination (60%). The evaluation criteria will be as given below.

5. Internal Assessment:

The internal assessment will be formative as well as summative in nature including the following activities.

Criteria	Marks	Remarks
Attendance	5	70-80=3, 81-90=4, 91-100=5
Class participation	5	Presentation (either in pair or individual) based on the Unit II task in an original and natural style.
Assignment I(Individual task)	10	Any task from Units II or III.
Assignment II(Group task)	10	Any task from Units IV or V.
Assignment III (Individual test)	10	Written examination: Objective and subjective items

6. External Evaluation:

The Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester.

The external (60%) written test covers the following nature of test items and marks.

External Examination	**60**	Group A: Objective items (10× 1) = 10 Group B: Short answer type items (6× 5) = 30 (including two OR-questions) Group C: Essay type items (10× 2) = 20 (including one OR-question)

Recommended Books and References

Anderson. L. W., & Krathwohl, D. R., (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives.* New York: Addison Wesley Longman, Inc.

Bloom, B. S. and et al. (1956). *Taxonomy of educational objectives: Handbook I: Cognitive domain.* New York: David McKay Company, Inc.

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Nicholls, A. & Nicholls, S. H. (1978). *Developing a curriculum: A practical guide.* Britain: Cox and Wyman Ltd.

Ornstein, A. C. & Hunkins, F. (2017). *Curriculum: Foundation, principles, and issues (7th* edition). New York: Person Education, Inc.

Print, M. (1993). *Curriculum development and design.* Australia: Allen and Unwin Pvt. Ltd.

Taba, H. (1962). *Curriculum development theory and practice.* New York: Harcourt, Brace & World, Inc.

Tanner, D. and Tanner, L. N. (1980). *Curriculum development: Theory into practice.* London: Collier Macmillan Publishers.

Tyler, R. W. (1949). *Basic principles of curriculum and instruction.* Chicago: University of Chicago Press.

Walker, F. D. and Soltis, J. F. (1997). *Curriculum and aims*. New York: Teachers College Press. Walker, R. and MacDonald, B. (1976). *Changing the curriculum*. London: Open Books Publishing

Limited.

Wiles, J. W. & Bondi, J. C. (2011). *Curriculum development a practice guide (*8th edition) New Jersey: Pearson

Ed. 522: Education and Development

Course no. Ed. 522 Nature of the course: Theoretical

Level: M. Ed. Credit hours: 3

Semester: Second Teaching Hours: 48

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1. Course Introduction

This course intends to develop knowledge about education and different aspects of development thereby enhancing the impetus in education. It also intends to make students familiar with the different perspectives of development and education, education for sustainable development in terms of its evolving perspectives, phases, characteristics, goals, progress, dimensions, and different forms of education. This course also deals with the right based approach to education and development and implication of sustainable development in the Nepalese context. It also focuses on the indigenous knowledge and practices of sustainable development and education for peace and development.

2. General Objectives

- To acquaint the students with the concept of development and role of education in development;
- To assist the students to conceptualize and visualize the connections of education and different approaches of development;
- To help the students conceptualize and analyze the development practices from different perspectives of development;
- To enable them to develop the understanding of sustainable development as alternative perspective of development and explain the role of education for sustainable development;
- To familiarize the with the indigenous knowledge and practice of sustainable development and right based approach to education and development;
- To help the conceptualize education for sustainable development in different forms of education and also describe the implication of sustainable development agendas in Nepalese context;
- To acquaint them with Nepal's efforts in peace education, and their relation with the development of education in the country;

3. Course Details

Unit I: Concept of Development and its Relation with Education (14 hours)		
Specific objectives	**Contents**	**Content coverage**
• Clarify the concepts of development • Explain how different ideas of development evolved over time • Relate education with the evolving development concepts	1.1 Concept of development and its purpose 1.2 Evolving perspectives (economic, social, and human) of development 1.3 Relating education to economic, social, and human development 1.4 Education and the Need -based Approach to Development	1. Literary meaning, basic concepts, and purpose of development given by Todaro 2. Basic thoughts of the economic or the growth model (Rostow), social (cohesion, harmony, equity, equality, non-violence and so on), and human development (capability enhancement) focusing on how the thoughts kept on evolving 3. Focusing on how education supports to form, mobilize, and convert assets or capitals for production contributing to growth 4. Focusing on how education empowers students for respecting human rights (non-discrimination, non- violence, equity, equality, justice, dignity, respect and so on) for building harmonious and cohesive society 5. Emphasizing how knowledge and skills serve as assets for enhancing capability and freedom of choice 6. Stressing on how knowledge and skills serve as capability for individual development enlarging choices of people Focusing on the concept of the need based approach to development and how education can play a catalytic role for fulfilling the basic needs of people

Teaching learning strategies		
Teacher's input (14 hrs.)	**Students' efforts (28 hrs.)**	**Tasks for assignments**
• Provide learning materials • Facilitate classroom discussion/interaction • Share ideas on the contents • Provide feedback on class presentation	• access the learning resources (papers, books, online sources, and power point slides) • engage in discussing on ideas of development and role of education in development • Group Presentation in Classroom	• Preparation of presentation schedule by teacher and students together.
Unit II: Development Perspectives and Education (14 hours)		
Specific objectives	**Contents**	**Content coverage**
• Explain the different perspectives of development and education • Visualize the development and education practices in Nepal from different perspectives	2.1 Neoliberalism and education (privatization in Nepal) 2.2 Modernization and modern schooling 2.3 Dependency and schooling 2.4 Globalization, localization, and glocalization 2.5 The gender perspective on education	• Milton Friedman's ideas of free and competitive market (marketization and commodification of education) • Modernization (rejection of traditionalism, centrality, rigidity, structured processes) in development and education (practices of mass education) • Exploitative core and periphery

• Critically examine how the local ideas and practices are getting suppressed • Describe implications of different perspectives development in education.	development (WID, WAD and GAD) 2.6 Capitalist and socialist models of development and education 2.7 Actor oriented approach and post-development approach	relations in development and education • Global spread of economy, culture, knowledge, skills; domination on local ideas and practices of development and education; creating justice via glocalization (synergy building) • Concept of feminism and shifting ideas of Gender (WID, WAD, GAD) on development and education • Stressing on the trickle down approach to development and social ownership and operation of the means of production • Focusing on respecting the agency (knowledgeability, willingness, skills, interest) of local people for development of their own. • Focusing on respecting local culture and knowledge (culture sensitivity) in development and education.
Teaching learning strategies		
Teacher's input (14 hrs.)	**Students' efforts (28 hrs.)**	**Tasks for assignments**
• Provide reading materials • Facilitate classroom discussion/ interaction • Share key theoretical ideas, development and education • Provide feedback on classroom presentation	• Access the learning resources (papers, books, e-resources and power point slides) • Engage in discussing on ideas of development linking with education • Group II presentation	• Generate a case of local development practice of your community and analyze the case from any of relevant perspective/s discussed in this chapter. • Prepare a reflective note of infrastructure development activities of your locality and explain the phenomena with any of the perspective/s of development. • Case report
Unit III: Education for Sustainable Development (12 hours)		
Specific objectives	**Contents**	**Content coverage**

• Clarify the concept of Sustainable Development (SD) and the changes that occurred to its understanding over a period of time. • Elaborate the current SD goals with its implication in the Nepali context. • Explain the dimensions of education for SD. • Describe indigenous forms of SD. • Describe how different forms of education can promote SD. • Conceptualize the development and education from human rights perspectives	3.1 Concept of sustainable development 3.2 Evolving perspectives of sustainable development 3.2.1 Phases of sustainable development discourse (Environmental awareness, environment and development, and sustainable development) 3.2.2 Sustainable development goals and progress achieved in the Nepali context 3.2.3 Dimensions of sustainable development (environment, economy, and socio-cultural) 3.3 Indigenous knowledge and practices of sustainable development 3.4 Concept of education for sustainable development and its characteristics 3.5 Education for sustainable development in different forms of education (formal, non-formal and informal) 3.6 Right based approach to education and development 3.7 Implication of sustainable development agendas in the Nepali context (policies and curriculum)	• Significance of sustainable development (SD) • The conceptual development of SD over the period of time. Changes that occurred to the concept/understanding during different phases of SD discourse. • Sustainable Development Goals (SDGs) in general and goals related to Education in particular. Analysis of SDG from the sectorial lens (this can be student work). Link student work with the dimensions of SD. • Traditional or local systems of SD in Nepal or in other countries. For example in Nepal (Guthi-allotting land for cash generation to maintain infrastructure such as bridge, temple or institution), Specific ethnic practices of SD (Students will write and present about 1 or 2 indigenous practices of SD in their communities or elsewhere in other countries). • The significance of ESD • Identification of the key characteristics of ESD. • Curriculum, pedagogy and assessment techniques focused by ESD • Formal, non-formal and informal education forms of education • The ways these modes of education can ensure SD • Focusing on integration human rights of people in development and education policies and practices • The ways that SD features or aspects can or are reflected in education policies and practices (curricular materials, pedagogy, school governance, etc.)
Teaching learning strategies		

Teacher's input (12 hrs.)	Students' efforts (24 hrs.)	Tasks for assignment
• Provide reading materials • Moderate classroom discussion/ interaction • Share ideas of sustainable development • Providing feedback on classroom presentation	• Access the learning resources (papers, books, e-resources, and power point slides) • Engage in discussing on ideas of sustainable development and education • Group III presentation	• Review a school curriculum and analyze the content of the curriculum from the perspective of sustainable development (Student work) • Review the education policies (any two) and identify the notions of education for sustainable development (Student work)
Unit IV: Education for Peace and Development (8 hours)		
Specific objectives	**Contents**	**Content coverage**
• Describe the concept of peace in general and the Eastern understanding of peace in particular. • Describe intra and inter personal peace. • Elaborate the content and process of peace education. • Discuss the contextual perspectives of peace education linking it with content and process. • Conceptualize and explain the holistic framework and institutionalization process of peace education. • Analyze the contribution of	4.1 Peace and peace education 4.1.1. The Eastern understanding of peace 4.1.2. Intra and inter-personal concepts of peace 4.1.3. Content and process of peace education 4.1.4. Contextual understanding of peace education 4.2 Holistic framework of peace education 4.3 Institutionalization of peace education 4.4 Peace education and social development (participation, empowerment, equity, equality) 4.5 State obligations and efforts relating to right to education for peace.	1. General understanding of peace and peace education 2. Concept of peace in Veda, Buddhism and Mundhum 3. Elements of inter and intra personal peace. 4. Conditions on which peace education becomes content and on which it becomesprocess 5. Forms of peace education to respond to different natures of conflict in different contexts and times. 6. Components of holistic peace. Analysis of the Eeastern understanding of peace through holistic framework. 7. Integrating peace in content and process and teacher preparation for institutionalizing peace education. 8. Peace education as a transformative approach- transforming individual through participation, empowerment, equity, equality, etc. for social harmony and development. 9. Basic principles that guide the states to ensure right to education for peace.

peace education to social development • Describe Nepal's efforts in relation		10. Nepal's efforts to ensure right to education and their contribution to establishing peace.

4. Evaluation Criteria: (internal 40%, external 60%)

Students' learning will be evaluated based on the internal assessment (40 %) and the external examination (60%). The evaluation criteria will be as explained below.

Criteria	**Marks**	**Remarks**
Internal assessment: The internal assessment will be formative as well as summative in nature depending on the following activities.		
Attendance	5	70-80=3, 81-90=4, 91-100=5
Class participation	5	Presentation (either in pairs or individual) on the given themes from within the content areas in an original and natural style.
Assignment I (Individual task)	10	Any one task from Units I or II.
Assignment II (Group task)	10	Any one task from Units III or IV.
Assignment III (Individual test)	10	Written examination: Objective and subjective items
External evaluation: Examination Division, Office of the Dean, Faculty of Education will conduct final examination at the end of semester. The external (60%) written test covers the following nature of test items and marks.		
External Examination	60	Group A: Objective items (10× 1) = 10 Group B: Short answer type items (6× 5) = 30 (including two OR-questions) Group C: Essay type items (10× 2) = 20 (including one OR-question)

OR Questions

Note: *Relating the above mentioned criteria for the first and the second assessments, students may interchange the units specified above considering the practicability of the classroom situation*

5. **Recommended Books and References**

Anjum, M. R. (2017). Concept of peace in World's major religions: An analysis. *International Journal of Scientific and Research Publications*, 7 (4), 248-259.

Cornwall, A., Harrison, E., & Whitehead, A. (2007). *Feminisms in development: Contradictions, contestations and challenges.* London and New York: Zed Books.

Elliott, J. A. (2006). *An introduction to sustainable development* (3rd ed.). London and New York: Routledge.

Human Development and Capability Association (2012). *Capability and functionings: Definitions and justifications.* Author.

Long, N. (2001). *Development sociology: Actor perspectives.* London and New York: Routledge.

Navarro-Castro, L., & Anti-Balaka, J. (2008). *Peace education: A pathway to a culture of peace.* Philippines: Center for Peace Education.

Osmani, S. R. (2013). The human rights-based approach to development in the era of globalization. In *Realizing the Right to Development: Understanding the Right to Development.* Geneva: United Nations.

Osmani, S. R. (2016). *The capability approach and human development: Some reflections.* USA: Human Development Report Office.

Peet, R., & Hartwick, E. (2009). *Theories of development: Contentions, arguments, and alternatives* (2nd ed.). London and New York: Guilford Press.

Pieterse, J. N. (2010). *Development theory: Deconstructions/reconstructions* (2nd 3d.). Thousand Oaks, California: SAGE Publications Ltd.

Rapley, J. (2007). *Understanding development: Theory and practice in the third world.* USA: Lynne Rienner Publishers.

Roosa, S. A. (2008). *Sustainable development handbook*. London: The Fairmont Press. Ross, E. W., & Gibson, R. (2006). *Neoliberalism and education reform* (Eds). New Jersey: Hampton Press Inc.

Sosyal, Y.N. & Strang, D. (1989). Construction of the first mass education systems in nineteenth century Europe. *Sociology of Education*, *62*, 277-288.

Todaro, P. M. (1993). *Economic development in the third world.* Hyderabad: Orient Longman Ltd.

Tanabe, J. (2016). Exploring a Buddhist peace theory. *Cultural and Religious Studies*, 4 (10), 633-644 doi: 10.17265/2328-2177/2016.10.004

United Nations Educational, Scientific and Cultural Organization (2012). Education for sustainable development: Sourcebook. France: Author.

Webel, C., & Galtung, J. (2007). *Handbook of peace and conflict studies.* London and New York: Routledge.

Wood, H. B. (1965). *Development of education in Nepal*. Washington D.C.: Office of Education.

Willis, K. (2005). *Theories and practices of development*. London and New York: Routledge.

Ziai, A. (2007). *Exploring post-development: Theory and practice, problemsand perspectives.* London and New York: Routle

Health Education

H. Ed. 526: Nutrition Education

Nature of Course: Theoretical

Course No. : H. Ed. 526 Credit hour: 3

Level: M.Ed. Teaching hours: 48

Semester: Second

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1. Course Introduction

This course deals with the fundamental issues of nutrition and nutrition education. The students will gain deeper understanding on nutrition requirement for different age groups and determinants of food choices and food habits. It examines nutrition education including emerging education models for promoting healthy eating and an active lifestyle. Emphasis is given on a stepwise procedure for designing nutrition education. Focus of this course is designing and implementing theory based nutrition education in school and community by linking theory, research and practices. The students will learn about the impact of marketing and communication on the food and choices of lifestyle choice that are made by consumers.

2. General Objectives

General objectives of this course are as follows:

- To impart knowledge on fundamental concepts of nutrition and malnutrition.
- To enhance the students' understandings of nutrition requirement and diet management during different phases of lifespan.
- To familiarize the students with determinants of food choices and food habits.
- To make the students enable to carry out nutrition survey and assessment in community schools.
- To make the students enable to conceptualize and apply educational and health behavioral theories in promoting healthy eating behavior.
- To enable the students to design nutrition education programme following stepwise procedure and applying theories and models relevant to nutrition education.
- To impart knowledge and skills required for implementing nutrition education community school.
- To enhance the students' capacity for developing nutrition education materials that are appropriately targeted for an audience in terms of gender, ethnicity, demographics, etc.

- To improve critical thinking and problem solving skills of the students about nutrition.

3. Specific Objectives and Contents

Specific Objectives	Contents
• Describe the biological and social functions of foods and nutrition. • Classify and explain functions, and sources of carbohydrate, protein, fats, minerals and vitamins. • Discuss daily requirement of different nutrients. • Explain body water requirement and water balance systems in human body. • Illustrate digestion, absorption and utilization of nutrients in human body. • Discuss principles and procedures of healthy diet planning and management for different age groups and needs. • Describe basic concepts, needs and scope of nutrition education. • Identify setting for nutrition education (School, community and work place). • Explore challenges of nutrition education in the least developed country like Nepal.	**Unit 1: Introduction to Human Nutrition and Nutrition Education (12)** 1.1 Biological and social functions of food and nutrition 1.2 Review of classification, functions, sources and daily requirements of carbohydrate, protein, fats, mineral and vitamins 1.3 Body water requirement and water balance systems 1.4 Digestion, absorption and utilization of nutrients in human body 1.5 Diet planning principles and procedures for different age groups and needs. 1.6 Concept, needs and scope of nutrition education 1.7 Settings for nutrition education(school, community and work place) 1.8 Challenges of nutrition education in the least developed country like Nepal

• Explain nutrition requirement for women during pregnancy and lactation. • Discus nutrition requirement for infant children and adolescents. • Analyze determinants of food choices and dietary habits of Nepalese people living in Mountain, Hill and Terai. • Discuss the roles of information and communication for food choices. • Explain roles of nutrition education changing dietary habits. • Explore the situation of consumer awareness of healthy/nutritious foods and healthy eating. • Analyze consumer awareness of food labeling and junk/fast food calorie information, and food adulteration. • Explain the health effects of pesticide use in food and vegetables. • Explain consumer rights and Consumer Protection Acts of Nepal.	**Unit 2: Nutrition and Dietary Habits (12)** 2.1 Nutrition during pregnancy and lactation 2.2 Nutrition in infancy, childhood, adolescent and elderly people. 2.3 Determinants of food choices and dietary habits • Food related determinants • Persons related determinants • Socio-cultural determinants • Economic determinants • Environmental determinants • Political determinants 2.4 Roles of information and communication in food choices 2.5 Roles of nutrition education changing dietary habits 2.6 Nutrition and consumer health 2.6.1 Consumer awareness of healthy/nutritious food and healthy eating 2.6.2 Consumer awareness of food labeling and junk food/fast-food, calorie information, and food adulteration and pesticide /chemical use in food 2.6.3 Consumer rights and consumer Protection Act of Nepal.
• Conceptualize malnutrition and under-nutrition. • Discuss social determinants of malnutrition in Nepal. • Explain nutrition assessment methods and procedures. • Discuss the needs of nutrition surveillance in nutrition education programme. • Describe procedure of nutrition survey in community schools. • Illustrate the situation of hunger and malnutrition. • Explain situation food production and food security in Nepal. • Illustrate the situation malnutrition and nutritional deficiency diseases in Nepal. Discuss the needs of community rehabilitation center for severely malnourished children.	**Unit 3: Nutrition Assessment and Surveillance (12)** 3.1 Concept of malnutrition and under-nutrition 3.2 Social determinants of malnutrition in Nepal 3.3 Methods of assessment of nutritional status: anthropometric measurement, Body Mass Index (BMI) and, Growth Chart for children 3.4 Nutritional surveillance and nutrition survey process in nutrition education programme in School and community. 3.5 Situation of Hunger and malnutrition in Nepal and world 3.6 Food production and security in Nepal 3.7 Malnutrition, obesity problems and nutritional deficiency diseases in Nepal Community Rehabilitation of severely malnourished children

• Review nutrition policy, plan and strategies of Nepal. • Write an overview of nutrition programmes in Nepal including multi-sect oral nutritional intervention. • Describe nutrition education planning model. • Illustrate stepwise procedure for designing nutrition education. • Explain the process of developing and using printed materials, visual and audio-visual aids in nutrition education. • Discuss roles of IEC materials and mass media in nutrition education. • Prepare guidelines for using different teaching and supportive materials in nutrition education. • Apply different learning styles in nutrition education.	**Unit4: Nutrition Education Planning, Polices and Program (12)** 4.1 Nutrition policy, plan and strategies of Nepal 4.2 Nutrition programmes and multi-sectorial nutrition interventions in Nepal 4.3 Stepwise procedure and model for designing/planning nutrition education 4.4 Developing and using printed materials, visual and audio-visual aids in nutrition education 4.5 Roles of Information, Education and Communication (IEC) materials and mass media in nutrition education 4.6 Guidelines for using different teaching and supportive materials 3.8 Different learning styles in nutrition education

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. The first group consists of general instructional techniques applicable to most of the units. The second group consists of proposed specific instructional techniques applicable to specific units or sub units or content.

4.1.1. **General Technique**

Lecture

- Discussion
- Presentation
- Library visit and web surfing

4.2. Specific Instructional Techniques

Unit	Activities and instructional techniques
1	Each student will be assigned to review and prepare note on classification, functions and sources of carbohydrate, protein, fat, vitamin and mineral. Teacher will select some students to take class on given topic of nutrition.
2	Students will be divided into several groups and each group will be assigned to read relevant books and articles on one of topics such as nutrition requirement for pregnant mothers, infants, children, adolescents, adults and aging people. Then, leader of each group will present their notes on the given topics in class.

3	Each student will be asked to identify and collect relevant books, articles and research reports on situation of nutritional status and food security, and prepare a short paper on situation of nutrition in Nepal by review the relevant documents. A few students present their paper in class. Students will be divided into several groups for group exercise on calculation of hypothetical anthropometric data using Gomez and Water low formula. Each group will work on group and present result of analysis in classroom.
4	In order to run the group work on designing nutrition education programme, students will be divided into four groups and each group will design nutrition education programme using theory and stepwise procedures. The same group will collect nutrition policy and programme documents and prepare a paper by analyzing them. Leader of each group will present analysis of the policy documents in class

5. Evaluation

5.1. Internal Evaluation 40%

Internal evaluation will be conducted by the course teacher based on following activities:

- Attendance 5 marks
- Participation in learning activities 5 marks
- Fist assignments: Review of publications 10 marks
- Second assignment: Mid-term exam 10 marks
- Third assignment: Write term paper 10 marks Total

Total 40 marks

5.2. External Examination (Final Examination) 60%

Examination Division, Office of the Dean, Faculty of Education will conduct final examination at the end of semester.

SN	Types of question	Marks
1	Objective type question(multiple choice 10 x 1)	10
2	Short answer questions (6 questions x 5 marks with 2 OR questions)	30
3	Long answer questions (2 questions x 10 marks with 1 OR question)	20
Total		**60**

6. Recommended Books and References

6.1. Recommended Books

Contento, I.R. *(2007). Nutrition education. Linking research, theory, and practice:* Sudbury MA: Jones and Bartlett Publishers. (For I, and IV)

Holli, B.B., & Calabrese, R.J. (2003).*Communication and Education Skills for Dietetic Professionals (4th Ed.).*London: Williams and Wilkins.

Mudambi, S.R. & Rajagopal, M.V. (2007). *Fundamental of foods, nutrition and diet therapy.* New Delhi: New Age International Publishers. (For unit I)

Nix, S. (2009). *William's Basic Nutrition and Diet Therapy*. Noida, UP India: Elsevier, a division of Reed Elsevier India Private Limited. (For unit I and II)

Nutrition Society (Ed.) (2009).*Introduction to human nutrition*. Oxford: Wiley-Blackwell (For unit I and II)

Spark.A. (2007).*Nutrition in public health.Principles, policies and practices*. New York: CRC Press, Taylor and Francis Group. (For Unit III)

Wiseman, G. (2002). *Nutrition and Health*. London: Taylor and Francis (For Unit II) WHO (1988).*A guide to nutritional assessment.*(For unit III)

6.2. References

Eastwood, M. (2003).*Principles of human nutrition*. Oxford: Blackwell Science. Ministry of Health (2004).*National nutrition policy and strategies of Nepal*. Kathmandu:

Nutrition Section, Department of Health Services

Nutrition Society (Ed.) (2009).*Introduction to human nutrition*. Oxford: Wiley-Blackwell (For unit I and II)

Semba, R.D., & Bloem, M.W. (2008*).Nutrition and health in developing countries*.Human Press. Semba, R.D., & Bloem, M.W. (2008*).Nutrition and health in developing countries*. Human Press UNICEF & World Bank (2013). *Multi-sectoral nutrition programme in Nepal*.

H. Ed. 527 : Community Health
Nature of Course: Theoretical.
Course No. : H. Ed. 527 Credit hour: 3
Level: M.Ed. Teaching hours: 48
Semester: Second

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1. Course Introduction

This course is designed to provide an overview of community/public health and some of its main components. It is particularly directed towards health problems in developing countries including Nepal. It also deals with environmental health, community-based health intervention, mental health, drug abuses and health care systems. This course emphasizes the importance of creating and applying an evidence base to finding solutions to the health problems facing populations.

2. General Objectives

General objectives of this course are as follows:

- To introduce the students about fundamental concepts, functions, scopes, history and determinants of community health.
- To familiarize the students with scopes and principles of environmental health.
- To enlighten the students about different types of waste, waste management, pollutions, climate change and their impacts on human health.
- To equip the students with knowledge and understanding of community health intervention.
- To develop deeper understanding of issues and community health intervention of mental health problems and substances abuse.
- To make the students enable to illustrate organizational structure of health care systems of Nepal.
- To acquaint the students with community/public health programme of Nepal.

3. Specific Objectives and Contents

Specific Objectives	Contents
• Explain contrasting concepts of community health. • Explore and illustrate scopes, aims and functions of community health. • Compare history of community health in Nepal, India and china. • Describe concepts of burden of diseases and quality of life. • Analyze situation of global burden of diseases, quality of life and disability adjusted life using DALY in Nepal.	**Unit 1: Introduction to community health and community health interventions (18)** 1.1 Concept of community health, 1.2 Scope, aims and functions of community health 1.3 A brief history of community health in Nepal, China and India. 1.4 Global burden of Burden of diseases, Quality of life index (QUALY) and Disability Adjusted Life Year (DALY) in Nepal.

Discuss community based intervention and	Community based intervention and
• Community health strategies for improving pre-natal, perinatal and neonatal health. • Analyze the situation of community based Integrated Management of Neonatal and Childhood Illness (IMNCI) in Nepal. • Explain social network approach and community based HIV prevention intervention. • Analyze the strengths and weaknesses of community based prevention of vector borne disease. • Explore and discuss the situation of public awareness and prevention strategies of emerging diseases such as avian influenza, swine flu and ebola, COVID-19, NCD's (Diabetes, Cancer, heart diseases).	1.5 community health strategies for improving pre-natal, perinatal and neonatal health 1.6 Integrated Management of Neonatal & Childhood Illness (IMNCI) 1.7 Social network approach and community based HIV prevention intervention 1.8 Community based prevention of vector borne diseases 1.9. Public awareness and prevention of emerging infectious diseases: avian influenza, swine flu and ebola hemorrhagic fever (EHF),COVID -19 and NCD's (Diabetes, Cancer, heart disease).
• Conceptualize ecology and environment. • Describe principles and approaches of environmental health. • Conceptualize environmental health hazards and explain health problems due to biological, chemical, physical and psychological hazards. • Conceptualize sanitation and hygiene and principles and approaches of total sanitation. • Discuss water supply and sanitation strategies and plan of Nepal. • Analyze situation of solid waste production and management practices in urban and semi-urban areas. • Explain key factors related to global warming and climate change. • Describe consequences and effects of climate change on human health. • Explain causes and effects of occupational diseases such as pneumoconiosis, cancer, lead poisoning. • Describe common occupational health hazards of agricultural workers.	**Unit 2: Environmental Health and Sanitation (12)** **2.1.** Concept of ecology and environment **2.2.** Principles and approaches of environmental health **2.3.** Environmental health hazards- biological , Chemical, Physical and Psychological hazards and human health **2.4.** Principles and approaches of total sanitation and hygiene **2.5.** Water supply and sanitation strategies and plan of Nepal **2.6.** Solid waste management methods and practices in urban and semi-urban areas **2.7.** Consequences of global warming and climate change on human health Occupational health and diseases: Pneumoconiosis, lead poisoning, occupational cancer and occupational health hazards of agricultural workers

• Describe concepts and scope of mental health. • Classify mental disorder into different groups and explain causes of mental disorders and illness. • Illustrate statistical and social indicators of mental illness. • Explain techniques of managing stress,	**Unit 3: Mental Health and Substance Abuse (9)** 3.1. Concepts and scopes of mental health 3.2. Classification, origin and causes of mental disorders 3.3. Statistical and social indicators of mental illness 3.4. Management of stress, depression
• Depression and anxiety at personal, family and community level. • Discuss need of community mental health care. • Identify factors leading to substance and drug abuse among adolescents and youths • Review of Government policies, programme and law for prevention of drug abuse and consumption of drugs, alcohol and tobacco products. Discuss needs of community based rehabilitation for drug abusers.	3.5. and anxiety and community Mental health car 3.6. Factors leading to substance and drug abuse among adolescents and youths 3.7. Government policies, programme and law for prevention of drug abuse and consumption of drugs, alcohol and tobacco products Community-based rehabilitation for drug abusers
• Illustrate the concepts of health care systems. • Describe different types of health care systems in Nepal. • Sketch and illustrate organizational structure of health services in Nepal. • Discuss political nature of health and health care system. • Write an overview of various public health programmes such as malaria and kala-zar control, tuberculosis control, leprosy control, goitre control, Diarrhea and ARI control, safe- motherhood, expanded immunization programme and FCHVprogramme	**Unit 4: Health Care Systems (9)** 4.1. Concept of health systems and health care systems 4.2. Types of health care systems in Nepal 4.3 Federal structure of health services 4.5 Political nature of health care system (neoliberal, welfare and socialistic health care) 4.4 Health Insurance, free Health Care Policy and Services in Nepal 3.8. An overview of various public health programmes in terms of objectives and activities: Malaria, Kala-zar control, tuberculosis control, Leprosy control, Goiter control, Diarrhea and ARI control, HIV/AIDS and STD Control, FP/MCH, Safe motherhood, Expanded Immunization Programme

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. The first group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to specific units.

4.1. General Techniques

- Lecture
- Discussion
- Demonstration
- Presentation
- Guest speech
- Library visit and web surfing
- Home assignment

4.2. Specific Instructional Techniques

Unit	Activities and instructional techniques
1	Each student will be asked to read relevant books and articles related to concept and evolution of community health and prepare a short paper on the history of community health of India, Nepal and China. Students will be divided into four groups: First group will prepare notes and present on situation of environmental health and sanitation of Nepal. Second group will prepare notes and present on Diarrhea and ARI problems of Nepal. Third groups will present on TB, HIV/AIDS and Vector Borne Diseases of Nepal. Fourth group will present worm infestation and hunger and malnutrition problems of Nepal. Students will be divided into four to five groups. Each group will collect relevant articles and books and review them, and write a group paper on community based intervention such as community based intervention to improve pre-natal, perinatal and neonatal health, HIV/AIDS prevention, Tuberculosis and malaria, elderly health care. Talk programme will be organized and guest speakers will deliver their speeches on avian influenza, swine flu and Ebola Haemorhagic fever.
2	Each student will be asked to write a short paper with data and references on health impact/hazards of water, air, land and pesticide pollutions. Field visit and presentation: Teacher and students will visit the municipality and its solid waste management practices. Students will observe solid waste management practices and interact with staff involved in solid waste management. Based on field visit, group leader of each group will present key points observed in the field.

3	Self-study and individual assignment: Each student will be assigned to read and prepare a paper on classification, cause, symptoms and prevention of mental illness and disorder. Guest speaker will be invited to speak on mental health problem of Nepal. Teacher and students will visit drug rehabilitation center and explore issues related to it.
4	Students will be divided into several groups and each group will visit relevant programme unit of Ministry of Health such as Child Health Division, Leprosy Division, Immunization programme, STD and HIV Control, Tuberculosis Control, Safe motherhood and collect relevant data and information and prepare a short paper on these programme. Each group will present their papers in the classroom.

5. Evaluation

5.1. Internal Evaluation 40%

Internal evaluation will be conducted by the course teacher based on the following activities:

- Attendance 5 marks
- Participation in learning activities 5 marks
- Fist assignments: Review of publications 10 marks
- Second assignment: Mid-term exam 10 marks
- Third assignment: Write term paper 10 marks

- Total 40 Marks

5.2. External Examination (Final Examination) 60%

Examination Division, Office of the Dean, Faculty of Education will conduct final examination at the end of semester.

SN	Types of question	Marks
1	Objective type question(multiple choice 10 x 1)	10
2	Short answer questions (6 questions x 5 marks with 2 OR questions)	30
3	Long answer questions (2 questions x 10 marks with 1 OR question)	20
Total		**60**

6. Recommended Books and References

6.1 Recommended Books

Bhutta, Z. A., Darmstadt, C.L. Hasaan, B.S. & Haws, R.A. (2005).Community-Based Interventions for Improving Perinatal and Neonatal Health Outcomes in Developing Countries: A Review of the Evidence. *Pediatric*, Vol. 115, (2). (For Unit I)

Cassels, A. (1995). Health Sector Reform: key issues in less developed countries. *Journal of International Development,* 7(3), 329-347.

DoHS (2013).*Annual report of health services*. Ministry of Health and Population, Department of Health Services.

Frumkin, H. (2010). *Environmental health: From global to local* (Second Edition). San Francisco: Jossey-Bass. (Unit II)

GoN (2011*).Sanitation and Hygiene Master Plan, Nepal*. (For Unit II)

Jiloha, R.C. (2008). *Tobacco use, health and behavior*. New Delhi: New Age International Publisher. (For Unit IV).

McKenzie, J.F., Pinger, R.R. & Kotecki, J.E (2005). *An introduction to community health (5th Edition*) Boston: Allyn and Bacon. (For unit I, II, and IV).

Ministry of Health (2004).*Nepal health sector programme-implementation plan, 2004-2009. (For unit IV)*

Nandha, B., & Krishnamuoorthy, K. (2010). Impact of education on community based vector control in hastening the process of elimination of lymphatic failariasis in Tamil Naud, South India. *Health Education Research.*

Park, K. (2012). *Park's Textbook of Preventive and Social Medicine.* Jabalpur, India: M/S BanarsidasBhanot (For Unit I, II, III)

Smith, B.C. (1997). Decentralization of health care in developing countries.Organizational option. *Public Administration and Development*, 17, 399-412. (For unit IV)

Susman, S., & Ames, S.L. (2008).*Drug abuse, concept and cessation*. New York: Cambridge University Press. (For Unit III)

Trikett, E.J., & Pequegnat, W. (2005).*Community intervention and AIDS*. Oxford: Oxford University Press. (For Unit III)

Wallace, R.B., Kohatsu, N., & Last, J.M. (2008).*Public health and preventive medicine*. New York: McGraw Hill. (For Unit II and III)

Walsh, J. And Warren, K. (1979). Selective Primary Health Care: An Interim Strategy for Disease Control in Developing Countries. *New England Journal of Medicine*, Vol. 301, (18). (Unit IV)

WHO (2013).*Community based dengue vector control*. ADB and WHO (For Unit I)

6.2. **References**

Bassett, W.H. (1999). *Clay's handbook of environmental health*. London: Taylor and Francis Group Castello, J. & Haggart, M. (2003). *Public Health and Society*. New York: Palgrave MacMillan.

Ehiri, J. (2009). *Maternal and child health: Global challenges, policies and programme*. New York: Springer.

Guttmacher, S., Kelly, P.J., & Ruiz-Janecko, Y. (2010).*Community-based health interventions.Principles and application.* San Francisco: Jossey-Bass.

Jones, L. J. (1994). *The social context of health and health work.* New York: Palgrave.

Healey, B.J., & Walker, K.T. (2009).*Introduction to occupational health in public health practice*. San Francisco: Jossey-Bass.

Lopez, A.D. et al. (2006). *Global burden of disease and risk factors*. New York: World Bank.

Tchobanglous, G., & Kreith, F. (2002). *Handbook of solid waste management*. New York: McGrahill Companies.

Tulchinsky, T.H, &Varavikova, E. A. (2009).*The new public health* (Second Edition). San Diago, California: Elsevier Academic Press .

Kar, K. & Robert, C. (2008).*Handbook on community led total sanitation (CLTS).* UK: Institute of Development Studies.

H. Ed. 528: Community Organizing for Health Education

Course No. : H. Ed. 528 Nature of course: Theoretical

and Practical Level: M.Ed. Credit hour: (2Th+1P)

Semester: Second Teaching hours: 64 (Th: 32, Pr: 32)

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1. Course Introduction

This course is designed to develop a broader understanding of community structure, community organization, community participation and community development, and group process for community health education among students. It equips students with practical knowledge and skills in organizing community, doing survey, analyzing community health needs and problems, writing report of community organization and planning action program for community health education and promotion.

2. General objectives

The general objectives of courses are as follows:

- To familiarize the students community structure and interaction.
- To gain in-depth understanding in group dynamic and group process.
- To provide a better understanding of process, approaches and methods of community organization.
- To acquaint students with principles, approaches and processes of community development.
- To develop the skills required for data analysis and interpretation of survey data.
- To build transferable knowledge and skills on organizing community, building team and community coalition, mobilizing and utilizing available resources for community health promotion.

3. Specific Objectives and Contents

Specific Objectives	Contents
• Compare concept of community with society. • Discuss different types of community interaction. • Explain community power structure and source of power. • Describe concepts, elements and principles of group dynamics. • Analyze group structure and roles of group dynamics in community organization. Discuss the process of group formation in community school.	**Unit 1: Community Interaction and Group Dynamics (15)** 1.1 Concept and structure of community and society 1.2 Types of community interaction 1.3 Community power structure and its sources 1.4 Concept of group dynamics 1.5 Elements and principles of group dynamics 1.6 Group structure: types and roles 1.7 Group communication models and process 1.8 Formation of group in community schools

	1.9 Concept, types and qualities of leadership Roles and responsibilities of leaders for community organization
▯ Conceptualize community organization and community building. ▯ Discuss principles of community organization. ▯ Explain the aims and objectives of community organization in health education. ▯ Explain the Dunhman' method of community organization. ▯ Explains basic steps of community organization. ▯ Explain the Participatory Rural Appraisal (PRA) tools for community participation. ▯ Explain the process and continuum of community development. ▯ Identify the community capacity for development. ▯ Discuss the importance of social capital, social network, coalition and partnership in development. ▯ Discuss the method of community health need assessment. ▯ Discuss the components of project cycles. • Prepare the detailed action plan in the process of project planning	**Unit 2: Principles and methods of community organization (17)** 2.1 Concept of community organization, community building and community coalition 2.2 Principles, aims and model of community organization 2.3 Basic steps/process of community organization. 2.4 Methods and tools of community organization and community participation (PRA) 2.5 Principles, Approaches and processes of community development 2.6 Social capital, social network, coalition and partnership for community development 2.7 Concepts of community needs and methods of community health need assessment 2.8 Methods and procedures of community survey 2.9 Concept of project ad project cycle 1.10 Steps and components of action program planning
• Develop brief proposal to conduct community health survey and community organization. • Develop survey and need assessment tools to collect data. • Collect data/ information by using survey tools and other methods. • Analyze & interpret the data with appropriate processes. • Identify and prioritize the community needs. • Prepare action plan, formation of council/groups and organize action program in community based on identified health needs. • Implement community health education activities as per action plan by mobilizing the members of community organization.	**Unit 3 : Project/Practical Work on Community Organization for Health Education (32)** 3.1 Planning for community survey and organization for health education 3.2 Preparation of survey and need assessment tools 3.3 Conducting a field study for gathering essential data 3.4 Data processing and analysis 3.5 Dissemination of survey results in community and preparing action plan based on identified needs through participatory approach 3.6 Formation of community health council and group for implementation action program/community health education

Preparing report of community organization for health education and health promotion.	programme 3.7 Implementation of community health education as per action plan by mobilizing members of the community organization Preparing report of community organization for health education

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. The first group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to specific units.

4.1. General Techniques

- Lecture
- Discussion
- Demonstration
- Field visit
- Presentations
- Guest speech
- Library visit and web surfing
- Home assignment

4.2. Specific Instructional Techniques

Unit	Activities and instructional techniques
1	Each student will be asked to read relevant books and articles related to structure of community and community power structure. Some students will present their notes in the class and after presentation, there will be interaction among students. Role play: Class will be divided into three groups and each group plays different roles such as negative roles and positive roles, group building roles, group maintenance roles. After playing roles of different groups, there will be discussion among students. Likewise, there will be brain storming and buzz session on group communication and community leadership.
2	Class will be divided into several groups comprising 4-6 members in each group and each group will collect books, articles and documents related to philosophies, principles and approaches of community organization from different sources. They will read and prepare notes for presentation on the assigned topic. Each group will present their notes in the class. After presentation, there will be discussion among the students. Role play/Rehearsal: Role play and rehearsal exercises will be organized on social mapping, wealth ranking, capacity mapping, transect walk, timeline and group discussion. Likewise, there will be rehearsal on interview and focused group discussion technique. After role play and rehearsal, there will be question-answer and interaction among students.

3	Project work on community survey and community organization: Class will be divided into several groups comprising 7-10 students in each group. Each group will conduct ocular survey for site selection. Each group will prepare detailed proposal with data collection tools. After having prepared the proposal, each group will be mobilized to the community for collecting the required data. After data collection, student will analyze data in group and prepare summary of findings for presentation. Again, each group organizes community assembly and present key findings of the survey to the community. After presentation, community health council/organization will be formed. Study teams and members of community health council sit together and prepare action plan for organizing community health education and development programme at the community level. Upon completion of field level activities, each group will prepare a complete report of community survey and community organization for health education and submit it to the Department of Health Education of the concerned campus.

5. Evaluation

5.1. Internal Evaluation 40% (25) of 65 theory portion

Internal evaluation will be conducted by course teacher based on following activities:

- Attendance 2 marks
- Participation in learning activities 3 marks
- Fist assignments: Review 10 marks
- Second assignment: Mid-term exam 10 marks

Total 25 marks

5.2. **External Examination (Final Examination) 60% (40) of 65 Theory portion** Examination Division, Office of the Dean, Faculty of Education will conduct final examination at the end of semester.

SN	Types of question	Marks
1	Objective type question(multiple choice 10 x 1 marks)	10
2	Short answer questions (6questions x 5 marks with 2 OR questions)	30
Total		**40**

5.3. Internal Evaluation 40% (15) of 35 Practical portion

Internal evaluation will be conducted by course teacher based on following activities:

Attendance	2 marks
Participation in field preparation and field work	3 marks
Report writing	5 marks
Presentation/oral examination	5 marks
Total	10 marks

5.4. **External Examination (Final Examination) 60% (20) of 35 practical portion** Examination Division, Office of the Dean, Faculty of Education will conduct final examination at the end of semester.

SN	Types of question	Marks
1	Viva	5
2	Presentation of report	5
3	Quality of report	10
Total		**20**

6. Recommended Books and References

Butterfoss, F.D. (2007). *Coalition and partnership in community health*.San Francisco: Jossey-Bass. (For unit II)

Frank, F., & Smith, A. (1999). *The community development handbook: A tool for build community capacity.* Hull, Quebec: Human Resource Development Canada (For Unit II)

Harris, T.E. & Sherblom, J. C. (2008).*Small group and team communication*. Boston: Pearson (For Unit I)

Loue, S. (2003).*Community health advocacy*. New York: Kluwer Academic Publishers (For unit II)

Minkler, M. (2004).*Community organizing and community building for health*. San Francisco: Jossey-Bass. (For units II)

Mikkelsen, B. (1995). *Methods for development work and research*: *A guide for practitioners*. New Delhi: Sage Publications. (For units II)

McKenzie, J.F., Pinger, R.R. & Kotecki, J.E (2005). *An introduction to community health (5th Edition*) Boston: Allyn and Bacon. (For unit II)

Ross, M.G. (1967). *Community organization: theory, principles & practice*. New York: Harper & Raw Publications. (For units II)

Payne, J. (1999). *Researching health needs: community based approach*. London: Sage Publication.(For units II)

H. Ed. 529: Health Promoting Schools

Course No.: H. Ed. 529 | Nature of course: Theoretical
Level: M.Ed. | Credit hour: 3
Semester: Second | Teaching hours: 48

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1. Course Introduction

Schools are an important setting for both education and health aspects of the people related to it. A health promoting school is one that works in a way which demonstrates a whole school commitment to improving and protecting the health and well-being of the school community. It is one that constantly strengthens its capacity as a healthy setting for living, learning and working. This course is designed to provide students with an understanding of health promoting school as a setting based concept of school health program. It deals with school health programme, development of school policies and environment, curriculum materials, health services and cooperation and evaluation techniques of health promoting school.

2. General Objectives

The general objectives of this course are as follows:

- To help the students conceptualize health promoting school as an approach to improve health at school setting and identify other models of school health program.
- To make the students familiar with the importance of healthy school policy and promotive environment in creating health promoting school.
- To help the students gain in-depth understanding of teaching and learning in curriculum as a key part of health promoting school.
- To enable the students to comprehend the importance of staff's health in health promoting school.
- To make the students familiarize with the methods of establishing community links.
- To provide the students with knowledge of methods of providing health services in the school.
- To make the students enable to figure out the importance, process and methods of evaluating interventions in health promoting school.

3. Specific Objectives and Contents

Specific Objectives	**Contents**
• Define school health programs and describe its importance in schools. • Explain historical development of school health programme. • Describe the concepts and components of health promoting school. Describe framework of co-ordinated school	**Unit 1: Introduction to Health Promoting School (6)** 1.1 School health program- concept, historical development and importance 1.2 Evolution of Health promoting school (HPS)- Concept and aims 1.3 Principles and components of HPS

health program, child friendly school and focusing resources in effective school health (FRESH).	1.4 Other models of school health programme 1.4.1 Coordinated/comprehensive school health programme 1.4.2 FRESH approach in school health Whole school approach
• Describe school health policy as a foremost requisite of developing health promoting school. • Identify criteria for developing school health policy. • Describe components of the conceptual framework for developing school health policy. • Explain the concept and importance of school's physical and social environment in health promoting school. • Plan and design appropriate elements for a physically and socially healthy school. • Describe management aspects of school food services for students and its roles in healthful school environment.	**Unit 2: School Health Policy and Environment (10)** 2.1 Developing school health policy**:** Concept and need 2..1.1. Criteria for a school health policy 2.1.2 Conceptual framework for Developing a school health policy 2.2 Creating health promotive environment in school 2.2.1 The school's physical environment-concept, importance and elements 2.2.2 The school's social environment-concept, importance and elements 1.4.3 Creating healthful school nutritional environment in school: managing school food services (Midday meal and Tiffin) and its roles in healthful school environment
• Describe the health education provided through formal and informal methods. • Plan for health instruction. • Explain the types of health instruction. • Develop action competencies. • Evaluate health instruction. • Analyze the role of staff's health and competences in health promotion in school. • Identify healthy lifestyles among students and staff to be developed by health education and teaching and learning activities. • Describe management aspects of school food services for students and staff.	**Unit 3: Teaching Learning Activities for Health Promotion (16)** 3.1 Student's individual health skills and action competences 3.1.1 Health education through formal and informal methods 3.1.2 Planning for health instruction 3.1.3 Types of health instruction 3.1.4 Developing action competencies through students' participation, empowerment and decision making 3.1.5 Evaluation of health instruction (types, tools and techniques) 3.2 School Staff's health and competences 3.2.1 Health role modelling by staff/teachers 3.2.2 Occupational health hazards of school staff 3.2.3 Health promotion activities for school staff 3.2.4 Teacher education for health promotion 3.3 Promotion of healthy lifestyles among students and staff 3.3.1 Involvement in physical exercises, sports, Yoga and extra-curricular

	activities 3.3.2 Healthy food habits, sanitation and hygiene behaviors Managing stress 3.3.4 Preventing substance abuse

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. The first group consists of general instructional techniques applicable to most of the units. The second group consists of proposed specific instructional techniques applicable to specific units.

4.1. General Instructional Techniques

- Lecture
- Discussion
- Brain Storming
- Presentation
- Assignment
- Library visit and web surfing

4.2. Specific Instructional Techniques

Unit 1 Students are given to do review of literature related to articles of SHP, CSHP, HPS, CFS, etc. and group discussion will be done in the classroom.

Unit 2 Students will be given to visit at least one separate school and they will observe the environment of school and make a separate report with suggestions for improving school environment for healthful living.

Unit 3 Guest lecture will be organized in some subunits and students are given to brain storming putting some critical questions by guest lecturer or class teacher in related topics.

Unit 4 Group work will be given in different topics and the groups will present their reports in classroom in their respective topics.

5. Evaluation

5.1. Internal Evaluation 40%

Internal evaluation will be conducted by course teacher based on following activities:

- Attendance 5 marks
- Participation in learning activities 5 marks
- Fist assignments: Review of publications 10 marks
- Second assignment: Mid-term exam 10 marks
- Third assignment: Write term paper 10 marks

Total 40 marks

5.2. External Examination (Final Examination) 60%

Examination Division, Office of the Dean, Faculty of Education will conduct final examination at the end of semester.

SN	Types of question	Marks
1	Objective type question(multiple choice 10 x 1)	10
2	Short answer questions (6 questions x 5 marks with 2 OR questions)	30
3	Long answer questions (2 questions x 10 marks with 1 OR question)	20
Total		**60**

Recommended Books and References Recommended Books

Allensworth, D. et al. (Editors) (1997).*Schools health: Our nation's investment.* Anderson, C.L. (1972). *School health practice.*St. Louis: The CV Mosby Company. (For Units II, III and IV)

Barnekow, V., Bujis, G., Clift, S., Jensen, B.B., Paulus, P., Rivett, D., & Young, I. (2006).*Health-promoting schools: a resource for developing indicators.*_____: International Planning Committee of the European Network of Health Promoting Schools. http://www.euro.who.int /ENHPS. (For Unit I)

Denman, S., Moon, A., Parson, C., & Stears, D. (2004). *Health Promotion School in Action: Policy, research and practices.* New York: Taylor and Francis Group (For Unit I)

Gray, G., Young, I., & Barnekow, V. (2006).*Developing a health-promoting school.*A practical resource for developing effective partnerships in schoolhealth, based on the experience of

the European Network of HealthPromoting Schools._____: International Planning
Committee of the European Network of Health Promoting Schools. http://www.euro.who.int /ENHPS(For Units I, II, III, IV).

Jenne, F.H. (1976). *Turner's school health and health education* (7thed.). Saint Louis: The CV Mosby Company (For Units II, III and IV).

Meeks, L. et al. (2003). *Comprehensive school health education: Totally awesome strategies for teaching health.* New York: Mc. Graw–Hill. (For Unit II and III)

Redican, K.J., Olsen. L. K., & Baffi, C.R. (1986). *Organization of school health program*. New York: Macmillan Publishing Company. (For Unit III)

Naidoo, J.,& Wills, J. (2009). *Foundations for health promotion* (3rd ed.). Edinburgh: Elsevier Limited.(For Unit I)

World Health Organization Expert Committee on Comprehensive School Health Education and Promotion. (1997). *Promoting health through schools* (WHO technical report series; 870). Geneva: Author. (For Unit I, II, III and IV)

Young, I. (2005). Health promotion in school-historical perspective.*Promotion and Education,* 12(3-4), p. 112-117.(For Unit I)

6.2 **References**

Budhathoki, C.B. &Wagle, B. (2068 BS).*School health programmemanagement*.Kathmandu: Pinnacle Publication.

Katz, J., Peberdy, A., & Douglas, J. (2000).*Promoting health: knowledge and practice* (2nded.).

London: The Open University.

Maharjan, S.S.,& Khanal, S.P. (2068 BS).*School health programme management*. Kathmandu: Sunlight Publication .

World Health Organization.(2009). *Milestones in health promotion; Statements from global conferences.*Geneva: Author.

Whitman, C.V., &Aldinger, C.E (Eds.) (2009).*Case studies in Global school health promotion.From research to practice*. Newton MA: Education Development Center, Inc.

Population Education

Pop. Ed. 526: Quality of Life Education

Course Code: Pop. Ed. 526 | Nature of course: Theoretical

Level: M. Ed. | Credit hours: 3

Semester: Second | Teaching hours: 48

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1. Course Introduction

This course is designed for the students of Master in Population Education of second semester. It aims to equip the students with the advanced knowledge of Quality Life Education. It intends to acquaint the prospective teachers with the factors affecting quality of life, plans and policies to enhance quality of life, level of quality life in Nepal, neigh bouring countries and developed world. It also aims to equip the students with the skills of measuring quality of life as well as empirical study in quality life dimensions.

2. **General objectives**:

The general objectives of this course are as follows:

- To develop knowledge regarding quality life education.
- To equip the students with deeper understandings on demographic, economic, social, environmental and political factors affecting quality of life.
- To enable the students with the capability of analysing population policies critically.
- To enhance the students with the skills of quality life measurement and empirical studies on related issues.

2. Specific objectives and contents

1. Define quality life through material and non-material views. **2.** Discuss the importance and framework of policy dimension for quality of life.	**Unit I: Introduction to Quality of Life (6)** 1.6 Concept and definition of quality of life 1.7 Physical, social, mental and spiritual dimension of quality of life (material and non-material well being) 1.8 Importance of quality of life 1.9 Framework of policy dimension for quality of life
3. Explain the perception of happiness and human need. 4. Illustrate the demographic, economic, social, political and environmental, nutritive factors and sanitation affecting quality of life. 5. Discuss and give critical perspectives on how political factors infucen quality of life of people. **3.** Discuss the roles of social and environmental factors in promoting quality of life.	**Unit II: Factors affecting Quality of Life(12)** 2.1 Perceptions of happiness, dimension of human needs (Maslow) 2.2 Factors contributing quality of life 2.2.1 Demographic factors: size of population, age, sex, composition, ageing, morbidity, dependency burden and population growth rate 2.2.2 Economic factors: economic growth (National Income-GNP and NNP) and technological development, occupation, employment, per-capita income, natural resources Social factors: education, health services and

	facilities, social security, women empowerment, preservation and promotion of cultural heritage, social prestige and self-satisfaction 2.2.4 Environmental factors: resource utilization and sustainability, effects of environment pollution: air, water, land, and noise 2.2.5 Political factors: population policy, family welfare, good governance and human rights 2.2.6 Nutritive factors (energy needs, calorie intake, components of nutrition and food habit) Personal hygiene and sanition
7. Discuss the status of quality of life in the context of Nepal. 6. Discuss the technique of determining status of quality of life using basic need approach and human development index approach.	**Unit III: Status of Quality of Life (8)** 3.1 Real national income 3.2 Per capita real income (PCI): purchasing power parity (PPP) 3.3 Basic needs approach 3.4 Physical quality life index (PQLI) 3.5 Human development index (HDI) 2.2.3 Gross happiness index
8. Evaluate the current policies of Nepal for quality of life on food security, housing, education, health and women empowerment, employment, social security and environment & sanitation.	**Unit IV: Policies and programmes for Quality of Life(10)** Current policies and programmes on: 4.1 Food security and housing related policies and programmes 4.2 Education, health and women empowerment policies and programmes 4.3 Employment, social security related policies and programmes Environment and sanitation
9. Compare the levels of living in developed and developing countries including Nepal and its neighbouring countries. 10. Discuss the concept and status of absolute and relative poverty, inclusion and exclusion, inequality and 11. Gini coefficient in terms of quality of life.	**Unit V: Quality of Life in Developed and Developing countries (6)** 5.1 Levels of living: level of quality life in developed and developing countries (HDI, GEM, HPI) 5.2 Absolute poverty and relative poverty 5.3 Inequality and Gini coefficient Inclusion and exclusion

12. Perform community study related to community issues. Make Empirical studies and community visit on different community issues.	**Unit VI:Empirical Study(6)** Field study on contemporary issues: Community/ field visit, selection of topic related to quality of life issues, planning for field study, data collection, use of measures of quality of life, data analysis, report writing and presentation (Contemporary issues: food, housing condition, nutritional status, ageing care, child labour and human trafficking and other related topics)

Note: The figures in the parentheses indicate the approximate hours for the respective units.

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. The first group consists of general instructional techniques applicable to most of the units. The second group consists of proposed specific instructional techniques applicable to specific units.

3.1. General Instructional Techniques

- Lecture
- Document review
- Discussion
- Collaborative works/learning
- Brainstorming
- Presentation
- Guest speech
- Project work
- Collaborative learning
- Interaction
- Research based learning activities

3.2. Specific Techniques

Unit	Activities and instructional techniques
I	Define quality life lecture on physical, mental and spiritual concept of quality life Discussion and drawing conclusion relating to the importance of the study of quality of life.
II	Lecture on factors affecting quality of life Group division and assignment on different factors and sub factors affecting quality of life, paper writing and presentation by each group, floor discussion and summarization Exhibition of related materials

III	Workshop on Collection of related data processing and use of different measures eg. PQLI, PCI, RNI, HDI, HPI and Gross Happiness Index Ranking countries, regions and districts in order of different indicators
IV	Lecture and question answer Reference and data sheet study, note making and distribution
V	Study of economic survey, economic plans and development plans of different periods regarding the policies and programmes of Nepal Government to raise quality of life
VI	Case study on food, housing condition, nutritional status, ageing care, child labour and human trafficking and other related topics

5. Evaluation

5.1**. Internal Evaluation 40%**

Internal evaluation will be conducted by the subject teachers based on the following aspects:

S.N	Particular	Marks
1	Attendance	5
2	Participation in learning activities	5
3	First assessment: Article review/ book review/ open book test/ unit test, etc.	10
4	Second assessment: Midterm test	10
5	Third assessment: Project work/case study/field study/survey/seminar/workshop	10
Total		**40**

5.2 External Examination (Final Examination) 60%

Examination Section, Office of the Dean, Faculty of Education will conduct final examination at the end of semester.

S.N	Types of question	Marks
1	Objective type questions (Multiple choice questions 10x1 mark)	10
2	Short answer questions (6 questions with 2 OR questions x 5 marks)	30
3	Long answer questions (2 questions with one OR questions x 10 marks)	20
Total		**60**

6. Recommended books and references

6.1 **Recommended Books**

CDC, TU (1993). *Population and quality of life.* TU, Kirtipur, Nepal **(Unit III)** Dhakal, S. (2070) *Gunastariya jivan*. Kathmandu: Ratnapustak Bhandar **(Unit V)** Gnyawali, D. (2067 BS) *Population education principles and philosophy*. Kirtipur: Sunlight Publications. Chapter V, pp 157-180 **(Unit II)**

Janasankhya sikshya, rastriyas sroat pustak (1985). Sikshyasasthra Adhyan Sansthan, Dean ko karyalaya, Sanothimi Bhaktapur, Nepal **(Unit I chapters)**

K.C, Balkumar; Population and Development in Nepal, pp.195-201

Sanchez, C. A. (1983). *Population education*. Metro Manila: National Books store, Chapters 11 and 12 **(Unit II)**

Sharma, R.C (1988). *Population, resources, environment and quality of life*. New Delhi: Dhanpal Rai and Sons, Nai sarak **(Unit II)**

Sinha, B.C & Sinha. (2005). *Principles of demography*. New Delhi: Mayur Paper books. pp 426-450 **(Unit III chapters)**

Thrillwall, A.P. (2004) *Growth and development with special reference to developing dconomies* (7th edition) Palgrave (Macmillan) pp 51-58 **(Unit III)**

Todaro, M, P. & Smith, S. C (2014); *Economic development* (10th edition). Pearson Publication **(Unit I)**

Todaro, M., P. and Smith, S., C.(2014) *Economic development*. (10th edition) Pearson Publication, pp233-238 **(Unit IV)**

www.bridge.ids.ac.uk/reports/re

40c.pdf**(Unit III)**

www.grossnationalhappiness.com

(Unit III)

References

Acharya, P. (2016). *Reference book on population education*.

Kathmandu: Gita Rijal. Dhakal S. & Devkota B. (2070) *Adharbhut janasankhya sikshya*

Kathmandu: Ratna Pustak bhandar.

Neupane, I. P. (2063 BS), *Gunastariya jivan*. Kathmandu:

Taleju Prakashan FAO (1978). *The state of food and agriculture*, Vol. I, Rome

Human Development Report (2013). *The rise of the south humanpProgress in diversew word.* UNDP (Latest series)

UNESCO (1975) P*opulation: quality of life theme-population education in Asia: a source book*. Bangkok.

UNESCO (1982). *Population change, food, nutrition and health*. Bangkok

Pop. Ed. 527: Indirect Techniques for Population Analysis
Course No. : Pop.Ed.527 Nature of course: Theoretical

Level: M. Ed. Credit hours: 3

Semester: Second Teaching hours: 48

1. Course Introduction

This course is designed to acquaint the students with the analysis of population data. Specifically, this course intends to provide the students with the advanced indirect demographic measures and techniques with reference to model life tables, stable population, nuptiality models and models of fertility, mortality and migration.

2. General Objectives

The general objectives of this course are as follows:

- To make the students familiarize with the knowledge and skills on major indirect techniques.
- To enable the students to apply indirect techniques in demographic estimation.
- To make the students enable to compute and interpret demographic rates and ratios.
- To enable the students to analyze demographic data in different situations.

3. Specific Objectives and Contents

Specific Objectives	Contents
▪ Explain the meaning and concept of indirect techniques. ▪ Explain the need, importance and limitation of indirect techniques.	**Unit I. Introduction to Indirect Techniques (6)** 1.1 Concept of indirect techniques 1.2 Need and importance of indirect techniques 1.3 Limitations of indirect techniques
▪ Describe the concept of selected demographic models. ▪ Explain model stable population. ▪ Describe nuptiality models in demographic analysis.	**Unit II. Demographic Models (11)** 2.1 Modellife tables 2.1.1 UN model of life tables 2.1.2 UN model of life tables for developing countries 2.2 Model stable population 2.3 Nuptiality models
▪ Describe the concept of Coale and Trussel methods for fertility estimation. ▪ Explain the P/F ratio techniques for fertility estimation. ▪ Analyze the own children method for fertility estimation. ▪ Explain the children ever born by duration of marriage. ▪ Describe reverse survival method for fertility estimation.	**Unit III. Techniques for estimating fertility (12)** 3.1 Brass P/F ratio method 3.2 Coale and Trussel P/F ratio methods 3.3 The P/F ratio method for hypothetical cohort 3.4 The own children method 3.5 Estimation of fertility from information on children ever born by duration of marriage 3.6 Estimation of birth rates by reverse survival of the population under age 10

▪ Explain Brass method for estimating child mortality. ▪ Explain Trussel method for estimating child mortality. ▪ Explain the techniques of child mortality rate by duration of marriage. ▪ Explain the Preston and Coale method of estimating adult mortality. ▪ Explain the Brass growth balance method of estimating adult mortality.	**Unit IV. Techniques for Estimating Mortality (12)** 4.1 Estimating Brass methods of child mortality rates using data classified by age. 4.2 Estimating Trussel methods of child mortality rates using data classified by age. 4.3 Estimating child mortality rates using data classified by duration of marriage Preston and Coale method of estimating adult mortality from information on the distribution of deaths by age 4.4 Brass growth balance method of estimating adult mortality from information on the distribution of deaths by age
▪ List out various methods of measuring migration. ▪ Compute vital registration method for measuring migration rates by applying various methods. ▪ Describe survival ratio (life table survival and census survival) to calculate net migration using forward and backward ratio method).	**Unit V. Techniques for Measuring Migration (7)** 5.1 Vital registration method for estimating migration 5.2 Concept and measurement of survival ratio 5.2.1 Life table survival ratio 5.2.2 Census survival ratio 5.3 Forward survival ratio method for estimating migration 5.4 Reverse/backward survival ratio method for estimating migration

Note: *The figures within the parenthesis indicate the approximate teaching hours allocated to respective units.*

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. The first group consists of general instructional techniques applicable to most of the units. The second group consists of proposed specific instructional techniques applicable to specific units.

4.1. **General Instructional Techniques**

- Lecture
- Document review
- Discussion
- Collaborative works/learning
- Brainstorming
- Presentation
- Guest speech
- Project work
- Collaborative learning
- Interaction
- Research based learning activities

4.2.Specific Instructional Techniques

Units	Activities and Instructional Techniques
I	The students will be assigned to consult UN Manual X and Method and Materials of Demography and they prepare a brief note on the concept, need and importance of indirect techniques in demography.
II	The students will be asked to prepare notes on demographic models. Various demographic models will be discussed and the techniques/steps of computing them will be explained. Examples of different region will be introduced.
	in estimating fertility and demographic rates.
IV	The techniques of estimating child mortality rates using data classified by age will be discussed. Similarly, child mortality rates using data classified by duration of marriage will be estimated. The techniques of estimating adult mortality rates from information on the distribution of deaths by age will be explained with examples.
V	Various methods for measuring migration by vital registration method, survival ratio method, life table survival method and census survival method will be used. The Student will be assigned some problems on measuring migration and asked to present in the class.

5. Evaluation

5.1. **Internal Evaluation 40%**

Internal evaluation will be conducted by the subject teachers based on the following aspects:

S.N	Particular	Marks
1	Attendance	5
2	Participation in learning activities	5
3	First assessment: Article review/ book review/ open book test/ unit test, etc.	10
4	Second assessment: Midterm test	10
5	Third assessment: Project work/case study/field study/survey/seminar/workshop	10
Total		**40**

5.2.**External Examination (Final Examination) 60%**

Examination Section, Office of the Dean, Faculty of Education will conduct final examination at the end of semester.

S.N	Types of question	Marks
1	Objective type questions (Multiple choice questions 10x1 mark)	10
2	Short answer questions (6 questions with 2 OR questions x 5 marks)	30
3	Long answer questions (2 questions with one OR questions x 10 marks)	20
Total		**60**

6. Recommended books and references

6.1 Recommended Books

Barclay, G.W. (1953) *Techniques of population analysis*. New work: Wiley **(for Unit I-V)**.

Mishra, B.D. (1981). An introduction to the study of population, New Delhi: South Asian Publisher. (For units I-V)

PRB. (1998). *Population hand book*. Washington D.C.: Population Reference Bureau. **(for Unit I-V)**

Ross, J.A. (ed.) (1992). *International encyclopedia of population, vol. I and II*.New York : Free Press **(for Unit I-V)**

Shryock, H. S. et al. ((1973). *The methods and materials of demography (condensed version)*

washington D.C.: Government Printing Office **(Unit I-V)**

Singh, M. L. & Syami, S.B. (1999). *An introduction to mathematical demography*. Kathmandu:

UN. (1983). Indirect techniques for demographic estimation (Manual X)., New York: United Nations. **(for Unit I-V)**

1.1 References

Adhikari, M.R. (2069 BS). *Demographic Analysis II, Indirect techniques*. Kathmandu: Pinnacle Publication.

G.C., Bishnu (2068 BS). *Demographic analysis II, indirect techniques*. Kathmandu: Sunlight Publication.

Paudel, B. (2069 BS). *Demographic analysis II, indirect techniques*. Kathmandu: Intellectual Book Palace.

Pop. Ed. 528: Population Planning and Management

Course No. : Pop.Ed. 528 Nature of course: Theoretical
Level: M. Ed. Credit hours: 3
Semester: Second Teaching hours: 48

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1. Course Introduction

This course is designed to acquaint the students with knowledge and skills about population policies, planning and management issues with reference to Nepal.

2. General Objectives

The general objectives of this course are as follows:

- To enhance students' knowledge and understandings of the population policies, planning and management.
- To develop the critical understanding about the global population policies and programs.
- To make the students familiarize with the concept of population planning.
- To make the students familiarize with the process of population management.
- To enable the students to understand the basic approach of population management.

3. Specific Objective and Contents

Specific Objectives	Contents
▪ Discuss on concept and types of population policies. ▪ Analyze the ICPD, 1994. ▪ Analyze the Beijing, 1995. ▪ Review on the MDGs. ▪ Discuss sustainable development goals (SDGs).	**Unit- I Major Population Policies and programs (10)** 1.1 Concept and types of population policies 1.2 Population policies in ICPD, 1994 1.3 Population policies in Beijing, 1995 1.4 Review of millennium development goals (MDGs) 1.5 Sustainable development goals(SDGs)
▪ Explain the meaning, definition and characteristics of population policy. ▪ Discuss the population policies in current periodic plan of Nepal. ▪ Describe the PPP in Nepal.	**Unit-II Population Policies and programs in Nepal (10)** 2.1 Concept and evolution of population policies in Nepal 2.2 Characteristics of Nepalese population policy 2.3 Population policy and program in current periodic plan of Nepal 2.4 Population perspective plan (PPP)

▪ Discuss different sectors of planning. ▪ Explain the age-sex structure in planning in the context of Nepal. ▪ Describe the family planning in Nepal.	**3.1 Concept of population planning** **3.2 Need and importance of population planning** **3.3 Different sectors of planning (Health, education, employment, human resource, occupation)** **3.4 Age-sex structure and its implication in planning in the context of Nepal** **3.5 Family planning program in Nepal**
▪ List out the various approaches of management. ▪ Describe the main approaches of population management. -	**Unit- IV Basic Approaches of Population Management (8)** **4.1 Population change approach** **4.2 Training approach** **4.3 Motivational and incentives approach** **4.4 Human resource development approach** **4.5 Integration approach**
▪ Explain the concept of population management. ▪ Discuss the evolution, need and importance of population management. ▪ Describe the role of different organizations in population management. ▪ Analyze the issues and challenges in population management (e.g.,demographic, demographic dividend, negative population growth, uneven distribution, brain drain, etc.).	**Unit- V Population Management in Nepal (10)** **5.1 Concept of population management** **5.2 Need and importance of population management** **5.3 Evolution of population management in Nepal** **5.4 Role of different organizations in population management** **5.5 Issues and challenges in population management**

Note: *The figures within the parenthesis indicate the approximate teaching hours allocated to respective units.*

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. The first group consists of general instructional techniques applicable to most of the units.

The second group consists of proposed specific instructional techniques applicable to specific units.

4.1. General Instructional Techniques

- Lecture
- Document review
- Discussion
- Collaborative works/learning
- Brainstorming
- Presentation
- Guest speech
- Project work
- Collaborative learning
- Interaction
- Research based learning activities

4.2. Specific Instructional Techniques

Units	Activities and Instructional Techniques
I	Review of books, population monograph, statistical year books, National planning reports, survey reports etc. and discuss on them. Conducting group work, report writing and presenting through seminar.
II	Review of books, population monograph, statistical year books, ICPD reports, Beijing report, MDG report and PPP report, survey reports etc. and discuss on them. Conducting group work, report writing and presenting through seminar.
III	Review of books, population monograph, statistical yearbooks, National planning reports, survey reports etc. and discuss on them. Conducting group work, report writing and presenting through seminar.
IV	Review of books, population monograph, statistical yearbooks, National planning reports, survey reports etc. and discuss on them. Conducting group work, report writing and presenting through seminar.
V	Review of books, population monograph, statistical yearbooks, National planning reports, survey reports etc. and discuss on them. Conducting group work, report writing and presenting through seminar.

5. Evaluation

5.1.Internal Evaluation 40%

Internal evaluation will be conducted by the subject teachers based on the following aspects:

S.N	Particular	Marks
1	Attendance	5
2	Participation in learning activities	5
3	First assessment: Article review/ book review/ open book test/ unit test, etc.	10
4	Second assessment: Midterm test	10
5	Third assessment: Project work/case study/field study/survey/seminar/workshop	10
Total		**40**

5.2. External Examination (Final Examination) 60%

Examination Section, Office of the Dean, Faculty of Education will conduct final examination at the end of semester.

S.N	Types of question	Marks
1	Objective type questions (Multiple choice questions 10 x 1 mark)	10
2	Short answer questions (6 questions with 2 OR questions x 5 marks)	30
3	Long answer questions (2 questions with 1 OR questions x 10 marks)	20
Total		**60**

6. Recommended books and references

6.1 Recommended Books

Adhikari, D.R. (2008) *Human resources management text and cases*. Kathmandu: Buddha Academic (For Unit- IV- V)

Agrawal, G.R. (2014) *Human resources management in Nepal*. M.K. Publisher and Distribution, Ktm. (For Unit- IV- V)

Jhingan, M.L. (1997). *Economics of development and planning*. India: Konark Publication PVT. Ltd (For Unit- II- III)

Millennium Development goals. (2002). UNDP, NPC/HMG, Nepal. (For Unit- II)

NPC (2007) Three year interim plan (2006/07 - 2009/10) Kathmandu Author. (For Unit- I-II)

NPC (2010). *Nepal millennium development goals progress report*. Kathmandu: Author. (For Unit- I-II)

Report of the fourth world conference (1995). Beijing, China. (For Unit-II)

Report of the international conference on population and development (1994). Cairo, Egypt. (For Unit-II)

UN (2011). *Human development report:* New York: Author (For Unit- I-V)

6.2 **References**

CBS (2013). *Population National Report- Central Bureau of Statistics,* Kathmandu. MoHP (2013). *Annual Population Report of Nepal*. Kathmandu Author.
UNESCO (2004). *Planning Human Resources: Methods, experience and practices*. Paris: Author

Ministry of State for Planning (2012). *National Development and Vision 2030*. Kenya Population Policy for National Development. Nairobi, Kenya

Pop. Ed. 529: Population and Development
Course No. :Pop. Ed. 529 Nature of course: Theory
Level: M. Ed. Credit hours: 3
Semester: Second Teaching hours: 48

1. Course Introduction

This course is designed to provide the students with knowledge and skills about the activities of population and development issues with reference to Nepal. Specifically, this course intends to provide the prospective teachers with critical knowledge on population and development activities.

2. General Objectives

The general objectives of this course are as follows:

- To enable the students to acquire knowledge on the population development.
- To develop the understanding about the basic issues in development.
- To make the students familiarize with the concepts of population and economic development.
- To make the students familiarize with the process of population and sustainable development
- To enable the students to understand the global issues of population and development.

3. Specific Objective and Contents

Specific Objectives	Contents
▪ Discuss on the meaning and importance of development. ▪ Analyze the indicators of development with their measurement. ▪ Discuss the policies of current periodic plan. ▪ Review the current population status of developed and developing countries.	**Unit- I Concept and measurement of development 10** 1.1 Meaning and importance 1.2 Indicators and measurement of development (Per capita Income, GDP,GNP, Basic needs approach, PQLI, HDI, GEM, GDI, HPI, MDPI and Gini coefficient 1.3 Policies on population and development(Education, employment, health and housing) 1.4 Current population status among developed and developing countries
▪ Explain the population growth. ▪ Discuss the inequality of development. ▪ Describe the gender issues in development and social inclusion and exclusion. ▪ Analyze the human and child rights.	**Unit- II Basic issues in development (10)** 2.1 Population growth (Causes and consequences) 2.2 Inequality of development 2.3 Gender issues in development 2.4 Social inclusion and exclusion 2.5 Human and child rights

▪ Explain the meaning and importance of economic development. ▪ Discuss economic growth.	**Unit- III Population and Economic Development 10** 3.1 Meaning and importance of economic development
▪ Explain the linkage among poverty, unemployment and income. ▪ Describe the Lewis model. ▪ Discuss human capital theory. ▪ Explain Rostow's stage of economic development.	3.2 Meaning and importance of economic growth 3.3 Population growth and economic development 3.4 Linkage among poverty, unemployment and income (Lewis Model) 3.5 Lewis model on economics of labour transfer and rural-urban migration 3.6 Human capital theory 3.7 Rostow's Stage of economic development
▪ Explain the meaning and importance of sustainable development. ▪ Discuss the population pressure on the natural resources. ▪ Describe the world Summit on sustainable development, 2002 (including the recent summit). ▪ Explain the eco-tourism in Nepal. ▪ Describe the role of GOs, NGOs and INGOs	**Unit- IV Population and sustainable development 10** 4.1 Meaning and importance of sustainable development 4.2 Sustainable development goals (SDGs) 4.3 Population pressure on natural resources 4.4 World Summit on sustainable development, 2002 (including the recent summit) 4.5 Eco-tourism with special reference to Nepal 4.6 Role of GOs, NGOs and INGOs in sustainable development
▪ Explain the meaning and importance of globalization ▪ Discuss on the major global issues in population ▪ Describe the global policies on population ▪ Analyze the demographic impact on globalization	**Unit- V Globalization and Population development 8** 5.1 Meaning and importance of globalization 5.2 Major global issues on population and development in developed and developing countries 5.3 Global policies on population and development 5.4 Demographic impact on globalization

Note: The figures in the parenthesis indicate the approximate periods for the perspective units.

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. The first group consists of general instructional techniques applicable to most of the units. The second group consists of proposed specific instructional techniques applicable to specific units.

4.1.General Instructional Techniques

- Lecture
- Document review
- Discussion
- Collaborative works/learning
- Brainstorming
- Presentation
- Guest speech
- Project work
- Collaborative learning
- Interaction
- Research based learning activities

4.2. Specific Instructional Techniques

Units	Activities and Instructional Techniques
I	Review of books, population monograph, statistical year books, international publication, survey reports etc. and discuss on them. Conducting group work, report writing and presenting through seminar.
II	Review of books, population monograph, statistical year books, ICPD reports, Beijing report, survey reports etc and discuss on them. Conducting group work, report writing and presenting through seminar.
III	Review of books, population monograph, statistical year books, National planning reports, survey reports etc. and discuss on them. Conducting group work, report writing and presenting through seminar.
IV	Review of the books, population monograph, statistical year books, National planning reports, survey reports etc and discuss on them. Conducting group work, report writing presenting through seminar.
V	Review of books, statistical year books international publication, survey reports etc and discuss on them. Conducting group work, report writing and presenting through seminar.

5.Evaluation

5.1 Internal Evaluation 40%

Internal evaluation will be conducted by the subject teachers based on the following aspects:

S.N	Particular	Marks
1	Attendance	5
2	Participation in learning activities	5
3	First assessment: Article review/ book review/ open book test/ unit test, etc.	10
4	Second assessment: Midterm test	10
5	Third assessment: Project work/case study/field study/survey/seminar/workshop	10
Total		**40**

5.2 External Examination (Final Examination) 60%

Examination Section, Office of the Dean, Faculty of Education will conduct final examination at the end of semester.

S.N	Types of question	Marks
1	Objective type questions (Multiple choice questions 10x1 mark)	10
2	Short answer questions (6 questions with 2 OR questions x 5 marks)	30
3	Long answer questions (2 questions with one OR questions x 10 marks)	20
Total		**60**

6. Recommended books and references

6.1 Recommended Books

Jhingan, M.L. (1997). *Economics of development and planning*. India: Konark Publication PVT. Ltd

NPC (2020). *Fifteenth plan* (2019/20-2023/24). Kathmandu: Author.

NPC (2010) *Nepal millennium development goals progress report*. Kathmandu Author. Report of the Fourth World Conference (1995).Beijing, China.

Report of the International Conference on Population and Development (1994). Cairo, Egypt .UN (2011) Human Development Report: New York: Author

World Bank.(2007). World development report. Washington: World Bank.

6.2 References

Dhital, N.P. &, Khanal, T. (2069). *Population and development.* Kathmandu: Pinnacle Publication.

CBS (2013). Population national report- Central Bureau of Statistics, Kathmandu. Dahal, M. K. & Dev, R. D. (1998).Environment and sustainable development, issues in Nepalese perspective. Kathmandu: NEFAS. Kathmandu MoHP (2013), *Annual population report of Nepal.* Kathmandu Author.

UNESCO (2004). *Planning human resources: Methods, experience and practices*. Paris: Author

UN(2021**).** *Human development report.* New York: Author

World Bank.(2021). *World development report.* Washington: World Bank.

Physical Education

P. Ed. 525: Exercise Physiology and Sports Medicine

Course No:P.Ed.525 | Nature of course: Theoretical

Level: M.Ed. | Credit hours: 3

Semester: Second | Teaching hours:48

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1. Course Introduction

This course has been designed with the purpose to equip students with the basic and advanced concepts, knowledge, and approaches of sports medicine and exercise physiology. Prevention of sports injuries, a balanced diet for athletes and doping in physical activity and sports are the key issues and aspects of sports medicine that intend to develop necessary knowledge and skills of sports medicine among the prospective students. In this subject, exercise physiology, the effects of exercise on different types of muscles and human body systems as well as the relation between exercise and human health are dealt with.

2. General Objectives

The general objectives of this course are as follows:

- To enable students to explain the concepts, objectives and importance of exercise physiology in sports.
- To enable students to analyze the muscular structures and functions.
- To make the students enable to analyze the effects of exercise on different human body systems.
- To facilitate the students to examine the meaning, importance, goal, rule, and classification of physiotherapy and therapeutic exercise in sports.
- To develop understanding of sports medicine in physical activity and sports.
- To make the students capable to take prevention and handling sports injuries in the field of physical activity and sports.
- To make the students capable to plan nutrient and balanced diets for athletes and aware of doping in physical activity and sports.

3. Specific Objectives and Contents

Specific Objectives	Contents
• Define the exercise physiology. • Explain the need and importance of exercise physiology. • Analyze the role of exercise physiology in human living and health. • Illustrate the use of exercise to develop and entertain fitness.	**Unit I: Exercise Physiology (5)** 1.1 Concept and definition of exercise physiology 1.2 Need and importance of exercise physiology 1.3 Role of exercise physiology in human living and health 1.4 Fitness and exercise
• Illustrate the types of skeletal muscles. • Analyze the structures of skeletal muscles. • Discuss the types of muscle contraction. • Explain the contractile process of muscles. • Describe the sliding Filament theory concerning energy release.	**Unit II: Muscular structure and Functions in Human movement (7)** 2.1 Types and structures of skeletal muscles 2.2 Types of muscle contraction during the contractile process 2.3 Sliding Filament theory concerning energy release
• Explain the effects of exercise on the respiratory system. • Discuss the effects of exercise on the circulatory system. • Describe the effects of exercise on the stele to the muscular system. • Illustrate the effects of exercise in the excreta-digestive system.	**Unit III: Effects of exercise in human body systems (8)** 3.1 Effects on the respiratory system 3.2 Effects on the circulatory system 3.3 Effects on skeletomuscular system 3.4 Effects on excreta-digestive system 3.5 Oxygen debt and recovery process
• Define the physiotherapy and therapeutic exercise. • Explain the goal and rule of treatment through physiotherapeu of the exercise. • Describe the classification the rapeutic exercise. • Illustrate the effect of exercise in controlling body fat, hypertension and sugar level.	**Unit IV: Physiotherapy and Therapeutic Exercise (8)** 4.1 Meaning and importance of physiotherapy and therapeutic exercise. 4.2 Goals and rules of treatment through exercise 4.3 Classification of therapeutic exercise 4.4 Exercise in controlling body fat, hypertension, and diabetes

• Explain the meaning and definition of sports medicine. • Discuss the needs, importance, and objectives of sports medicine. • Illustrate the scope of sports medicine • Apply the sports medicine in the sports field	**Unit V: Sports Medicine (5)** 5.1 Meaning and definition of sports medicine 5.2 Needs importance and objectives of sports medicine 5.3 Scopes of sports medicine 5.4 Use of sports medicine in the sports field
• Describe the meaning and types of sports injuries. • Explain the mechanism of common sports injuries and their preventive measures. • Discuss the causes, signs, preventive measures, and first aid of sports injuries. • Demonstrate the immediate care and treatment for simple sports injuries. • Explain the basic steps to reduce the risk of sports injuries.	**Unit VI: Sports Injuries (7)** 6.1 Meaning and types of sports injuries 6.2 Causes, Signs, Preventive measures and first aid treatment of following sports injuries:- sprain and strain, fracture, dislocation, cramps, shinsplints, tennis elbow/lateral epicondylitis,and stress fracture 6.3 Immediate care and treatment for simple sports injuries 6.4 Prevention of sports/athletic injuries 6.5 Basic steps to reduce the risk of sports injuries
• Define the meaning of nutrition and a balanced diet for athletes. • Explain and analyze the functions and factors affecting a balanced diet. • Delineate the elements of nutrient food/balanced diet. • Analyze the daily energy requirement of diet. • Illustrate the planning/tips of diet for athletes. • Enable the plan pre-competition and competition diet for athletes. • Clarify the concept of glycogen loading, dehydration, and rehydration in sports. • Explain the concept and intention of doping in sports. • Differentiate and clarify the use, misuse, and abuse of different drugs in sports.	**Unit VII: Nutrition and Balanced Diet for Athletes (8)** 7.1 Meaning of nutrition and balanced diet 7.2 Functions and factors affecting balanced diet 7.3 Elements of nutrient food/balanced diet 7.4daily energy requirements of diet for athletes 7.4 Planning/tips of diet for athletes 7.5 Planning of pre-competition and competition diet for athletes 7.6 Glycogen loading, dehydration, rehydration 7.7 Doping in Sports 7.7.1 Concept and intention of doping sorts 7.2.2 Use, misuse, and abuse of different drugs in competitive sports 7.7.3 Effects of drugs on the health of athletes

• Highlight the effects of different drugs on the health of athletes. • Discuss the concept of blood doping in the sports field and its hazards to the health of athletes. • Explain and analyze the laws and punishment for doping in sports.	7.7.4 Blood doping and its hazards in the health ofathletes 7.7.5 Laws and punishment for doping in sports

Note: *The figures within parentheses indicate the approximate teaching hours allotted to the respective unit.*

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. The first group consists of general instructional techniques applicable to most of the units. The second group consists of proposed specific instructional techniques applicable to specific units or sub-units or content.

4.1. General Instructional Techniques

- Lecture, discussion, question, and answer
- Participatory approach
- Guest lecture
- Demonstration
- Library work
- Book review, article review
- Group discussion, presentation
- Workshop, Seminar, group work
- Assignment, presentation interaction
- Project work.

4.2. Specific Instructional Techniques

Unit	Activity and instructional techniques
I	• The students will be given a group assignment to prepare a report and present it in the class on the role of human living, health, and exercise for keeping fit themselves.
II	• The students will be given reading materials in groups and they will take notes and review the types and structures of muscles

	• Group works will be given to the students on the types of muscular contraction and present in the class. • Multi-media will be used to interact with the Sliding Filament Theory.
III	• The floor will be open to discuss and collect on the effects/opinion of exercise in the cardio-respiratory system during class time. • Group assignments will be given to the students to collect the effects on skeletomuscular and excreta-digestive systems and present them in the class turn by turn.
IV	• Reading materials will be given to the students and collect the points for presentation in groups relating to physiotherapy and therapeutic exercise.
V	• The students will be given some reading materials in groups and they will take notes and review the introductory parts. • The students will discuss and interact on the meaning, definition, needs, importance, and objectives of sports medicine through a participatory approach. • The students will be given group assignments on preparing and presenting scopes and use of sports medicine in physical activity and sports and present their works turn by turn in the class.
VI	• The students will discuss the meaning and importance of safety education in sports based on previous knowledge. • The students will conduct a question and answer session in the class to clarify the needs and objectives of sports safety. • The teacher will present the mechanism of common sports injuries and preventive measures in the class and keep the floor open for discussion and question-answer sessions to clarify the main theme of the subject matter. • The students will be given individual assignments on different sports injuries. They will prepare their assignments incorporating causes, symptoms, preventive measures, and first aid treatment and present them in the class. • There will be an interaction and discussion on the needs and importance of personal hygiene in sports.

5. Evaluation

5.1 Internal evaluation-40%

Internal evaluation will be conducted by subject teachers based on the following activities:

SN	Activities	Marks
1	Attendance	5
2	Participation in learning activities	5
3	First assignment/ assessment	10
4	Second assignment/assessment	10
5	Third assessment	10
Total		**40**

5.2 External Examination (Final Examination) 60%

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester. The types and number of questions to be included in the final paper are as follows:

SN	Types of questions	Marks
1	Objective type questions (multiple choice 10x1 marks)	10
2	Short answer questions (6 with two OR questions x 5 marks)	30
3	Long answer questions (2 with one OR questionsx 10 marks)	20
Total		**60**

6. Recommended books and References

6.1 Recommended books

Barrow, H. M. (1977). *Man and movement:* Principles of physical Education Philadelphia: (Unit II and III).

Davis, B., Bull, R., Roscoe, J. & Roscoe, D. (2000). *Physical education and the study of sport*. Spain: Mosby Harcourt Publishers Limited (Unit I, II, and III)

Karpovich, P. V. & Sinning, W. E. (1976). *Physiology of Muscular Activity***.** Philadelphia: W. B. Saunders coy (Unit I, III, and IV).

Khanna, G. L. & Jayaprakash, C. S. (1990). *Exercise physiology and sports medicine.*

Patiala: Lucky Enterprises (Unit I, II, III, IV, and VII).

Lamb, D. R. (1984). *Physiology of exercise:* Responses and Adaptations New York: Macmillan Pvt. Co (Unit I, III, and IV).

Mirken, G. & Hoffman, M. (1978). *The sports medicine book*. Boston: Little Brown and company (Unit IV, V, and VI).

Singh, A., Bains, A., Gill, J. S. & Brar, R. S. (2012). *Essential of physical education***.** New Delhi, India: Prentice-Hall of India Private Limited (Unit I to VII)

6.2 References

Baruwal, H. B., Shrestha, S. B., Taradatta, B. M., Shrestha, M. K. & Paudyal, T. R. (2017). ***Sports science and games****.* Kathmandu: Pinnacle Publication Pvt. Ltd.

Putalisadak Eriksso, B. O. & et al (1990). *Sports medicine, health, and medication****.*** London: Gunness Publishing Ltd.

Frost, R. (2002). ***Applied kinesiology.*** California: North Atlantic Books. Pande, P. K. (1989). ***Know how sports medicine.*** Jalandhar: A. P. Publishers.

Robert, A. R. & Steven J. K. (2003). *Fundamentals of exercise physiology: for fitness, performance, and health.* New York: McGraw-Hill

Shaver, L. G. (1981). ***Essentials of exercise physiology.*** Delhi: Surjeet Publications, Kolhapur Road.

Sherchan, L. (2018). ***Sports science and games*****.** Kirtipur:: Quest Publication.

Tenenbaum, G. & Elkund, R. (2007). *A handbook of sports psychology* (3rd ed). New Jersey: John Wiley & Sons, Inc.

P. Ed. 526: Training, Coaching and Officiating

Course No: P. Ed.526 Nature of course: Theoretical

Level: M.Ed. Credit hours: 3

Semester: Second Teaching hours: 48

1. Course Introduction

This course is designed to give students the advanced knowledge, ideas, and strategies of training, coaching, and officiating in sports. It is intended to acquaint students with underlying rules, methods, and strategies of training and scientific principles applied to different sports training. This course also aims to orient students with basic and advanced principles and strategies of training, coaching, and officiating in the sports field.

2. General Objectives

The general objectives of this course are as follows:

- To enable the students to explain various trainings, methods and conduct training in different sports as per rules and scientific principles of training applied in different groups.
- To develop the advanced knowledge, skills, and strategies of coaching in students and build capacity to conduct coaching programs in different sports by applying various scientific principles.
- To build capacity and develop skills of officiating among prospective teachers and make them enable to do officiating duty in different sports competitions.

3. Specific Objectives and Contents

Specific Objectives	Contents
• Discuss the concept, objectives, and importance of sports training. • Explain the characteristics and principles of sports training. • Describe the means, Process of training, and sports performance. • Discuss the meanings, factors, and judgment of load. • Explain the relation of load and recovery, pace means of recovery,	**Unit I: Sports Training (20)** 1.1 Concept, objectives, and importance of sport training 1.1.1 Characteristics and Principles of sport training 1.1.2 Training process and sport performance Means of sport training 1.1.3 Balance

and tackle of overload.	1.2 Periodization and planning 1.2.1 Concept of periodization and planning 1.2.2 Principles of Planning 1.2.3 Planning of training program in sports 1.2.4 Factors to be considered in planning and training programs in sports. 1.2.5 Criteria for the selection and placement of players
• Explains the concept and objective of coaching in sports. • Analysis of the needs and importance of coaching. • Discuss the basic principles of coaching. • State the characteristics of coaching. • Discuss the concept, need, and importance of a coach in sports. • Describe the different qualities of a coach. • Explain professional training and education for a coach. • Describe the different duties and responsibilities of a coach in sports. • Discuss the coaching ethics and strategies for a successful coaching program. Analyze the problem of coaching in Nepal and present solutions to overcome the problems.	**Unit II: Coaching in Sports (16)** 2.1 Concept andobjectives of coaching in sports. 2.2 Needs and importance of coaching 2.3 Basic Principles of coaching 2.4 Characteristics of coaching 2.6Concept, needs, and importance of a coach. 2.6 Qualities of a good coach 2.6.1Education qualities 2.6.2Professional qualities 2.6.3 Moral/ ethical qualities 2.6.4 Social qualities 2.7 Professional training and education of the coach 2.8 Duties and responsibilities of the coach 2.8.1 Pregame duties 1.2.6 On-game duties

	2.8.3 Post-game duties 2.9 Coaching ethics 2.10 Strategies for successful coaching program 2.11 Problem of coaching in Nepal and its solution
	Unit III: Officiating in Sports (12)
• Discuss the concept and objectives of officiating. • Explain the need and importance of officiating. • Apply the principles of officiating in a real game situation. • Explain the qualities and duties of a referee and umpire. • Analyses and discuss the standards of officiating. • Identify the supporting factors of officiating. • Discuss the issues and challenges in officiating. • Describe the responsibilities of officials in major games and athletic events.	3.1 Concept and objectives of officiating 3.2 Need and importance of officiating 3.3 General principles of officiating 3.4 Qualities and duties of an official (Referee or Umpire) 3.5 Essential ingredients of officiating 3.6 Improving the standards of officiating 3.7 Supporting factors of officiating 3.8 Issues and challenges in officiating 3.9 Officials and their responsibilities in major games and athletic events

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. The first group consists of general instructional techniques applicable to most of the units. The second group consists of proposed specific instructional techniques applicable to specific units or sub-units or content.

4.1. General Instructional Techniques

Following general instructional techniques will be used to deal with all units and contents given in the course:

- Lecture
- Discussion
- Question and answer
- Interaction
- Project work
- Individual study
- Guest lecture
- Participatory approach
- Group work and presentation

4.2. Specific Instructional Techniques

Unit	Activities and Instructional Techniques
I	• The students will be divided into different groups; they will work together, discuss and present their assignments. • The students will organize a seminar on the topic given by the subject teacher, prepare a paper, and present it in the class. • The students will be divided into various groups, work in groups, and present turn by turn in the class.
II	• The student will be given study materials which they will review, discuss and present the meaning, objective, needs, and importance of coaching in sports. • The students will be divided into several groups and given assignments on basic principles of coaching, characteristics of coaching, and periodization of coaching. • The student will individually plan the coaching schedule and program in different sports. • The Subject teacher will manage a guest lecture to clarify the meaning, definition, needs, and importance of a coach and also to present the qualities of a good coach in the class. • The students will organize an interaction and question-answer session to share their views on the professional training and education of a coach. • The students will be given project works to prepare and present the material on the duties and responsibilities of the coach. • A seminar will be organized and the students will present papers on problems of coaching in Nepal and its solution and a question and answer session will be

	conducted.
III	• The students will be given materials to present in their groups. • The students will be given the assignment to prepare the notes on the principle of officiating and the qualities/duties of officials. • The students will organize a seminar on the title given by the teacher, prepare a paper, and present it in the class. • The students will be divided into various groups, work in groups, and present turn by turn in the class. • The students will organize a workshop on the given title. • The student will be given different titles. They will demonstrate one by one through a projector.

5. Evaluation

5.1 Internal evaluation 40%

Internal evaluation will be conducted by subject teachers based on the following activities:

S.N	**Activities**	**Marks**
1	Attendance	5
2	Participation in learning activities	5
3	First assignment/ assessment	10
4	Second assignment/assessment	10
5	Third assessment	10
Total		**40**

5.2 External Examination (Final Examination) 60%

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester. The types and number of questions to be included in the final paper are as follows:

SN	Types of question	Marks
1	Objective type questions (multiple choice 10x1 mark)	10
2	Short answer questions (6 with two OR questions x 5 marks)	30
3	Long answer questions (2 with one OR questions x 10 marks)	20
Total		**60**

6. Recommended Books and References

6.1 Recommended Books

Bucher, C.A. (2009). *Foundations of physical education.* New Delhi: Surjeet Publications (Unit I)

Reddy, P.S.A. (2009). *Sports officiating and coaching*. New Delhi: Sports publication (Unit II and III)

Sharma, P. D. (1991). *Officiating and coaching***.** Jalandhar: A.P. Publishers (Unit II and III). Singh, A., Bains, J., Gill, S. J., Brar, S. R. (2012). *Essentials of physical education.*

Bangalore India: Kalyani Publication (Unit I and II)

Singh, H. (1995). *Science of sports training*. New Delhi: DVS Publications (Unit I, II, and III).

Vanaik, A. & Khalon, D. S. (2005) *Officiating and coaching in physical education*. New Delhi: Friends Publication. (Unit I, II, and III).

6.2 References

Arnheim D. D. & William, E. P. (1993). *Principles of athletic training*. St. Louis: Mostly yearbook.

Baruwal, H. B., Shrestha, S. B., Taradatta, B. M., Shrestha, M. K. & Paudyal, T. R. (2075). *Sports training in physical education***.** Kathmandu: Pinnacle Publication Pvt. Ltd. Putalisadak

Bunn, J.W. (1972). *Scientific principles of coaching***.** New Jersey: Prentice-Hall, Inc. Sherchan, L. (2013). *Sports training and evaluation in physical education.* Kirtipur,

Kathmandu: Quest Publication.

Thompson, P. J. (1991). *Introduction to coaching theory.* Monaco: International Amateur Athletic Federation (IAAF).

P. Ed. 528: Management of Games and Sports
Course No.: P. Ed. 528 Nature of course: Theoretical

Level: M.Ed. Credit hours: 3

Semester: Second Teaching hours: 48

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1. Course Introduction

This course is designed to develop knowledge on administration, management, and supervision in games and sports. It also seeks to provide practical experience to the students about administrative and supervisory techniques.

2. General Objectives

The general objectives of this course are as follows:

- To enable students to discuss the concept of administration and supervision in physical education.
- To impart knowledge about the principles of administration and supervision in physical education.
- To acquaint the students with the functions, qualities of administrators and supervisors.

3. Specific Objectives and Contents

Specific Objectives	Contents
• Describe the concept and scope of administration and management in games and sports. • Discuss the administrative duties of the physical education administrator. • Describe the importance of administrative leadership in games and sports.	**Unit: I Administration and Management process (12)** 1.1 Concept, definition, and importance of administration andmanagement in games and sports 1.2 Scope of administrative management 1.3 Duties of administrator 1.4 Administrative leadership 1.5 Qualifications of the administrator
• Discuss the administrative theories applied in games and sports. • Explain the guiding principles of administrative organization. • Prepare an organizational chart of the personnel of the university campuses, and departments.	**Unit: II Administrative Theory (12)** 2.1 Importance of administrative theories for games and sports. 2.2 Traditional theories versus modern theories of administration in physical education. 2.3 Guiding principles of the administrative organization 2.4 Organization chart of personnel of University, Faculty of Education, Campuses, and Departments.

• List the sources of income and expenditure areas in physical education. • Explain the importance of human resource management in games and sports.	3.2 Facility Management 3.1.1 Facilities, equipment, and supplies 3.1.2 Care and maintenance of equipment and supplies 3.3 Fiscal Management 3.1.3 Income resources 3.1.4 Expenditure areas 3.4 Human Resource Management 3.3.1 Coaches, trainers, and teachers
• Describe the concept of supervision in physical education and games. • Explain the aims and objectives of supervision. • Describe the characteristics and principles of supervision. • Discuss the current situation of supervision in Nepal. • Clarify the concept of clinical supervision.	**Unit: IV Concept of Supervision in Physical Education and games (12)** 4.1 Concept, importance, and scope of supervision in physical education and games 4.2 Aims and objectives of supervision 4.3 Characteristics of supervision 4,4 Principles of supervision 4.5 Types of supervision 4.6 Concept of clinical supervision 4.7 Process and steps of clinical supervision 4.8 Issues and challenges of supervision in physical education
• Describe the role and functions of a supervisor. • enlist the qualities of a good supervisor. • Describe how the supervisor is trained.	**Unit: V The Supervisory Role (6)** 5.1 The role and functions of a supervisor 5.2 Qualities of a good supervisor 5. 3 Training of supervisors
• Describe the methods of supervision in physical education. • Conduct different methods of supervision in games and sports.	**Unit: VI Methods of Supervision (6)** 6.1 Visitation/ Observation 6.2 Conference 6.3 Demonstration 6.4 Bulletins display 6.5 Other methods (Seminar, workshop, in-service training)

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. The first group consists of general instructional techniques applicable to most of the units. The second group consists of proposed specific instructional techniques applicable to specific units or sub-units or content.

4.1 General Instructional Techniques

- Lecture
- Group discussion, presentation
- Review books

- Demonstration
- Question-answer
- Group Work
- Survey
- Workshop, Seminar

4.2 Specific Instructional Techniques

Unit	Activities and Instructional Techniques
I	• The students will be asked to find reading materials on the introduction of management in games and sports and let them discuss the meaning, scope, and Importance of management in games and sports.
II	• The students will organize a seminar on the topic given by, prepare a paper and present it in the class. • The students will organize a workshop on the title offered and conduct a workshop. • The students will be asked to prepare an organizational chart of the University and Department's personnel.
III	• The students will conduct a survey on available games and sports facilities within the campus premises to suggest the maximum utilization of the available facilities. • The students will be asked to discuss the process of developing human resources for games and sports in Nepal.
IV	• The students will be asked to review books to find the concept of supervision in physical education and games. • They will also be asked to discuss the current situation of supervision in physical education and games in Nepal.
V	• The students will be asked to discuss how the supervisors are trained in Nepal in the field of physical education and games.
VI	• The students will be asked to organize workshops, seminars on some assigned topics.

5. Evaluation

5.1 Internal Evaluation 40%

Internal evaluation will be conducted by subject teachers based on the following aspects:

S.N.	Particular	Marks
1	Attendance	5
2	Participation in learning activities	5
3	First assessment: Article review/ book review/ open book test/ unit test etc	10
4	Second assessment: Midterm test	10
5	Third assessment: Project work/survey/seminar/workshop/presentation	10
Total		**40**

5.2 External Examination (Final Examination) 60%

Examination Section, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester.

S.N	Types of questions	Marks
1	Objective type questions (Multiple choice 10x1 mark)	10
2	Short answer questions (6 questions with 2 or x 5marks)	30
3	Long answer questions (2 questions with 1 or x 10marks)	20
Total		**60**

4 Recommended Books and References

4.1 Recommended Books

Bucher. C.A. (1958). *Administration of school health and physical education programs.* Second Edition. U.S.A.: The C.V. Mosby Company.

Bucher. C.A. (1979). *Administration of physical education and athletics program***.** St. Louis: The C.V. Mosby Company.

Bucher. C.A. et al (2014). *Management of physical education and sport (13th ed).* New York:McGraw-Hill

Voltmer, E. F., Esslinger, A. A., McCue, B.F. & Tillman, K. G.. (1979). *The organization and administration of physical education.* New Jersey: Prentice-Hall. Inc.

4.2 References

Aroda, P. K. (1983). *Organisation administration and recreation in physical education*. India: Prakash Brothers

Kamlesh, M. L. (2000). *Management concepts in physical education and sport.* New Delhi: Metropolitan Book Co. Private Ltd.

Sherchan. L. (2073). *Management and supervision in physical education.*

Kirtipur: Quest Publication www.info.com/**Sports**+And+**Management**

P. Ed. 529: Racket Games and Field Games

Course No: P. Ed. 529 Nature of course: Practical

Level: M.Ed. Credit hour: 3

Semester: Second Teaching hour: 96

1. Course Introduction

This course is designed to develop advanced skills and apply game strategies in any one Badminton/Table Tennis/Kho-Kho/Kabaddi/ and Yoga. This course also intends to impart practical experiences by applying related principles in those games. The students have to choose any two activities (One from racket/field games and another is yoga) from this course where they are required to develop specific notes on their respective games. The main intention of this course is to apply advanced skills, strategies, scientific principles, and laws in their respective fields so that the students will be able to demonstrate skills properly, apply related strategies and laws in-game situations. It also intends to provide officiating experiences on their respective games.

2. General Objectives

The general objectives of this course are as follows:

- To provide knowledge on the historical development of Badminton/Table Tennis/Kho-Kho /Kabaddi and yoga.
- To make the students familiarize with the required skills in Badminton or Table Tennis and Kho-Kho or Kabaddi.
- To provide knowledge of competitive strategies and laws in their respective games.
- To enable the students to apply rules of officiating Badminton/Table Tennis/Kho Kho/ Kabaddi in real setting
- To provide knowledge and skills to perform and adopt the different yoga practices in daily life.

3. Specific Objectives and Contents

Part One: Badminton/Table Tennis/Kabaddi/Kho-Kho (Anyone)

Specific Objectives	Contents
• Explain the historical development of the badminton game. • Demonstrate different strokes in badminton. • Apply different coaching strategies of badminton games. • Officiate badminton game. Organize badminton tournament.	**Unit I: Badminton(48)** 1.1 Introduction and history of badminton game 1.2 Basic skills of badminton 1.2.1 Grip and stance; Stance (low, high, drive and flick) 1.2.2 Receive (forehand and backhand); 1.2.3 Footwork (walking step and stretching step) 1.2.4 Strokes (underhand and overhead) Clear and drops 1.3 Single's and double's play. 1.4 Coaching strategies in badminton 1.5 Rule, regulation and officiating Organization of badminton tournament

• Demonstrate different strokes in table tennis. • Plan different strategies for coaching table tennis. • Officiate table tennis game. • Organize table tennis tournament.	2.2.1 Grip (shake hand and pen holder) 2.2.2 Service (sidespin and backspin) 2.2.3 Receive (stance and footwork in singles and double's) 2.2.4 Strokes (forehand and backhand counter-attack, drive, chop, push, and half volley). 2.3 Single's and Double's play 2.4 Coaching strategies in table tennis 2.5 Rules, regulations and officiating 1.6 Organization of table tennis tournament
• Explain the historical development of the Kabaddi game. • Demonstrate different skills of Kabaddi. • Plan and apply different strategies for coaching Kabaddi. • Officiate Kabaddi game. Organize Kabaddi tournament.	**Unit III: Kabaddi (48)** 3.1 Historical development of Kabaddi 3.2 Skills of Kabaddi 3.2.1 Raiding (Cant, toe touch, kicking) 3.2.2 Fielding (Holding, trapping, and defending) 3.3 Rules and regulations of Kabaddi game 3.4 Training and coaching strategies in Kabaddi 3.5 Officiating Kabaddi game 2.1 Organization of Kabaddi tournament
• Explain the historical development of the Kho Kho game. • Demonstrate different skills ofkho kho. • Plan and apply different strategies for coaching Kho Kho. • Officiate Kho Kho game. • Organize the Kho Kho tournament.	**Unit IV: Kho Kho (48)** 4.1 Brief history of Kho Kho 4.2 Skills of Kho Kho 4.2.1 Running (Dodging, chain, and ring play) 2.2.2 Chasing (Sitting on the square, Kho giving, standing from the square, direction taking and teamwork) 4.3 Teaching/coaching techniques in Kho Kho 4.4 Rules and regulations 4.5 Officiating practice Organisation of Kho Kho tournament
Part Two: Yoga	
Specific Objectives	**Contents**
• Explain the concept of yoga. • Discuss the historical development of yoga. • Discuss the importance and rules of yogasanas. • Demonstrate the types of meditative and cultural poses of yoga asanas. Organize yogasanas practice.	**Unit: V Yoga: Introduction of Yoga (48)** 5.1 Concept of yoga and yoga asanas 5.1.1 History of yoga 5.1.2 Types of yoga 5.1.3 Astanga yoga (eight limbs of yoga) 5.1.4 Therapeutic effect of yoga for athletes 5.1.5 Importance and rules of yoga asanas 5.2 Yogasanas 5.2.1 Starting prayer 5.2.2 Yogic loosening and joint movements (eye, ear, face, neck, shoulder, elbow, wrist and finger, chest, hip, leg, ankle, and toes Surya namaskar(Sun salutation)

	5.3 Asanas 5.3.1 Meditative Poses • Padmasana (Lotus Pose) • Vajrayana (Kneeling Pose) • Sukhasana (Easy Pose) 5.3.2 Sitting poses • Ardha matsyaasan (Half Spinal Twist) • Paschimottanasan(Seated Forward Bend Pose) • Gaumukhasan(Cow Face Pose) 5.3.3 Supine Poses (Savasana) • Sarvangasana (Shoulder Stand Pose) • Halasan (Plough Pose) • Chakrasan (Wheel Posture) 5.3.4 Prone poses • Bhujanga asan (Cobra Posture) • Dhanurasana (Bow Pose) • Shalabhasana (Locust Pose) 5.3.5 Standing poses • Tadaasn (Standing Pose) • Vrikasan (Tree Posture) • Garodasan (Eagle Posture) 5.3.6 Balancing poses • Natrajasan (Dancing posture) • Uthitahastapadasan (Extended hand to toe posture) • Bakasan (Crow posture) 5.4 Pranayama (Breathing) 5.4.1 Chest breathing 5.4.2 Abdominal breathing 5.4.3 Left nostril breathing 5.4.4 Right nostril breathing 5.4.5 Alternate breathing 5.5. Bandhas 5.5.1 Mula bandha (Root Lock) 5.5.2 Uddiyana bandha (Abdominal Lock) 5.5.3 Jalandhar bandha (Chin Lock) 5.6 Meditation (Dhyan) 5.6.1 Nirmal Dhyan 5.6.2 Naadmul Dhyan 5.6.3 Navi chaitanya dhyaan 5.7 Ending Prayer 5.7.1 Shanti mantra 5.8 Shatkarmas (Cleansing) 5.8.1 Neti (Jalneti, sutraneti) Dhauti (Jaldhauti, kunjal)

Note: ***The figures within parentheses indicate the approximate teaching hours allotted to the respective unit.***

In practical classes 1 credit hour = 2 teaching hours

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. The first group consists of general instructional techniques applicable to most of the units. The second group consists of proposed specific instructional techniques applicable to specific units or sub-units or content.

4.1 General Instruction Techniques

- Lecture
- Demonstration
- Participation and practice
- Drill
- Group Work
- Project work and Presentation.

4.2 Specific Instructional Techniques

Unit	Activity and Instructional Techniques
I	• The teacher will explain the history of the badminton game and demonstrate all the skills required in badminton; the students will observe and participate in the activities along with the teacher. The students will also practice the skills as required. • The students will be asked to present the rules and regulations of badminton. • The students will be asked to organize a badminton tournament so that they can practice officiating.
II	• The teacher will explain the history of table tennis and demonstrate all the skills required in table tennis; the students will observe and participate in the activities along with the teacher. The students will also practice the skills as required. • The students will be asked to present the rules and regulations of table tennis. • The students will be asked to organize a table tennis tournament so that they can practice officiating.
III	• The teacher will explain the history of Kabaddi and demonstrate all the skills required in Kabaddi; the students will observe and participate in the activities along with the teacher. The students will also practice the skills as required. • The students will be asked to present the rules and regulations of Kabaddi. • The students will be asked to organize the Kabaddi tournament so that they can practice officiating.

IV	skills required in Kho Kho; the students will observe and participate in the activities along with the teacher. • The students will be asked to present the rules and regulations of Kho Kho. • The students will be asked to organize the Kho Kho tournament so that they can practice officiating.
V	• The teacher will explain the history of Yoga and demonstrate all the skills required in Yoga, the students will observe and participate in the activities along with the teacher. • The students will be asked to present the rules and regulations of Yoga. • The students will be asked to organize Yogasanas practice.

5. **Evaluation**

5.1 Internal evaluation-40%

Internal evaluation will be conducted by subject teachers based on the following activities:

SN	Activities	Marks
1	Attendance	5
2	Participation in learning activities	5
3	Performance	10
4	Tournament organization	10
5	Notebook keeping	10
Total		**40**

5.2 External Examination (Final Examination)-60%

Examination Division, Office of the Dean, Faculty of Education will appoint an external examiner to conduct a practical examination at the end of the semester.

SN	Types of activities	Marks
1	Performance in particular games and yoga	50
2	Oral test	10
Total		**60**

5. Recommended Books and References

6.1 Recommended Books

Sing, A., Bains, J., Gill, J. S., & Brar, R. S. (2012). *Essential of physical education.* New Delhi, India: Kalyani Publishers. (Unit I)

Goel, R. G. & Goel, Veena (1990).*Encyclopedia of sports and games***.** New Delhi: Vikas Publishing House Pvt. Ltd. (Unit I - III)

Jha, A. K. (2003).*Lay-out of games and sports*. Kathmandu: Ratna Pustak Bhandar. (Unit I – III)

Joshi, K. S. (1999).*Speaking of yoga and nature-cure therapy.* New Delhi, India: Sterling Publishers Private Limited. (Unit I)

Parker, D.(Nd). *Take up table tennis*. New Delhi: Learners Press. (Unit III)

Parker. D. & David, H. (1996). *Play the game table tennis*. London: Bland ford. (Unit III) YMCA (1981). *Rules of games and sports*. New Delhi: YMCA Pub. House. (Unit I – IV)

6.2 References

Pokherel, H. P. (2072). *Aarogya Mulbato.* Kathmandu: Vidhyarthi Publication.

Pokherel, H. P. (2073).*Manasagniko swadharma*. Lamjung, Nepal: Sarbodaya

Sewashram Saraswati, S. S. (2013). *Asana, pranayama, mudra and bandhas*.

Bihar, India: Yoga Publication Trust.

Singh, B. (1981).*Rules and skills of games and sports*. New Delhi: Pankaj Publication. (Unit I – III)

Sinha, P. (2008). *Yogic cure for common disease*. New Delhi, India: Orient Paperbacks. (Unit I)

Swami, M. (1998). *Haltha yoga pradipika***.** Bihar, India: Bihar School of Yoga.

Curriculum and Evaluation

ED. CE. 525: Curriculum Theory

Course no. ED. CE. 525 Nature of the course: Theoretical

Level: M. Ed. Credit hours: 3

Semester: Second Teaching hours: 48

1. Course Introduction

This is a specialization course in curriculum and evaluation designed for the M. Ed. programme. This course aims to equip the students with deeper knowledge and a theoretical understanding of curriculum phenomena. This course deals with introducing the curriculum theory, theorizing curriculum, the need for curriculum in the changing world, analysis of curriculum materials from various perspectives and the study of curriculum practices in Nepal.

2. General Objectives

The general objectives of this course are as follows:

- To enable the students to introduce the curriculum theory in detail including its concepts, theory-building process and politics in curricular decisions;
- To familiarize them with the different variables that lead to theorizing curricular phenomena;
- To make them able to explore knowledge, skills and attitude needed in the changing world in the 21st century;
- To enable them to analyze the components of curriculum materials using theoretical perspectives; and
- To make the students able to draw meanings, causes and consequences of curriculum practices in Nepal.

3. Specific Objectives and Contents

Specific objectives	Contents
• Elucidate the meaning of theory and curriculum theory • Illustrate the concepts, functions and sources of curriculum theory • Sketch the process of building theory. • Portray the curriculum as a political text • Show the relation of politics with the curriculum	**Unit I: Introduction to curriculum theory (10 hours)** 1.1 Concepts, functions and sources 1.2 Process of theory building 1.3 Reproduction theory 1.4 Politics in the curriculum 1.5 Reflections
• Present different orientations of curriculum theorizers • Illustrate various curriculum theorizing • Present argument for/against different orientations of curriculum theorizing	**Unit II: Curriculum theorizing (10 hours)** 2.1 Structure-oriented theories 2.2 Value-oriented theories 2.3 Content-oriented theories 2.4 Process-oriented theories 2.5 Reflections
• Examine the pattern of changes that impact skill demands. • Delineate the knowledge and skills needed to cope with the changes	**Unit III: Curriculum in the changing world (6 hours)** 3.1 Changes coming in the world - Automation - Globalization - Workplace change - Personal risks and responsibility

	3.2 Coping with the changes - Educational attainment - Fundamental knowledge and skills - Practical literacy - Broader competencies 3.3 Reflections
• Characterize modernism and structuralism against post-structuralism, postmodernism, and deconstructionism • Sketch out the link between postmodernism and schooling • Give an account of the historical background of the curriculum from a gender perspective • Analyze various components of curricula and textbooks from these perspectives	**Unit IV: Analysis of curriculum materials from various perspectives (10 hours)** 4.1 Modernist and structural perspectives 4.2 Post-structural perspectives 4.3 Reconstructionist perspectives 4.4 Deconstructionist perspectives 4.5 Postmodernist perspectives 4.6 Gender perspectives 4.7 Reflections
• Explain important recommendations made by various educational commissions, committees and authorities and why the recommendations were made and in what conditions • Explain important changes made in the school curriculum in Nepal and their impacts • Describe important features of the existing school level curricula in Nepal and relevant issues • Compare the expectations of various groups regarding curriculum and education • Explore ways forward for improving curricula and education	**Unit V: Study of curriculum practices in Nepal (12 hours)** 5.1 Historical recommendations: Their conditions and reasons 5.2 Historical changes and their impacts 5.3 The existing curricula and issues 5.4 Expectations of political, religious and ethnic groups 5.5 Ways forward: Policy measures and practical measures

Note: *The figures in the parenthesis indicate the approximate teaching hours for the respective units.*

4. Instructional Techniques

4.1 General Techniques

- Lecture with discussion
- Demonstration
- Home assignment and self-study

4.2 Specific Instructional Techniques

Unit	Activities and Instructional Techniques
	• The students will go through various sources of curriculum theory and find out the meaning of theory and theorizers. • They will prepare a paper on reproduction theory and curriculum. • Students will study various curricular aims and goals and explore views and

	ideologies these aims and goals represent.
	• The students will identify different camps of theorizers. • The students will present their views/ papers for discussion in the class.
	• The students will be assigned to explore and prepare report on the nature of changes that have an impact on skills demand. • The students will study the different skills needed to cope with the changes. • Reports will be presented in the class for discussion.
	• The students will be assigned to write a paper on the nature and impact of postmodern thinking on Nepalese society and school. • The students will figure out how genders are underrepresented, misrepresented, or overrepresented in textbooks and curricula. • The students will present at least one paper on an individual basis by studying at least one component or the unit of the school-level curriculum/ textbooks from various perspectives. • They will draw conclusions of the paper on the need to be emphasized in Nepalese school education and curriculum on a priority basis with conceptual clarity.
	• The students will study the historical turning points of curriculum changes, in what conditions and why the changes were made. Their positive and negative impacts will also be discussed. • Classroom discussion on the relevant issues of the existing curricula • The students will present various expectations of stakeholders regarding education and curriculum • Reports will be presented in the classes for discussion.

5. Evaluation

5.1 Internal Evaluation (40%)

The Internal Evaluation will be conducted by the course teacher based on the following activities.

1) Attendance	5 marks
2) Participation	5 marks
3) First assignment/book review/written assignment/quizzes	10 marks
4) Second assignment/paper writing and or presentation	10 marks
5) Third assessment/ written test	10 marks
Total	40 marks

5.2 External Evaluation (60%)

The Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester.

1) Objective type question (Multiple choice questions 10 ×1)	10 marks
2) Short answer questions (6 question with 2 OR × 5)	30 marks
3) Long answer questions (2 questions with 1 OR × 10)	20 marks
Total	60 marks

6. Recommended Books and References

6.1 Recommended Books

Glatthorn, A. A., Boschee, F., & Whitehead, B. M. (2009).*Curriculum leadership:*

Strategies for development and implementation (2nd ed.). USA: Sage.

Marsh, C. J., & Willis, G. (1999). *Curriculum: Alternative approaches and ongoing issues.* New Jersey: Prentice Hall.

Marsh, C. J. (2004). *Key concepts for understanding curriculum* (3rd ed.). USA: Routledge.

Ornstein, A. C., & Hunkins, F. P. (2004). *Curriculum foundations, principles and issues* (4th ed.). New York: Pearson.

Pinar, W. F. Reynolds, W. M., Slattery, P., & Taubman, P. M. (1995).*Understanding curriculum: An introduction to the study of historical and contemporary curriculum discourse.* New Work: Peter Lang.

6.2 **References**

Dealors Report (1996). *Learning the treasure within.* Report to UNESCO of the international commission on education for the twenty- first century.

Noddings, N. (2009).*The aims of education.* In David J. Flinders, and Stephen J. Hornton (Eds.). The Curriculum Studies Reader (3rd ed.). (pp. 425-438). New York: Routledge.

ED. CE. 526: Test Theory
Course No. ED.CD. 526 Nature of the course: Theoretical
Level: M. Ed. Credit hours: 3
Semester: Second Teaching hours: 48

1. Course Introduction

This is a specialization course designed for the M. Ed. Programme specializing in Curriculum and Evaluation. This course aims to equip the students with deeper knowledge and understanding of various concepts and the process of test theory and development. It covers the issues related to testing along with the concept of classical and modern test theories. This course also covers the practice and use of both classical and modern test theories and acquaints the students with different models of modern test theory. In addition, this course helps students to acquire essential knowledge for constructing the test and analyzing the effectiveness of each item of the test.

2. General Objectives

The general objectives of the course are as follow:

- To trace the historical development of test theory and the process of creating measurement instruments;
- To introduce the various issues in test and testing;
- To construct the test and analyze the effectiveness of each item of the test;
- To familiarize them with classical test theory and (CTT) modern test theory;
- To make them undertake item analysis concering CTT;
- To equip them with the concept and meaning of modern test theory; and
- To diagnose the effective and pathological items by observing the item characteristics curve (ICC).

3. Specific Objectives and Contents

Specific Objectives	Contents
• Define test and measurement • Trace the historical development of test and measurement in brief • Identify the major technological advancement and application in testing • Explain the process of creating a measuring instrument • Explore the major issues of test/testing in the context of schools and colleges in Nepal.	**Unit 1: Introduction to test (6)** 1. Concept of measurement and test 2. Historical development of measurement and test 3. General classification of test 4. Technological advancement in testing 5. The process of creating a measurement Instrument 6. Issues in test/testing in the context of school and college of Nepal (e.g. ethical and professional issues, influence of different interest groups)
• Analyse the objectives of the test (what a test aims to measure) based on their characteristics and criteria • Explain the process of developing a specification table and assess its	**Unit 2. Process of test construction (10 hours)** 1. Identifying the purposes of a test 2. Identifying behaviours to represent the construct 3. Domain sampling 4. Preparing test specifications 5. Wirting test items

quality • Write, with examples, the major considerations for preparing subjective and objective test items • Develop the knowledge and skills needed for item analysis. • Analyse the quality of subjective test items.	- Writing subjective items (short answer and long answer types) - Writing objective items (multiple-choice items, matching items, supply items, true-false items) 6. Item review 7. Piloting and item analysis of the item (difficulty level, discriminating value and power of distracters) 8. Analysis of the quality of subjective test (format and guidelines, content representation, specificity, organization, ethically sound, language,)
• Describe the concept of classical test theory and its importance. • Explain the theory of true and error scores. • Explain the relationship between true score, observed score and error scores. • Describe the item analysis procedures and do the calculations. • Elaborate on ramifications and limitations of classical test theory assumptions.	**Unit 3: Classical Test Theory (16)** 1. Concept and assumptions of classical test theory 2. Theory of true and error scores 3. The true score and parallel tests 4. The observed score and error 5. The true score and reliability 6. The true score and the validity coefficient 7. Error of measurement and reliability of a test in classical test theory 8. Ramifications and limitations of classical test theory
• Describe the concept of modern test theory and its assumptions. • Elaborate latent ability and its importance in IRT. • Describe models in modern test theory and their uses. • Estimate item parameters and examinee's ability. • Describe the strength and limitations of modern test theory. • Make a comparison between CTT and IRT. • Analyse the logical shapes of the item characteristic curve. • Define/describe theoretically acceptable items. • Identify pathological ICCs and interpret how they are pathological. • Conceptualize the meaning of the test characteristics curve	**Unit 4: Modern test theory (16)** 1. Latent ability and item response theory (IRT) 2. Models in modern test theory □ One-parameter logistic model □ Two- parameter logistic model □ Three- parameter logistic model 3. Graphical diagnosis of items and test □ Logical item characteristic curve □ Graphical diagnosis with an IRT program o Acceptable items o Pathological items □ Test Characteristic Curve

Note: *The figures in the parenthesis indicate the approximate teaching hours for the respective units.*

4. Instructional Techniques

4.1 General Techniques

- Lecture with discussion
- Demonstration
- Home assignment and self study

4.2 Specific Instructional Techniques

Unit	Activity and instructional techniques
	• Students will work in pairs or groups to discuss the issue of testing in schools • Students will visit a nearby school, observe the classroom teaching and talk to the teachers focusing how the teachers are assessing students' learning. • Students will identify the problems teachers and students facing for assessing students' learning and draw major issues of testing in the school.
	Students will work in pairs or groups for the following activities: • Select a course • Prepare a test specification table • Write the test item (MCQs) • Administer the test in a classroom in a nearby school • Analyse the quality of items (difficulty level, discrimination index, power of distracters)
	• Let the students read the resource materials on estimating true and error scores and reflect the meaning, they will present their understanding in the class. • Let the students derive reliability formula
	• Divide the students into 3 groups • Let the groups study Models in modern test theory - One-Parameter Logistic Model, Two-Parameter Logistic Model, and Three-Parameter Logistic Model (Kline, 2005 and Metsämuuronen, 2012) • Let the groups present their understanding and findings in the class.

5. Evaluation

5.1 Internal Evaluation (40%)

The Internal Evaluation will be conducted by the course teacher based on the following activities.

1)	Attendance and participation	10 marks
2)	First assignment/book review/written assignment/quizzes	10 marks
3)	Second assignment/paper writing and or presentation	10 marks
4)	Third assessment/ written test (1 or two)	10 marks
	Total	40 marks

5.2 External Evaluation (Final Examination) (60%)

The Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of semester.

1) Objective type question (Multiple choice 10×1 mark)	10 marks
2) Short answer questions (6 questions with 2 OR × 5 marks)	30 marks
3) Long answer questions (2 questions with 1 OR ×10 mark)	20 marks
Total	60 marks

7. Recommended Books and References

Recommended Books

- Crocker, L. and Algina, J. (2010). Introduction to classical and modern test theory. Ohio: Cingage Learning
- Baker, Frank B. (2001). The basics of item response theory 2nd edition. USA: ERIC Clearinghouse on Assessment and Evaluation (For Unit II & III)
- Kline, Theresa J. B. (2005). Psychological testing. New Delhi: Vistaar Publications, (For Unit II & III)
- Greene, H.A., Jorgensen, A.N. and Gerberich, JR. (2008). Measurement and evaluation in the secondary school. India: Surjeet Publications. (For Unit I)
- Gregory, R. J. (2005). Psychological testing: history, principles and applications, 4th edition. New Delhi: Pearson Education (For Unit I)
- Linn R. L. and Gronlund N. E. (2000). Measurement and assessment in teaching, 8th edition. Singapore: Pearson Education Inc. (For Unit I)
- Metsämuuronen, J. Handbook of Basics of Research Methods in Human Sciences. (5th ed.) Researchers‟ edition, e-book series. Ltd International Methelp Oy (For Unit I to IV)

References

- Anastasi, Anne. (1976). Psychological testing, 3rd edition. New York: McMillan Publishing Company Inc.
- Garrett H. E. and Woodworth R. S. (1965). Statistics in psychology and education, 3rd edition. Bombay: Bikas, Feller and Simons Pvt. Ltd.
- Ebel L.R. and Frisbie D.A. (1991). Essentials of educational measurement, 5th edition. New Delhi: Prentice Hall of India Pvt. Ltd.
- Kubiszyn, T and Borich, G. (2003). Educational testing and measurement, 7th edition, Singapore: John Wiley and Sons Pte. Ltd.
- Nunnaly J. C. (1981). Psychometric theory 2nd edition. New Delhi: McGraw Hill Publishing Company Ltd.

ED. CE. 527: Test Development | Nature of the course: Practical

Course no.: ED. CE. 527 | Credit hours: 3
Level: M. Ed. | Teaching hours: 48
Semester: Second

1. Course Introduction

This course aims to provide the students with the knowledge and skills needed for planning and developing a test. The course enables them to develop a preliminary form of test and scoring rubrics based on a specification grid to measure specified learning outcomes intended by the curriculum. Upon completion of this course, the students will be able to develop a final form of the test and test manual to administer the test, and score the answers in a reliable and valid way. Finally, the students are expected to develop skills in writing a report by encompassing important tasks carried out by them during the test development process under this course.

2. General Objectives

The general objectives of this course are as follows.

- To enable the students to follow a series of steps to develop a test to measure whether students achieved determined learning outcomes as intended by the curriculum;
- To capacitate the students to write, edit, and finalize different types of test items based on the specification chart and prepare the answer key and scoring rubric for objective and subjective test items respectively;
- To get then to administer the test with a sample and analyze both subjective and objective test items to ensure their reliability, validity, and objectivity;
- To enable them to prepare the final form of the test and test manual by adjusting them to the given format to assess students' learning; and
- To enable them todevelop a report by incorporating different types of activities carried out by learners during the test development process.

3. Specific Objectives and Contents

Specific Objectives	Contents
• Specify the purpose of carrying out a particular test. • Formulate intended learning outcomes to be measured during the test process. • Prepare the outline of contents to be covered by the test. • Make a specification grid to develop a valid test.	**Unit 1: Test Development Process (10)** 1.1 Determining the purpose of the test 1.2 Defining the traits/learning outcomes to be measured 1.3 Specifying content to be covered 1.4 Preparing a specification grid
• Develop multiple-choice items applying the different levels of Bloom's taxonomy of educational objectives. • Write subjective test items from the cognitive domain.	**Unit 2: Developing Test Items and Rubrics** 2.1 Writing test items based on a specification grid • Objective test items (multiple-choice items) • Subjective test items (restricted-response and extended-response)

• Edit and revise the devised items to give the final shape. • Prepare answer keys and scoring rubrics to examine students' answers objectively.	2.2 Editing, revising and finalizing the items 2.3 Preparing answer keys and scoring rubrics
• Administer the developed test in the chosen sample to ensure the reliability, validity, and objectivity of each test item. • Finalize test items by trying out them in a small group of the targeted population. • Analyze each item of the test after scoring the answers given by learners. • Estimate the reliability of the test by using a specific method (split-half for example). • Find out the inter-rater consistency of subjective items of the test.	**Unit 3: Administration of the Test** 3.1 Assembling test items 3.2 Writing instruction for examinees 3.3 Determining a population for administering the test 3.4 Trying out the preliminary test (among at least 5 students) 3.5 Reviewing and finalizing the items based on the pilot 3.6 Administering the test (among at least 50 students) 3.7 Scoring the responses 3.8 Analyzing the items • Item difficulty • Discriminative index • Power of distractors • Reliability estimation of test items (e.g. split-half) 3.9 Inter-rater consistency (subjective test)
• Assemble the finalized test items by following the given format. • Prepare the test manual to administer the test in a reliable and valid way.	**Unit 4: Preparation of the Final Form of the Test** 4.1 Organizing the test items in the given format 4.2 Revising the instruction for examinees (if necessary) 4.3 Revisiting and finalizing the answer key and the rubric 4.4 Preparing the test manual
• Write a test report including the findings, conclusions, and implications of the test development process.	**Unit 5: Preparing the Report** Chapter 1: Introduction to the test (grade and subject, objective, rationales, specification grid with description) Chapter 2: Methodology (population and sample, school, testing process, data analysis process, ethical considerations) Chapter 3: Results and Discussion (Achievement based on the ability, gender, and ethnicity, the students can apply descriptive statistics to analyze the data, the result of item analysis, the result of inter-rater consistency) Chapter 4: Conclusions and Implications References Annex (test items, large table, etc.).

Note: *The figures in the parenthesis indicate the approximate teaching hours for the respective units.*

4. Instructional Techniques

Different types of instructional techniques will be applied to developing basic knowledge and skills on the contents incorporated within this course. Generally, two types of instructional techniques – general and specific– will be used to provide a set of learning experiences to the learners for developing test development skills intended by the curriculum. A brief introduction to each of these techniques is given below.:

4.1 General Instructional Techniques

Different types of instructional techniques will be applied to developing test development skills in the learners. Especially, question-answer, demonstration, problem-solving method, discussion, individual study, project work, and cooperative instructional techniques will be used to inculcate the intended skills in the students. The contents included in this curriculum will be taught by relating them to the Nepalese context to increase the relevancy of this course.

4.2 Specific Instructional Techniques

Unit-specific activities will be carried out to develop the desired knowledge and skills in the learners in the field of testing. For this purpose, ample opportunities will be provided to the learners to practice the behaviors intended through specific instructional techniques. These instructional techniques will help increase students' active participation in the classroom to ensure their access to the curricular contents. The subject teacher will work as a facilitator in the classroom to enable learners to achieve the intended learning outcomes. Some representative specific instructional activities proposed under this course to develop competencies required to develop a reliable and valid test are given below.

Units	Specific Instructional Techniques
1	Each student will be asked to select any subject from the secondary level to develop two sets of the test from this subject. And then they will determine the purposes of the test, formulate learning outcomes to be measured, specify an outline of the contents to be covered, and prepare a specification chart by following the curriculum of the chosen subject. Ample opportunities will be provided to some students to share the results of their work. Then the instructor will provide feedback to each learner on a required basis for improvement.
2	Each student will write at least 50 objective items and 15 subjective items (5 extended responses and 10 restricted responses) from the chosen subject and then the students will finalize these items from their side by editing and revising them on a required basis. They will also be asked to prepare the answer key and the scoring rubric of the written items and share them among the larger group.
3	The individual student will be asked to assemble the written items and each of them will review and finalize the items based on the results obtained from the piloting. Then the test will be carried out among at least 50 students in order to analyze each item to ensure their reliability, validity, and objectivity.

	The students can get support either from their peers or from their instructor during the administration process.
4	ch student will assemble the finalized items by following the given format and revisit the instruction, review the answer key and the rubric. Finally, all students will prepare a short test manual to administer the test in a reliable, valid, and objective way.
5	lividual reports will be prepared by all students including the major activities executed during the test development process. The report will be organized into four chapters excluding References and Annex. Then after, each student will be asked to share their report through PowerPoint presentation within a specified timeline and necessary feedback will be provided to each of them for improvement.

5. Assessment

5.1 Internal Assessment (40%)

The Internal Evaluation will be conducted by the subject teacher based on the following activities.

- Attendance 5 marks
- Participation 5 marks
- First assignment: Student will prepare this assignment by following the test development process given up to second unit 10 marks
- Second assignment: This assignment will be prepared by each student by following the test development process given under unit 3 and unit 4 10 marks
- Third assignment: Report prepared by each student can be treated as the third assignment 10 marks

Total 40 marks

5.2 External Assessment (60%)

The Examination Division, Office of the Dean, Faculty of Education (FOE) will conduct the final assessment by the external supervisor at the end of the semester. The subject teacher/internal supervisor will manage the viva voce within the time framework of the FOE office of the Dean. The external assessment will be based on the following aspects.

Final report of test development process	30 marks
Manual of the test	10 marks
Viva voce	20 marks
Total	60 marks

6. References

Bloom, B.S.(Ed.). Engelhart, M.D., Furst, E.J., Hill, W.H., Karthwohl, D.R. (1956). *Taxonomy of educational objectives, handbook I: The cognitive domain.* New York: David McKay Co Inc.

Ebel, L.R. & Frisbie, D.A. (1991). *Essentials of educational measurement*, 5th edition. New Delhi: Prentice Hall of India Pvt. Ltd.

Garrett, H. E. & Woodworth, R. S. (1965). *Statistics in psychology and education*, 3rd edition. Bombay: Bikas, Feller and Simons Pvt. Ltd.

Greene, H.A., Jorgensen, A.N. & Gerberich, J.R. (2008). *Measurement and evaluation in the secondary school.* India: Surjeet Publications.

Kline, Theresa J. B. (2005). *Psychological testing*. New Delhi: Vistaar Publications.

Linn R. L. & Gronlund, N. E. (2000). *Measurement and assessment in teaching*, 8th edition. Singapore: Pearson Education Inc.

Mangal, S. K. (1987) *Statistics in psychology and education*. New Delhi: Tata McGraw Hill Publishing Company.

Minium, E.W., King, B.M. & Bear. (2001). *Statistical reasoning in psychology and education*, 3rd edition. New York: John Willey and Sons Inc.

ED. CE. 528: Curriculum Evaluation and Research Nature of course: Theoretical

Course No.: ED. CE. 528 Credit Hours: 3
Level: M. Ed. Teaching Hours: 48 hours
Semester: Second

1. Course Description

This course is designed for the master's degree program with a specialization in Curriculum and Evaluation. The course aims to provide students with professional content knowledge, skills, and perspectives related to curriculum evaluation and research. The course is divided into two parts. The first part covers models, aspects, and forms of curriculum evaluation with evaluation criteria, designs, and tools. The second part deals with the historical background, dimension, and trends of curriculum research. Overall, this course aims to prepare students for evaluating a curriculum and undertaking research on different dimensions of curriculum.

2. General Objectives

The general objectives of this course are as follows.

- Acquaint the students with the concept, nature, and facets of curriculum evaluation.
- Develop students' knowledge and perspectives on different curriculum evaluation approaches and models.
- Enhance the students' knowledge of evaluative aspects of different forms of curriculum.
- Develop competencies among students in selecting and developing relevant and appropriate instruments and strategies for curriculum evaluation.
- Provide students with concepts, dimensions, and trends of curriculum research.
- Enable students to design and conduct evaluation and research activities on curricular issues.

3. Contents and Specific Objectives

Part One: Curriculum Evaluation

Unit I: Concept of Curriculum Evaluation Teaching Hours: 8 hrs.	
Specific Objectives	**Contents**
• Develop a comprehensive definition of curriculum evaluation • Argue the scientific bases of curriculum evaluation • Contrast the natures of curriculum evaluation • Justify the facets of curriculum evaluation • Explain the minimum evaluation requirements	1.1. Meaning and definition of curriculum evaluation 1.2. Emergence of curriculum evaluation as a scientific discipline 1.3. Nature of curriculum evaluation 1.3.1. Model type 1.3.2. Eclectic 1.4. Facets of curriculum evaluation 1.4.1. The developmental stages of the curriculum 1.4.2. The aspects or entities to be evaluated 1.4.3. Curriculum evaluation criteria 1.4.4. Types of evaluation data 1.4.5. Mode of data summary 1.4.6. Role of curriculum evaluation 1.5. Minimum evaluation requirements

Unit II: Evaluation of Written Curriculum **Teaching hours: 6 hrs.**	
Specific Objectives	**Contents**
• Elucidate the meaning of written curriculum evaluation • Explain the aspects of the evaluation of written curriculum • Delineate criteria for evaluating a written curriculum. • Evaluate the aspects of a written curriculum using the evaluation criteria	2.1. Conceptualizing written curriculum 2.2. Aspects and criteria of written curriculum evaluation 2.2.1. Evaluation of objectives 2.2.2. Evaluation of contents 2.2.3. Evaluation of teaching and learning strategies 2.2.4. Evaluation of curricular materials: curricular guide, textbook, workbook, other curricular resources
Unit III: Evaluation of Executed Curriculum **Teaching Hours: 6 hrs.**	
Specific Objectives	**Contents**
• Present the concept of executed curriculum and its evaluation • Justify the need for quality assurance • Portray the process of quality assurance and its continuity • Describe the process of evaluating taught curriculum both as planned and in transaction	3.1. Concept of evaluating executed curriculum 3.2. Need for quality assurance 3.3. Process of quality assurance 3.4. Criteria for evaluating taught curriculum as planned 3.5. Criteria for evaluating taught curriculum in transaction
Unit IV: Curriculum Evaluation Strategies **Teaching Hours: 11 hrs.**	
Specific Objectives	**Contents**
• Critically justify the role of expert judgment data in curriculum evaluation • Identify the context for observation techniques • Describe different tests and scales in curriculum evaluation • Illustrate teachers, parents, community and students as data sources • Devise curriculum evaluation instruments	4.1. Expert judgment 4.1.1. Context for the use of expert judgment 4.1.2. Means and ways for expert judgment 4.2. Observational techniques 4.2.1. Context for the use of observational data 4.2.2. Types of observational data 4.3. Tests and scales in curriculum evaluation 4.3.1. Nature of information to be collected 4.3.2. Types of tests and scales 4.4. Information collection from stakeholders 4.4.1. Teachers, parents, community, and students as data sources 4.4.1.1. Perceived needs 4.4.1.2. Acceptance

	4.4.1.3. Evidence of student learning

Part Two: Curriculum Research

Unit V: Conceptualizing Curriculum Research Teaching Hours: 7 hrs.	
Specific Objectives	**Contents**
• Critically present the concept of curriculum research distinguishing from curriculum research • Examine the specific roles of the dimensions of curriculum research in curriculum development • Explain the changing trends in curriculum research as the emergence of the understanding curriculum	5.1. Concept of curriculum research 5.2. Similarity and differences between curriculum evaluation and research 5.3. Dimensions of curriculum research 5.3.1. Quasi-fundamental research 5.3.2. Policy-related curriculum research 5.3.3. Curriculum analysis 5.3.4. Curriculum evaluation 5.4. Trends in curriculum research: From positivist to interpretivist paradigm
Unit VI: Research in Curriculum Development Teaching Hours: 10 hrs.	
Specific Objectives	**Contents**
• Analyze the role of research in curriculum development • Explain the concept of applied research • Describe the concept, forms, and procedures of action research • Identify the role of the teacher as a researcher • Prepare a research proposal outline for school curriculum research	6.1. Concept of research-based curriculum 1.1. Goals of curriculum research 6.2. Research bases for curriculum 6.2.1. Priori- foundations 6.2.2. Learning models 6.2.3. Evaluation 6.3. Applied research 6.4. Action research 6.4.1. Curriculum design, Implementation and action research 6.4.2. Forms of action research: scientific/traditional, collaborative; critical 6.4.3. Procedure for action research 6.4.4. Teacher as a researcher

4. Instructional Techniques

4.1.General Instructional Techniques

- Lecture with discussion
- Question-answer
- Assignment presentation and self-study

4.2.Specific Instructional Techniques

Unit	Specific Instructional Strategies
I	• Presentation of the teacher on basic ideas and concepts of the curriculum evaluation and aspects involved in the evaluation

	• Stimulation of teacher to develop learning from the materials like presentation slides and referred books, journal articles, and other sources • Interact or discuss the subject matter in pair or group of the students • Students' presentation and discussion on the various aspects of curriculum evaluation analytically and critically perspectives
II	• Discussion on various forms and aspects of the written curriculums that are available in the classroom • Teacher's presentation on the concept of written curriculum, aspects to be evaluated, conceptual definition of the entities of evaluation, evaluation criteria, and possible tools • Student interaction and discussion on the evaluation entities/aspects from the written curriculum material and oral presentation about conducting evaluation
III	• Teacher presentation on the key concepts of executed curriculum i.e., implemented, taught, enacted curriculum, with examples drawn from the general observation and experience • Stimulation to the students to work in pairs and groups to sort out information from the recommended materials and share it among the students in the classroom • Student presentation on the assigned issue, discussion, and feedback
IV	• Teacher questioning to elicit students' concepts on different types of evaluation instruments • The students 'Think, Pair, and Share' their knowledge on evaluation instruments • Facilitation to the students to integrate the various information, experiences and examples regarding the forms of curriculum, the context of evaluation and types of instruments along with some presentations or supplying conceptual information • Assignment to develop instruments for evaluating implemented or planned curriculum
V	• Teacher presentation and discussion on similarities and differences in curriculum evaluation and research • Group discussion on curriculum research for curriculum development • Pair reading and paired summarizing techniques for the concept of the dimensions of curriculum research and sharing • Panel discussion on the quantitative and qualitative trends in curriculum research
VI	• Teacher presentation on the concepts of research-based curriculum, and types of curricula and their role • Question-answer • Critical reading of the materials related to a curriculum research framework, types of curricula and teacher as a researcher • Discussion on components of research proposal and student exercise to outline curriculum research proposal with the help of the teacher

5. Evaluation

5.1 Internal Assessment 40%

Category of assignments	Weightage	Nature and content representation
Attendance	5	Attendance record
Presentation	5	Participation in interaction, discussion, question-answer, class assignments, etc.
Assignment 1	10	Paper writing from Unit I, II, III & IV
Assignment 2	10	Research proposal writing from Unit V & VI
Assignment 3	10	Written test with quality of content and construct validity

5.2 External Assessment (Final Examination) 60%

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester.

1) Objective type question (Multiple choice 10x1) 10 points
2) Short answer questions (6 questions OR 2 questions x 5 points) 30 points
3) Long answer questions (2 questionsOR 1question x 10 points) 20 points

Total 60 points

6. Recommended books

Biswas, N. B. (1999). *Curriculum studies: A model for SAARC countries*. Delhi: Indian Publishers & Distributors. **(For Units I, II, III, V & VI)**

Clement, H.D. (2019). Towards a framework for "research-based curricula" . *Journal for research in mathematics education*. **(For Unit VI)** Retrieved fromwww.unhas.ac.id/rhiza/arsip/jurusan/FGD...2015/.../R%26D-based-curriculum.pdf

Dijkstra, S. (2004). The integration of curriculum design, instructional design, and media choice. In N. M. Seel and S. Dijkstra (Eds), Curriculum, plans, and processes in instructional design: international perspectives, pp.145-170. New Jersey: Lawrence Erlbaum Associates. **(For Unit II & III)**

Fitzpatrick, J. L., Worthen, B. R. & Sanders, J. R. (2011). *Educational evaluation: Alternative approaches and practical guidelines*. New Jersey: Pearson. (For Unit V)

Glatthorn, A.A. (1987). *Curriculum renewal.* Virginia: Association for Supervision and Curriculum Development. **(For Unit II & III)**

Lewy, A.(ed) (1977). *Handbook of curriculum evaluation.* Paris: UNESCO/IIEP **(For Units I, II, III & IV)**

Marsh, C. J. and Willis, G. (1999). *Curriculum: Alternative approaches, ongoing issues*. New Jersey: Prentice-Hall. **(For Units I, II, III & VI)**

Ornstein, A. C. and Hunkins, F. P. (2004). *Curriculum: Foundations, principles and issues*. Boston: Pearson Education. **(For Units I)**

Pinar, W. F., Reynolds, W. F., Slattery,P. & Taubman, P. M. (1996). *Understanding curriculum: An introduction to the study of historical contemporary curriculum discourses*. New York: Peter Lang Publishing. **(For Units V & VI)**

Riding, P. , Fowell, S. & Levy, P. (1995). *An action research approach to curriculum development*. Information Research 1, Retrieved from: http://InormationR.net/ir/1-1/paper2.html **(For Unit VI)**

Sharma, P. (2009). *Curriculum research.* New Delhi: A.P. H. Publishing Corporation. **(For Units V &VI)**

Stenhouse, L (1975). *An introduction to curriculum research and development.* Great Britain: Heinemann Educational. **(For Units V &VI)**

Math Education

Math. Ed. 525: Trends in Mathematics Education

Nature of the course: Theoretical **Credit hours: 3**

Course no: Math. Ed. 525 **Level: M. Ed.**

Teaching hours: 48

Semester: II

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1. Course Introduction

This course has been designed and prepared to trace the trends of various aspects of teaching/learning (T/L) mathematics education. It deals with the recent trends of T/L mathematics practices at different levels, from school to university. It focuses on the reforms of major areas of school mathematics along with their T/L issues and problems. It also assesses the rationale of T/L applied mathematics and illustrates some mathematical modeling. Besides this, it provides an updated overview on the themes, issues and the recommendations made by different international conferences on mathematics education. The social, cultural and inclusive educational issues and problems are also critically assessed. Further, this course presents the trends of research in mathematics education.

2. General Objectives

The general objectives of this course are as follows.

- To enable the students to sketch the global trends in mathematics education from school to university levels especially with respect to the development of curriculum, content; teaching/learning methods and materials, evaluation system and research.
- To enable them to sketch the developmental trends, reform and teaching/learning issues and problems in three basic areas of school mathematics;
- To have the students elucidate the trends how the concept applied mathematics changes with time (This objective needs rewriting)
- To enable the students to trace out the different trends that are observed in the historical development of different Commissions, Unions, Conferences, and Olympiads along with different activities of Nepalese mathematical organizations;
- To acquaint the students with the critical appraisal to address different issues (social and cultural roles, popularization, gender differences, ethno- mathematics, inclusion) in mathematics education.
- To provide them with historical and modern trends of knowledge observed in the area of research in mathematics education.

3. Contents and specific objectives

Specific Objectives	Contents
• Discuss briefly the roles of philosophy and learning theory that trace the trends in mathematics education. Sketch the global trends that are observed in mathematics education at different levels especially with respect to curriculum, content, methods and materials, evaluation system, research and sociological components.	**Unit I: Mathematics Education at School and Tertiary Levels (12 hrs)** 1.1 Introduction 1.2 Trends in mathematics education at the basic level 1.3 Trends in mathematics education at the secondary level 1.4 Trends in mathematics education at the tertiary level
• Sketch the developmental trends of the three basic areas of school mathematics • Review the trends reflected in reforms of school geometry, arithmetic and algebra (with reference to curriculum, content, methods, materials and evaluation system) • Give comprehensive views on the issues and problems of teaching/learning school mathematics for the recent era.	**Unit II: Trends in the Three Basic Areas of School Mathematics (9 hrs.)** 2.1 Introduction 2.2 Reforms in Geometry 2.3 Reforms in Arithmetic 2.4 Reform in Algebra 2.5 Issues and problems in the T/L the three basic areas of mathematics for the 21st century
• Explain the trends showing how the concept of applied mathematics changes with time. • Clarify the reason for teaching the application of mathematics at different levels of schooling. • State the issues and problems of applied mathematics in mathematics education. • Analyze the impact of applied mathematics on mathematics education. • Use practical knowledge and skills in the area of mathematical modeling	**Unit III: Educational Implications of Applied Mathematics (6 hrs)** 3.1 Introduction 3.2 Rationale to teach application of mathematics 3.3 Trends in teaching applied mathematics 3.4 Issues and problems of T/L applied mathematics 3.5 The impact of T/L applied mathematics 3.6 Some examples of mathematical modeling

• Sketch the different trends that are observed in the historical development of Union, Commission, Study groups, Conferences, and Olympiads. • Describe the aims, activities and responsibilities of IMU and ICMI. • Describe the achievements of different international congresses (ICMEs). • Explain different formalities (selection of Jury, conditions of participation, and topics asked) in IMO. • Describe the aims and activities of professional organizations of mathematics in Nepal.	**Unit IV: Mathematics Education Conferences (6 hrs.)** 4.1 International Mathematical Union (IMU) 4.2 International Commission on Mathematical Instruction (ICMI) 4.3 International Congress on Mathematical Education(ICME) 4.4 Organization of ICME in different countries 4.5 International Mathematical Olympiad (IMO) 4.6 Nepalese mathematical organizations (NMO)
• Give critical comments on the social issues and problem in T/L mathematics. • Appraise the role of culture in T/L mathematics. • Discuss on the assessment system of mathematics education. • Give critical appraisal to address different issues (popularization, gender differences, ethno-mathematics, and inclusion) in mathematics education. • Give critical comments on tensions occurring while dealing with mathematics education for the stakeholders of the 21st century.	**Unit V: Issues in Mathematics Education (9 hrs.)** 5.1 Social issues and problems in T/L mathematics education 5.2 Cultural role in T/L mathematics education 5.3 Issues and problems in students' evaluation system 5.4 Challenges of T/L mathematics in the 21st century 5.5 Popularization of mathematics education 5.6 Gender difference in mathematics education 5.7 Ethno-mathematics 5.8 Individual difference of students 5.9 Special needs of students

4. Instructional Techniques

4.1 General Instructional Technique

Lecture, mini-lecture, brain storming, group works, presentation and discussion methods

4.2 Specific Instructional Techniques

Unit I	Reading, discussing, reflecting and presenting different aspects of mathematics education at different levels from school to tertiary levels.
Unit II	Internet browsing and presentation in basic areas of school mathematics in classrooms.
Unit III	Peer-study, discussion, comparison and presentation in applied part of mathematics.
Unit IV	Net browsing, reading of the text, searching journals and reporting about the resolutions of different conferences.
Unit V	Critical discourse on different issues and problems, presentation and reflective writings.
Unit VI	Mini-lecture followed by students' group-presentations in different philosophical views of research and research-areas.

5. Evaluation

5.1 Internal Evaluation

Internal evaluation will be conducted by the subject teacher based on the following activities.

• Attendance	5 marks
• Participation in learning activities	5 marks
• First assignment/assessment	10 marks
• Second assignment/midterm exam	10 mark
• Third assignment/assessment	10 marks
Total	40 marks

5.2 External Examination (Final examination)

The Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester. The number of questions, types of questions and marks allocated to each type of question will be as follows.

Objective questions (multiple choice 10 × 1)	10 marks
Short answer questions (6 question × 5 points) with two OR questions	30 marks
Long answer questions (2 questions × 10 points) with one OR question	20 marks
Total	**60 marks**

6. Recommended and reference books

6.1 Recommended books

Kshetree, M. P. (2018). *Trends in mathematics education.* Kathmandu: Bhundipuran Prakashan (Units: All)

Pandit, R. P. (2011). *Recent trends in mathematics education*. Kathmandu: Indira Pandit Publication (Units: All)

Upadhyay, H. P. (2064 B. S.). *New trends in mathematics education*. Kathmandu: Vidhyarthi Prakashan (Units: All)

7. Reference books

Acharya, B.R. (2017). *Diversity in mathematics education.* Kathmandu: Dikshant Prakashan (Units: I,II & V)

Fisher, R. (2003). *Teaching thinking: Philosophical enquiry in the classroom* (2nd Ed.). New York: Continuum (Units: I & V)

Gates, P. (2001). *Issues in mathematics teaching*. London: Routledge, Falmer: Taylor Francis Group (Units: I & V)

Silverman, D. (2013). *Doing qualitative research* (4th Ed.). New Delhi: Sage Publication India (Unit: VI)

Math. Ed. 526: Linear Algebra
Nature of the course: Theoretical
Code no. : Math Ed. 526. Credit hours: 3
Level: M. Ed. Teaching hours: 48
Semester: Second

1. Course Introduction

This course covers vector spaces, inner product spaces, linear mapping and their algebraic properties, bilinear form and standard operators, polynomials and matrices, triangulation of matrices, spectral theorem and primary decomposition theorem with Jordan canonical form, and module theory.

2. General Objectives

The general objectives of this course are as follows.

- To provide the students with a deeper understanding of theoretical concepts of linear algebra including module theory;
- To increase the computing capacity of the students in linear algebra;
- To develop, among the students, a positive attitude towards linear algebra.; and
- To enable the students to explain the concepts of modules in any ring and distinguish it with vector space.

3. Specific objectives and contents

Specific objectives	Contents
• Review the concepts of vector space, subspace, bases, and dimensions of vector space and illustrate them with examples. • Find the linear map associated with the matrix. • Find the matrix associated with linear maps. • Explain the relation of bases, matrices and linear map in the vector space.	**Unit I: Linear Maps and Matrices (5** hrs.) 1.1 Revision of vector space 1.2 The linear map associated with a matrix 1.3 The matrix associated with linear maps 1.4 Bases, matrices, and linear maps
• Review the concepts of scalar product, Hermitian product, bilinear maps, linear functional and dual space • Define bilinear forms and standard operators. • Prove the properties of bilinear forms and standard operators. • State and prove Sylvester's theorem and find the index of positivity and nullity.	**Unit II: Bilinear Form and Standard Operators** **(**10 hrs.) 2.1 Bilinear forms 2.2 Quadratic forms 2.3 Symmetric operators 2.4 Hermitian operators 2.5 Unitary operators 2.6 Sylvesters' theorem

• Define eigenvalues and eigenvectors with examples • Prove the properties of eigenvectors and eigenvalues. • Define the characteristic polynomials of matrices and find characteristic polynomials of the matrices. • Determine eigenvalues and eigenvectors of the matrices and linear maps. • Determine the triangulizable and diagonalizable matrices. • State and prove Hamilton Cayley theorem.	**Unit III: Algebraic Properties of Linear Transformation** **(**10 hrs.) 3.1 Eigen values and eigenvectors 3.2 Characteristic polynomial 3.3 Triangulation of matrices and linear maps 3.4 Diagonalization of unitary matrices 3.5 Hamilton-Cayley theorem
• Prove the properties of symmetric linear maps. • State and prove the spectral theorem. • Apply the standard properties of polynomials to decompose the vector spaces. • Define s-invariant subspace and simple s-space. • State and prove Schur's lemma. • Define Jordan canonical form and reduce the matrices in Jordan canonical forms.	**Unit IV: Spectral Theorem and Primary Decomposition Theorem** **(**9 hrs.) 4.1 Eigenvectors of symmetric linear maps 4.2 The Spectral Theorem 4.3 The unitary operator 4. 4 Application of polynomial to decomposition of vector spaces 4.5 Schur's Lemma and Jordan normal form.
• Define modules, sub modules, quotient modules and module homomorphism and illustrate them with examples. • Prove the elementary properties of modules and sub modules. • State and prove fundamental theorem of module homomorphism. • Define direct sum of modules and prove its basic properties. • Define torsion and torsion free modules and illustrate them with examples. • Define exact sequence and establish the fundamental properties of module homomorphism. • Explain free modules and prove the elementary properties of free module. • Define projective and injective modules and prove elementary properties of them	**Unit V: Module Theory** **(**14 hrs) 5.1 Modules and sub modules 5.2 Module homomorphism 5.3 Quotient module 5.4 Direct sum of modules 5.5 Torsion modules 5.6 Exact sequences 5.7 Free modules 5.8 Projective and injective modules, homomorphism and duality

4. **Instructional Techniques:** This course is theoretical in nature and thus the teacher- centered instructional techniques will be dominant in the teaching-learning process. However, the instructional technique for this course is divided into two groups. The first group consists of

general instructional techniques applicable to most of the contents. The second group

consists of the specific instructional techniques applicable to the specific contents of each chapter.

4.1 ***General Techniques:*** The following instructional techniques will adapted accprding to the need and nature of the lesson.
Lecture
with
illustration
Discussion
Question-answer
Group work presentation and participation

4.2 Specific Instructional Techniques

Unit	**Activity and instructional techniques**
I	Group discussion for the matrix and linear maps. Individual work and group work presentation. Individual assignment on solving the problem of the exercise.
II	Individual work and group work presentation to explore bilinear form and its associated matrix. Group work assignment on solving some problems of the exercise and then group presentation.
III	Individual work and group work to explore polynomial of matrix and linear maps. Individual assignment to find the solution to numerical problems related to theorems of this unit and presentation. Group tasks to solve the problem of the exercise and discussion in small groups.
IV	Individual work and group work, problem-solving exercise and group presentation.
V	Individual work and group work presentation Solving the problem of the exercise Connecting examples with theorems and facilitating to find the related examples.

5 Evaluation

5.1 Internal Evaluation (40%)

Internal evaluation will be conducted by the course teacher based on the following activities

- Attendance 5 marks
- Participation in learning activities 5 marks
- First assignment/ midterm exam 10 marks
- Second assignment/ assessment 10 marks
- Third assignment/assessment 10 marks

Total **40 marks**

5.2 External Examination (Final examination) (60%)

The Examination Division of the Dean office, Faculty of Education will conduct the final examination at the end of the semester

Objective questions (multiple choice 10 × 1)	10 marks
Short answer question (6 question × 5 points) with two OR-questions	30 marks
Long answer questions (2 questions × 10 points) with one OR-question	20 markss
Total	**60 mark**

6. Recommended and reference books

The following are the recommended and reference books for this course.

6. 1 Recommended books

Bhattacharya, P.B, Jain, S.K and Nagpaul, S.R (2008*). First course in linear algebra*. India: New Age International House. (For Chapter III and IV).

Lang, S. (1973*). Linear algebra*. New York: Addision Wesley. (For Chapter I to IV)

Bhattacharya, P.B, Jain, S.K and Nagpaul, S.R (2007*). Basic abstract algebra*,*(*Printed in India): Cambridge University Press.(For Chapter V).

Hungerford, T.W (1974). *Algebra*. New York: New York Inc. Springer Verlag. (For Chapter V).

6.2 Reference Books

Maharjan, H.B. (2008). *Rings and rodules*. Kathmandu: Bhunipuran Prakasan. Bhattarai, B. N. (2011). *Introduction of rings and modules* (2nd ed). Kathmandu: Cambridge Publication.

Finkbeiner, D.T. (1986). *Introduction to matrices and linear transformations*. Delhi: CBS Publishers and Distributers.

Hohn, F. E. (1971). *Elementary matrix algebra*. Delhi: Amerind Publishing Co.Pvt.Ltd

Subedi, A. (2014). *Linear algebra*. Kathmandu: Sunlight Publication.

Bhattarai, B. N.(2019). *A textbook on linear algebra*. Kathmandu: Cambridge Publication.

Math. Ed. 527: Projective Geometry

Nature of the course:

Theory

Course no.: Math Ed.527

Level: M. Ed. Credit hours: 3

Semester: II Teaching hours: 48

1. Course Introduction

This course is designed to provide the students, who are mathematics educators and prospective mathematics teachers, with wider knowledge and skills on the axiomatic system in geometry for t. It comprises a wide range of skills varying from introductory projective geometry to projective space. This course defines an axiomatic structure that remains unchanged under projection and deals with incidence structure, perspectivity, and projectivity which are the beauty of this course. This course is divided into five major units. The topics on projective geometry deal with the Incidence Geometry, Collineations, Desarguesian and Pappian Planes, Conics in Pappian Plane, and Projective Space.

2. General Objectives

The general objectives of this course are as follows.

- To provide the students with the knowledge and concept of incidence structure and enable them to prove its basic results;
- To enable them to apply the basic results of projection to problem-solving;
- To enable them to analyze the relation between Desarguesian and Pappian plane;
- To enable them to prove the theorems on conics in the Pappian plane; and
- To enable them to investigate relations between the projective plane and projective space

3. Specific Objectives and Contents

Specific Objectives	Contents
• To define incidence structure and its examples • To define plane, affine plane, projective plane, and prove the theorems related to it • To define isomorphism and prove the related theorem • To define duality, its principle, and prove the related theorem • To define the configuration and prove related theorems • To define an embedded plane and prove theorems principle sub-planes • To homogeneous coordinate and define the order of plane and prove related theorems	**Unit I: Incidence Geometry (12 hrs)** 1.1. Incidence structure 1.2. Plane, affine plane, and projective plane 1.3. Isomorphism 1.4. Duality 1.5. Configuration 1.6. Embedded plane 1.7. Homogeneous coordinate and order of plane

(not clear)	
• To define perspectivity, derive its equation, and related problem solving • To define projectivity, and prove related theorems • To define collineation and prove related theorems • To define Matrix induced collineation, central collineation, and automorphic collineation and prove related theorems	**Unit II: Collineation (10 hrs)** 2.1 Perspectivity 2.2 Projectivity 2.3 Collineation 2.4 Matrix induced collineation, central collineation, and automorphic collineation
• To define the Desarguesian plane and the prove related theorems • To exemplify homogeneous coordinate for Desarguesian plane • To define quadrangular set and prove the related theorems • To define the Pappian plane and prove related theorems • To exemplify homogeneous coordinate for Pappian plane • To state and prove fundamental and uniqueness theorem • To define cross-ratio and prove the related theorem	**Unit III: Desarguesian and Pappian Plane (10 hrs.)** 3.1 Desarguesian Plane 3.2 Quadrangular set and related theorems 3.3 Pappian plane and related theorems 3.4 Fundamental and uniqueness theorem Cross-ratio
• To define point conic and line conic in the Pappian plane • To prove conics related theorems • To define the intersection of a range and a point conic and prove the related theorems • To prove closed projective plane related theorems • To state and prove Pascal's theorem and its converse	**Unit IV: Conics in Pappian Plane (8 hrs.)** 4.1 Conics in Pappian plane 4.2 The projective conic and the related theorem 4.3 Intersection of a range and a point conic 4.4 Closed projective plane and related theorems Pascal's Theorem and its converse
• To define projective space and prove related theorems • To define projective subspace and prove the related theorem • To define spanning set and apply it in problem-solving and theorem proof • To state and prove Desargues's theorem	**Unit V: Projective Space (8 hrs.)** 5.1 Projective space 5.2 Projective subspace 5.3 Theorems on spanning set Desargues's theorem

Note: The figures in the parentheses indicate the approximate periods for the respective units.

4. Instructional Techniques

4.1 General Instructional Techniques

The instructor will select the method/methods of instruction most suitable for a particular topic. It is quite acceptable to select more than one method and combine them into a single period of instruction whenever needed. For example, the instructor could combine a eory anstructured-lesson method to impart thd follow it up with a demonstration method in order to enforce students' understanding. So, the following general methods of instruction will be adopted:

- Lecture
- Demonstration
- Discussion
- Group work

4.2 Specific Instructional Techniques

Units	Activity and Instructional Techniques
I	• Multimedia presentation • Project work
II	• Project Work • Multimedia presentation
III	• Project work and presentation
IV	• Multimedia presentation • Project work • Group Discussion
V	• Multimedia presentation • Project work • Group Discussion

5. Evaluation

5.1 Internal Evaluation (40%)

Internal evaluation will be conducted by the course teacher based on the following activities:

a.	Attendance	5 marks
b.	Participation in learning activities	5 marks
c.	First assignment/ assessment	10 marks
d.	Second assignment/assessment	10 marks
e.	Third assignment/ assessment	10 marks
	Total	**40 marks**

5. 2 External Examination (Final examination) (60%)

The Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester. The number of questions and marks allocated to each type of question will be as follows:

• Objective questions	(10 × 1)	10 marks
• Short answer question 6 with 2 OR- questions	(6 × 5)	30 marks
• Long answer questions 2 with 1 OR- question	(2 × 10)	20 mark
Total		**60 marks**

1.Recommended Books and References

a. Koirala S. P. and Dhakal B. P., (2075). *Introductory projective geometry*. Read Publication: Kalimati, Nepal
b. Coxeter, H. S. M., (1973). P*rojective geometry*. New York: Springer- Verlag, London.
c. Garner, L. E., (1981). *An outline of projective geometry*. New York: North Holand Oxford.

Math. Ed. 528: Complex and Numerical Analysis
Nature of the course: Theoretical

Course no.: Math. Ed. 528 Credit hours: 3

Level: M. Ed. Teaching hours: 48

Semester: Second

1. Course Introduction

The course consists of two parts. The first part of complex analysis starts with the basic properties of complex numbers, functions of a complex variable, and their limit, differentiation, and analyticity of the complex function. This course discusses contour integral, series expansion of complex functions, residues, and its application to evaluating different types of integrals. It also deals with the transformation of complex functions through linear and bilinear mappings.

The second part of this course introduces numerical analysis which creates, analyzes and implements algorithms for obtaining numerical solutions to problems involving continuous variables. It is concerned with the numerical solution to a problem from the theoretical development and understanding of numerical methods as reliable and efficient. This course also incorporates different techniques of interpolation which gives approximate but accurate solutions to harder numerical problems and different types of iterative methods of differentiation and integration of the numerical problems.

2. General Objectives

The general objectives of this course are as follows:

- To familiarize the students with the functions of complex variables as a generalization of real variable function;
- To acquaint the students with limit, continuity, differentiability and analytic properties of complex-valued functions;
- To enable the students to examine properties of complex integration.
- To examine the series of expansions of different functions;
- To make the students able to examine related properties of zeros, singularities and poles of complex functions;
- To familiarize the students with different types of contours to integrate complex integrals using Cauchy's residue theorem;
- To provide the students with the knowledge of conformal transformation and transform special functions on the complex plane; and
- To make the students able to deal with numerical interpolation, differentiation and integration as techniques of solution in determining the value of numerical problems.

3. Specific Objectives and Contents

Specific Objectives	Contents
• Define and interpret the complex valued functions. • Define limit, continuity and differentiability of complex valued functions with examples. • Derive Cauchy- Riemann equations. • Explain the analytic function with examples • Construct corresponding analytic function of the given harmonic function.	**Unit I: Complex Number System and Analytic Functions (7).** **1.1.** Review of complex number and its basic properties. **1.2.** Limit, continuity and differentiability of complex valued functions **1.3.** Analytic functions **1.4.** Necessary and sufficient condition of the analytic function **1.5.** Polar form of Cauchy –Riemann equations **1.6.** Laplace's equations **1.7.** Harmonic functions **1.8.** Construction of analytic functions
• Define the contour integral and discuss the fundamental theorem of calculus • Prove Cauchy-Goursat theorem and extend it to different regions • Prove Cauchy integral formula • Derive the derivative of the analytic function of higher orders • Evaluate the integral using Cauchy integral formula • Prove Poisson integral formula, Morera's theorem and Liouville's theorem. • Prove the results related to the maximum moduli of functions • Establish the fundamental theorem of algebra.	**Unit II: Complex Integrals (9)** **2.1** Contour integrals **2.2** Fundamental theorem of calculus **2.3** Cauchy- Goursat theorem and its extensions **2.4** Cauchy integral formula **2.5** Derivative of an analytic function **2.6** Higher order derivatives **2.7** Poisson's integral formula **2.8** Morera's theorem **2.9** Cauchy's inequality **2.10** Liouville's theorem 2.11. Maximum moduli of functions 2.12Fundamental theorem of algebra

• Define sequence and series of complex numbers • Prove the results related to convergence of sequences and series. • Prove Taylor's and Laurent's theorems and use them to expand complex functions. • Prove the properties of absolute and uniform convergence of power series • Calculate the radius of convergence of power series. • Prove the properties of integration and differentiation of power series	**Unit III: Series (6)** **3.1** Convergence of sequences and series **3.2** Absolute and uniform convergence of series **3.3** Taylor's Series **3.4** Laurent's Series **3.5** Power series and its radius of convergence **3.6** Absolute and uniform convergence of power series **3.7** Integration and differentiation of power series **3.8** Uniqueness of series representation
• Explain different types of singularities. • Define zeros of an analytic function • Prove different properties of zeros and poles of function. • Prove Rouche's theorem • Define residue at a pole with examples. • Prove the residue theorem and evaluate the integral by using residue theorem. • Evaluate the improper real integrals • Evaluate the definite integral involving sine and cosines • Evaluate the improper integrals involving sines and cosines	**Unit IV: Residues and Poles (10)** **4.1** Singularity and its types **4.2** Zeros of an analytic function **4.3** Properties of zeros and poles. **4.4** Principle of argument **4.5** Rouche's theorem **4.6** Residues at poles of different orders **4.7** Cauchy residue theorem **4.8** Evaluation of improper real integrals. **4.9** Definite integrals involving sine and cosine Improper integral involving series of sine and cosines
• Define conformal mapping. • Prove necessary and sufficient condition for w=f(z) to represent a conformal mapping) • Identify different types of elementary transformations • Define linear and bilinear transformations • Establish cross ratio and apply it to transforming complex functions • Find fixed points of bilinear transformation • Explain how various curves and regions are mapped by elementary functions. • Discuss some special types of transformations	**Unit V: Mapping by Elementary Functions (6)** **5.1** Mapping or transformation **5.2** Jacobian of a transformation **5.3** Conformal mapping **5.4** Necessary and sufficient condition for w=f(z) to represent a conformal mapping) **5.5** Some elementary transformation (translation, rotation, magnification, inversion) **5.6** Linear transformation **5.7** Bilinear or fractional transformation and its properties **5.8** Cross ratio

	5.9 Fixed points of a bilinear transformation Mapping of the upper half plane; the transformations **w=sinz, w=e^z and w=logz; w=$z^2$and w=$z^{1/2}$**

• Derive formula for the errors in polynomial interpolation
• Explain finite differences and construct difference tables
• Establish the relationship between difference operators
  • Derive Newton's forward and backward
formulae for interpolation
  • Derive Gauss's central difference interpolation formula
  • Use Gauss's formula to derive Stirling's, Bessel's and Everett's formula and determine the appropriateness
• Determine the interpolation formula with unevenly spaced points
  • Use appropriate interpolation formulae in solving numerical problems
	Unit VI: Interpolation with Divided Differences (6)
	6.1 Errors in polynomial interpolation
	6.2 Finite differences
	6.2.1 Forward difference
	6.2.2 Backward difference
	Central difference
	6.2.4 Relationship between the difference operators
	6.3 Detection of errors by use of difference tables
	6.4 Differences of a polynomial
	6.5 Newton's formulae for interpolation
	6.6 Central difference interpolation formulae
	6.6.1 Gauss's central difference formula
	6.6.2 Stirling's, formula
	6.6.3 Bessel's formula
	6.6.4 Everett's formula
	6.7 Lagrange's interpolation formula for unevenly spaced points
	6.8 Divided differences and their properties
	6.8.1 Newton's general interpolation formula
	6.8.2 Interpolation by iteration
	6.8.3 Inverse interpolation
	Double interpolation

• Derive the general method for numerical differentiation and use it to differentiate an interpolating polynomial • Derive the general quadrature formula for numerical integration • Use the general quadrature formula establish trapezoidal, Simpson's 1/3, Simpson's 3/8 ,Boole's and Weddle's rules • Evaluate definite integrals using different rules	**Unit VII: Numerical Differentiation and Integration (4)** **7.1** Numerical differentiation **7.2** Derivative using forward difference formula **7.3** Derivative using backward difference formula **7.4** Derivative using central difference formula **7.5** Errors in numerical differentiation **7.6** Numerical integration **7.7** General quadrature formula for equidistant points

• State Gauss Legendre quadrature formula.	7.7.1 Trapezoidal rule 7.7.2 Simpson's 1/3 rule 7.7.3 Simpson's 3/8 rule 7.7.4 Boole's rule 7.7.5 Weddle's rule Newton – Cotes integration formula

Note: The numbers in the parentheses indicate approximate teaching hours to respective units.

4. Instructional Techniques

The instructor will select the method or methods of instruction most suitable for a particular topic. It is quite acceptable to select more than one method and combine them into a single period of instruction whenever needed. The general and specific instructional techniques are given below.

4.1 General Instructional Techniques

The following general instructional techniques will be adopted according to the need and nature of the lesson.

- Lecture
- Discussion
- Question-answer
- Group work

4.2 Specific Instructional Techniques

Unit	Activities and Instructional Techniques
Unit I	• Individual and group discussion on complex functions • Discussion in the classroom on some problems of limit, continuity and differentiability of complex functions. • Group discussion and individual assignments on analyticity and problems related to the C-R equation.
Unit II	• Individual and group discussion on the complex integration by Cauchy integral formula. • Group work and individual assignments on the problems of complex integration.
Unit III	• Group and individual discussion on Taylor and Laurent series • Individual assignment • Presentation on expansion of Taylor and Laurent series
Unit IV	• Group discussion on the zeros, singularity, pole and residue of a complex function • Discussion to the problems of contour integration • Individual assignment and presentation of the problems of contour integration

Unit V	• Group discussion on mapping of various curves and region by elementary functions • Individual and group presentation on mapping by linear and bilinear maps
Unit VI	• Individual and group discussion on calculating errors • Discussion on finite differences and interpolation formula • Group work and individual assignment for the solution of numerical problems

5. Evaluation

5.1 Internal evaluation (40%)

The internal evaluation will be conducted by the course teacher based on the following activities:

- Attendance 5 marks
- Participation in learning activity 5 marks
- First assignment 10 marks
- Second assignment and presentation 10 marks
- Third Assessment (written test) 10 marks

Total **40 marks**

5.2 External Evaluation:

Faculty of Education, Examination Division of the Dean Office will conduct the final examination at the end of the semester. The number of questions and the marks allocated to each type of question will be as follows:

- Objective questions (multiple choice questions) (10×1) 10 marks
- Short answer questions 6 with 2 **OR** questions (6×5) 30 marks
- Long answer questions 2 with 1 **OR** questions (2×10) 20 marks

Total **60 marks**

6. Recommended Books and References

6.1. Recommended Books

Churchill, R.V. (1996). *Complex variable and application*. New Delhi: Mc-Graw Hill(Unit I-V).

Sastry, S.S. (1990). *Introductory methods of numerical analysis*. New Delhi: Prentice- Hall of India.(Unit: VI-VIII).

6.2 References

Adhikari, G.P. (2021). *Complex analysis*. Kathmandu: Dikshanta Prakashan. Alford, L. V. (1979). *Complex analysis*. Tokyo: Mc-Graw Hill.

Gupta, S. and Sharma A. (2014). *Numerical analysis.* New Delhi: S. K. Kataria and Sons. Goyal, J. K Gupta K. P. (2009). *Functions of a complex variable*. Meerut:

Pragati Prakashan. Pandey, U. N. (2012). *Functions of a complex variable*. Kathmandu: Shubhakamana

Prakashan Pvt. Ltd.

Gupta, S. and Sharma, A. (2014) *Numerical analysis.* New Delhi: S. K. Kataria and Sons. Sharma, J. N. (1994). *Functions of a complex variable*. Meerut: Krishna Prakashan Mandir. Tyagi, B. S. (2015). *Functions of a complex variable*. Meerut: Kedar Nath Ram Nath.

Economics Education

Eco. Ed. 525: Macro Economics

Course No.: Eco. Ed. 525 Nature of course: Theory

Level: M. Ed. Credit hours: 3

Semester: Second Teaching hours: 48

1. Course Introduction

This course is designed for the economics education at Master's level. It contains theory as well as the application of macroeconomics. At first, the course deals with the basic concepts of macroeconomics. Then it proceeds with national income accounting system from theory to its application, classical theory of income and employment, Keynesian economics of income determination, supply of and demand for money and the rate of interest. Finally, it includes the IS-LM Framework under fixed price level and the relationship between inflation and unemployment rate.

2. General Objectives

The general objectives of this course are as follows:

- To enable the students to explain and analyze national accounting.
- To enable the students to review the classical theory of income and employment.
- To make the students able to analyze and apply the Keynesian economics of income determination.
- To make the students able to explain the IS-LM framework under fixed price level, the supply and demand for money and the rate of interest.
- To enable the students to explain the relationship between inflation and unemployment rate.

~~3.~~ Specific Objectives and Contents

Specific Objectives	Contents
• Clarify the basic concepts of macroeconomics such as: variable, parameter, static, dynamic, stock, flow, economic model, equilibrium and disequilibrium. • Explain the varieties of macroeconomic theory.	**Unit I: Basic Concepts of Macroeconomics (4)** 1.1 Key concepts 1.2.1 Variable 1.2.2 Parameter 1.2.3 Static 1.2.4 Dynamic 1.2.5 Stock 1.2.6 Flow 1.2.7 Economic model 1.2.8 Equilibrium and disequilibrium 1.2. Varieties of macroeconomic theory

• Describe the meaning of national income accounting. • Explain the use of national income accounting with calculation of GDP, NDP, GNP, NNP, NI, PI and DI • Measure the national income through production, income and expenditure approach. • Describe the difficulties in measuring the national income accounting • Evaluate the national income accounting system of Nepal. Differentiate between national product and national welfare.	**Unit II: National Income Accounting (10)** 2.1 Concepts of national income accounting- GDP, NDP, GNP, NNP, NI,PI, DI, PCI and meaning of constant -current prices and GDP deflator. 2.2 Importance/use of national income accounting. 2.3 Measurement of national income accounting- the expenditure, income and output approaches with a focus~~ing~~ on value-added approach. 2.4 Difficulties in measuring the national income. 2.5 Review of National income accounting system of Nepal. 2.6 National product and national welfare.
• Explain the classical theory of income and employment. • Determine income/output and employment under classical theory.	**Unit III: Theories of Income and Employment (4)** 3.1. Classical theory of income and employment 3.1.1. Say's law of market. Determination of income/output and employment under classical theory.
• Show diagrammatically the income determination in two sector model including multiplier. • Explain diagrammatically the income determination in three sector model including multiplier. Illustrate diagrammatically the income determination in four sector model including multiplier.	**Unit IV. Keynesian Model of Income Determination (15)** 4.1. Consumption function: APC and MPC including simple multiplier. 4.2. Determination of the equilibrium level of income in two sector economy. 4.3. Shifts in the consumption function and the multiplier equation. 4.4. Saving function: APS and MPS 4.5. Investment function and super multiplier. 4.6. Income determination in three sector model including multiplier. 4.6.1. Concept of three sector economy. 4.6.2. First fiscal model: Net taxes and government purchases; the government expenditure multiplier, tax multiplier and balance budget multiplier Second fiscal model-gross taxes,

	government purchases and transfer payments: and the transfer payment multiplier. 4.6.4 Third fiscal model-gross tax receipts as a function of income, government purchases and transfer payments. 4.6.5. Fiscal models and the full employment level of income. 4.7. Income determination in four sector model and the multiplier. 4.7.1 Concept of four sector economy. 4.7.2. The import function. 4.7.3. The equilibrium level of income. 4.7.4. The foreign trade multiplier and changes in the level of income.
• Analyze the measures of the supply of money and types of demand for money. • Explain the equilibrium rate of interest.	**Unit V: Demand and Supply of Money and the Rate of Interest (7)** 5.1 Demand for money (classical/neoclassical and Keynesian). 5.2 Supply of money (components and money multiplier). Equilibrium interest rate.
• Describe the equilibrium in goods market. • Describe the equilibrium in money market. • Explain effectiveness of monetary and fiscal policy through IS – LM curves. • Explain the relationship between inflation and the unemployment rate.	**Unit VI: IS-LM under Fixed Price Level and Unemployment (8)** 6.1 IS-LM framework: Equilibrium in the goods and money market and determination of rate of interest. 6.2 Effectiveness of monetary and fiscal policy. 6.3 Inflation and Unemployment: Phillips curve.

Note: The figures in the parentheses indicate the approximate periods for the respective units.

4. Instructional Techniques

The instructional techniques for this course are divided into two categories. The first category consists of general instructional techniques applicable to most of the units. The second category consists of specific instructional techniques applicable to specific units.

5. General techniques

- Lecture and illustration
- Discussion

6. Specific instructional techniques

Unit I: Review of materials on basic concepts by the students and group presentation.

Unit II: Project work on national income accounting system of Nepal.

Unit V & V I: Guest lecture on national income accounting and monetary system of Nepal to prepare for oral test.

7. Evaluation Schemes

7.1 Internal evaluation (40%)

Internal evaluation will be conducted by the course teacher based on the following activities:

S.N.	Activities	Points
1.	Attendance	5
2.	Participation in learning activities	5
3.	First assessment	10
4.	Second assessment (Paper submission)	10
5.	Final assessment	10

7.2 External evaluation (60 %)

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester.

S.N.	Nature of Questions	Number of Questions	Total marks
1.	Multiple choice	10× 1	10
2.	Short-answer questions (6 questions with TWO alternatives to any two questions)	6× 5	30
2.	Long answer questions (2 questions with ONE alternative to any one question)	2× 10	20

8. Recommended Books and References

- **Recommended books**

Shapiro, E. (2014), *Macroeconomic analysis.* (Fifth Edition). Delhi: Galgotia Publications Pvt. Ltd**. (For units I to VI)**

Keynes, J. M. (1961). *The general theory of employment, interest and money*. New York (publisher?

(For units IV)

Diulio, E. (2013). *Macro Economics (International edition).* Singapore: publisher? (For units I to VI)

Branson, W.H. (2012). *Macro Economics* (Third Edition), New Delhi: Affiliated East West Press Private Limited.

Vaish, M.C. (2013). *Macro Economic Theory* (14th Edition). New Delhi: Vikash Publishing House.

Central Bureau of Statistics (1976/77). *Manual on national income account of Nepal*. Kathmandu: National Planning Commission Secretariat. **(For unit II)**

United Nations, (2003). Studies in methods series F, No 85, *Hand book of national accountingNational accounts:A practical introduction*. New York: United Nations, Department of Economic Social Affairs, Statistics Division. **(For unit II)**

Dwivedi, D. N. (2005). *Macroeconomics: Theory and policy*. Tata McGraw-Hill Education.

References

Ackley, G. (2007). *Macroeconomic theory.* Delhi: Surjeet Publication.

Eugene D.(1997).*Macroeconomics*. Singapore: McGraw-HILL,

Lavacic, R. (1978). *Macroeconomics.* London: Macmillan.

Robinson, L. (1937). *An essay on the nature and significance of economic science*. London: Publisher?

Ministry of Finance (1976/77). *Economic survey of current fiscal year.* Kathmandu: Ministry of Finance.

Paudel M.R. (2071). *Economic analysis.* Kathmandu: MK Publisher and Distributers.

D'Souza, S. (2013). *Macroeconomics.* Delhi: Pearson.

Dornbusch, R., Fischer, S. and Startz, R. (2012). *Macroeconomics (Tenth Edition),* New Delhi: McGraw Hill Education (India), Private Limited.

Eco. Ed. 526: Mathematics for Economics Education
Course No.: Eco. Ed. 526 Nature of course: Theory
Level: M. Ed. Credit hours: 3
Semester: Second Teaching hours: 48

1. Course Introduction

This course is designed for Economics Education at Master's level. It includes the application of matrix and determinants, application of differentiation, application of integration, differential equation, difference equation, and linear programming.

2. General Objectives

The general objectives of this course are as follows:

- To make the students familiar with the application of matrix and determinants including solutions of simultaneous equation; determinants method, inverse matrix method and Gaussian elimination method.
- To enhance students' understanding about reviewing and applying differentiation in quantitative techniques.
- To enable the students to evaluate and determine the application of integration, to solve the differential equation and difference equation.
- To make the students able to formulate and solve the linear programming.

3. Specific Objectives and Contents

Specific Objectives	Contents
• Solve the simultaneous equations by using Cramer's rule, inverse matrix method and Row operation method. • Convert the given verbal problems related to economics in simultaneous equations and solve by using above methods.	**Unit I: Matrix (4)** 1.1 Concept and types of matrix 1.2 Solution of simultaneous equation up to three variables (Cramer's rule, inverse matrix method, row operation method) 1.3. Application of matrix in economics.
• Calculate partial derivatives up to three variables. • Solve the optimization of the given problem by using Lagrange's multiplier. • Define homogeneous functions. • Verify the properties of linearly homogeneous functions. • Define and verify the properties of Cobb-Douglas production function. • Use Euler's theorem for Cobb-Douglas production function. • Define the elasticity of substitution.	**Unit II: Differentiation and its Application in Economics (23)** 2.1 Techniques of differentiation 2.2 Partial and total differentiation 2.3 Optimization problems (up to three variables) 2.4 Optimization with equality constraints (Lagrangian multiplier method) 2.5 Economic application of differentiation 2.6 Utility maximization

	2.7 Demand analysis 2.8 Least cost combination of inputs 2.9 Linearly homogeneous functions (Euler's theorem) 2.10 Cob-Douglas production function 2.11 Elasticity of substitution **(**CES production functions)
• Evaluate the definite integral and its economic application. • Determine the consumer and producer's surplus.	**Unit III: Integration and its Application in Economics (7)** 3.1 Techniques of Integration. 3.2 Definite and indefinite integral. 3.3 Area and application (consumer's surplus and producer's surplus)
• Determine the order and degree of differential equation • Solve the first order differential equation in homogeneous, non-homogeneous and linear form.	**Unit IV: Differential Equation (4)** 4.1 Order and degree of differential equation. 4.2 Solution of differential equations (homogeneous, non-homogeneous, linear first order)
• Define the concept of finite differences. • Solve difference equation through iterative and general method. • Solve the linear first order homogeneous difference equation with constant coefficient.	**Unit V: Difference Equation (6)** 5.1 Concept of finite differences. 5.2 Solution of difference equations (Iterative and general method) 5.3 Solution of linear first order homogeneous difference equation with constant coefficient
• Define the concept of objective. function, constraints, inequality and LPP. • Formulate LPP problems. • Solve LPP by graphic and simplex method.	**Unit VI: Linear Programming (4)** 6.1 Concept of objective function, constraints, inequality and linear programming problem (LPP) 6.2 Mathematical formulation of LPP 6.3 Solution of LPP up to two variables only (graphic and simplex methods)

Note: The figures in the parentheses indicate the approximate periods for the respective units.

4. Instructional Techniques

4.1 General techniques

The instructional techniques for this course are divided into two groups. First group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to specific units.

- Lecture method

- Problem solving method
- Question-answer

4.2 Specific instructional techniques

Unit	Activities and instructional techniques
I & II	Project work
III	Project work and demonstration
IV & V	Problem solving

Note: Specific instructional techniques may or may not be required for each of the units mentioned in the course.

5. Evaluation Schemes

5.1 Internal evaluation (40%)

Internal evaluation will be conducted by the course instructor based on the following activities:

S.N.	Activities	Points
1.	Attendance	5
2.	Participation in learning activities	5
3.	First assessment	10
4.	Second assessment (Paper submission)	10
5.	Final assessment	10

5.2 External evaluation (60 %)

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester.

S.N.	Nature of Questions	Number of Questions	Points
1.	Multiple choice	10× 1	10
2.	Short-answer questions (6 questions with TWO alternatives to any two questions)	6× 5	30
2.	Long-answer questions (2 questions with ONE alternative to any one question)	2× 10	20

6. Recommended Books and References

6.1. Recommended books

Mehata, B. C. & G. M. Madnani (2006). *Mathematics for economist.* New Delhi: Sultan Chand and Sons (For Unit I).

Chiang, A. C. & Wainwright, K. (2013). *Fundamental methods of mathematical economics*.

Auckland: McGraw Hill Book Company (For Unit II& VI).

Allen, R. G. D. (1989). *Mathematical analysis for economics*. London: MacMillan Ltd (For Unit III).

Yamane, T. (2000). *Mathematics for economists*, (Second edition). New Delhi: Prentice-Hall of India (For Unit IV& V)

Monga, G. S. (1975). *Mathematics and statistics for economics.* New Delhi: Vikash Publishing House.(For Unit VI)

6.2. References

Archibald & Lipsey, (1994). *An introduction to mathematical treatment of economics*, (Third edition). Delhi: All India Traveller Bookseller.

Fryer, M. J. (1978). *An introduction to linear programming and matrix game theory.* London: Edward Arnold Ltd.

Kothari, C. R. (1990). *Quantitative technique* (Third edition). New Delhi: Vikash Publishing House (Pvt.) Ltd.

Eco. Ed. 527: Money, Banking and Finance

Course No. Eco. Ed. 527 Nature of course: Theory

Level: M. Ed. Credit hours: 3

Semester: Second Teaching hours: 48

1. Course Introduction

This course is designed to provide a thorough understanding of the concepts of money, banking, and financial systems/markets. This course may help the students to examine not only the origins and nature of money, but also theory of money, interest rate, inflation, development of banking systems, functions of central and commercial banks, money markets and capital markets and the foreign exchange markets, exchange rates, exchange control and devaluation.

2. General Objectives

The general objectives of this course are as follows:

- To introduce the concepts of money.
- To enhance students' understanding about the theory of demand for and supply of money, interest rate, inflation and deflation.
- To provide the students with a deeper understanding of the function and growth of financial institutions focusing to the role of central bank, commercial bank and monetary policy.
- To orient the students towards financial management regarding financial system and market, financial planning and capital structure, financial institutions and their management.
- To develop the capacity of the students to critically analyze the foreign exchange and exchange control.

3. Specific Objectives and Contents

• Search the evolution of money and value of money. • Analyze the Fisher's equation and Keynesian theory of demand for money. • Point out the determinants of money supply and show the effect of money supply on high powered money and money multiplier. • Explain the relation of interest rate with demand for and supply of money. • Explain the causes and consequences of inflation. • Analyze the measures of inflation. • Explain the causes and consequences	**Unit I: Theories of Money (16)** 1.1. Evolution and value of money 1.2. Demand for money: Fisher's equation and Keneysian theory 1.3. Supply of Money 1.3.1 Determinants of money supply 1.3.2 Factors affecting money supply 1.3.3 High powered money and money multiplier 1.4. Money and interest rates: Real and nominal interest rates 1.5. Inflation 1.5.1 Causes and consequences 1.5.2 Measures of inflation 1.6. Deflation: Causes and consequences

of deflation.	
• Analyze functions and objectives of central bank. • Describe the functions of commercial banks and pre-requisites of a sound commercial banking system. • Present a brief review of the measures taken in Nepal to liberalize the financial system. • Analyze objectives, tools and limitations of monetary policy with reference to Nepal Rastra Bank in the light of monetary and financial stability. • Examine the role of non-banking financial institutions in Nepal.	**Unit II: Functions & Growth of Financial Institutions in Nepal (16)** 2.1. Functions and objectives of central bank, instruments of credit control 2.2. Functions of commercial banks and pre-requisites of a sound commercial banking system 2.3. A brief review of the measures under- taken in Nepal to liberalize the financial system 2.4. Monetary Policy: objectives, tools and limitations of monetary policy 2.5. Review of current monetary policy with reference to Nepal 2.6. Role of non-banking financial institutions (co-operative, mutual funds, insurance company, investment companies) in Nepal
• Explain different forms of market under the financial system. • Describe the financial planning and capital structure management.	**Unit III: Financial System and Management (5)** 3.1. Financial system and market: capital market, money market, security market, market indexes, bond valuation 3.2. Financial planning and capital structure management
• Introduce the foreign exchange market and provide the concept of foreign exchange rate, spot exchange rate and forward exchange rates. • Explain the determination of fixed & flexible exchange rate. • Analyze the role of hedging in the determination of exchange rates in terms of Euro-Dollar market. • Highlight the rules, regulations, procedures and tools of exchange control. • Explain the concept and consequences of devaluation.	**Unit IV: Foreign Exchange (11)** 4.1. Foreign exchange market: Foreign exchange rate, concept of spot exchange rate and forward exchange rates. 4.2. Determination of exchange rates; fixed & flexible exchange rate. 4.3. Role of hedging in the determination of exchange rates with example of Euro-Dollar market 4.4. Exchange control: Rules, regulations, procedures and tools of exchange control. 4.5. Devaluation; concept and consequences

Note: *The figures within parentheses indicate the approximate teaching hours allocated to respective units.*

4. Instructional Techniques

4.1 General techniques

The instructional techniques for this course are divided into two groups. First group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to specific units.

- Lecture method
- Problem solving method
- Question-answer

4.2 Specific instructional techniques

Unit	Activities and Instructional Techniques
I	Project work
II & III	Project work and Demonstration
VI	Problem solving

Note: Specific instructional techniques may or may not be required for each of the units mentioned in the course.

5. Evaluation Schemes

5.1 Internal evaluation (40%)

Internal evaluation will be conducted by the course instructor based on the following activities:

S.N.	Activities	Points
1.	Attendance	5
2.	Participation in learning activities	5
3.	First assessment	10
4.	Second assessment (Paper submission)	10
5.	Final assessment	10

5.2 External evaluation (60 %)

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester.

S.N.	Nature of Questions	Number of Questions	Points
1.	Multiple choice	10× 1	10
2.	Short-answer questions (6 questions with TWO alternatives to any two questions)	6× 5	30
2.	Long-answer questions (2 questions with ONE alternative to any one question)	2× 10	20

6. Recommended Books and References

6.1 Recomended books

Gupta, S.B. (2010). *Monetary economics.* New Delhi: S. Chand & Co. Ltd.(For all Units) Crowther, G. (1948).*An outline of money*. London: Thomas Nelson. (For Unit I)

Sayers, R. S. (1967).*Modern banking*. New Delhi: Oxford University Press. (For Unit III) Paul, R. R. (2011). *Monetary economics*. New Delhi: Kalyani Publication.(For all Units)

Mishkin, F. S. (2013). *The economics of money, banking & financial markets.* Pearson (For all Units)

6.2 References

Jhingan, M. L. (2011). *Monetary economics*. New Delhi: Vrinda publications P. Ltd.

Friedman, M.(1970).*The counter-revolution in monetary theory*. London: Institute of economic affairs, occasional paper.

Ghatak, S. (1983)*Monetary economics in developing countries*. London: MacMillan Press.

Nepal Rastra Bank, (2022).Current m*onetary policy*. Kathmandu. Author.

Ministry of Finance (2022). Current *budget speech.* Kathmandu: Author. Ministry of Finance (2022). Current e*conomic survey*. Kathmandu: Author.

Nepal Rastra Bank (2007) *Inflation analysis and price division.* Kathmandu: Author.

Eco. Ed. 528: Education Finance
Course No: Eco. Ed. 528 Nature of course: Theory
Level: M.Ed. Credit hours: 3
Semester: Second Teaching hours: 48

1. Course Introduction

This course is designed to impart knowledge of the contribution of education to economic growth and the economic aspect of educational cost and financing system. It is intended to develop acquaintance with human resource development, demand for education, cost benefit analysis, on the job training, education finance and efficiency of education.

2. General Objectives

The general objectives of this course are as follows:

- To familiarize students with the economics of education and education finance.
- To enable students to explain and analyze the nature, scope and sources of education finance.
- To develop in students an in-depth understanding of the concept and indicators of human resources development and to enable the students to show the relationship between human resource development and economics of education.
- To enable students to estimate the educational production function and productivity of education.
- To enable students to analyze the demand for education.
- To make students able to analyze the cost-benefit and cost effectiveness in terms of private and social rate of return in education.
- To develop skills in students to analyze and compute the efficiency of education system.

3. Specific Objectives and Contents

• Introduce the economics of education. • Discuss the scope and issues of economics of education. • Analyse the behavioural economics of education. • Explain the nature and scope of education finance. • Analyse the sources of education finance at different levels of education in Nepal. • Explain the various methods of financing in education. • Give the arguments for and against the different methods of education finance.	**Unit I: Introduction to Economics of Education(15)** 1.1 Economics of education 1.1.1 Concept of economics of education 1.1.2 Scope and issues of economics of education 1.1.3 The behavioral economics of education 1.2 Education finance 1.2.1 Nature of education finance 1.2.2 Scope of education finance 1.2.3 Sources of education finance in Nepal (with special reference to basic, secondary and higher education) 1.3 Methods of educational finance 1.3.1 Grant system 1.3.2 Loan system (student loan system in higher education - Nepal, India, China, Japan and USA) 1.3.3 1.3.3 Voucher system
• Clarify the concept of human resources development. • Show the relationship between human resource development and economics of education. • State the indicators of human resource development. • Analyse the social value of education and human capital.	**Unit: II Human Resource Development (5)** 2.1 Concept of human resources development 2.2 Relationship between human resource development and economics of education 2.3 Indicators of human resource development The social value of education and human resources
• Show the relationship between education production function, educational productivity and quality of labour. • Estimate the educational production function. • Identify the problems in the estimation of educational production function. • Explain the contribution of education to economic development.	**Unit: III Educational Production Function and Productivity of Education (5)** 3.1 Educational production function, Educational productivity and quality of labour 3.2 Estimation of educational production function 3.3 Problems in the estimation of educational production function Contribution of education to economic growth

• Discuss the consumption demand for education. • Identify the determinants of consumption demand for education. • Discuss the investment demand for education and its determinants. • Define the concept of social and private demand for education. • Identify the determinants of social and private demand for education.	**Unit: IV Demand for Education (5)** 4.1 Consumption demand for education and its determinants 4.2 Investment demand for education and its determinants 4.3 Social and private demand for education. Determinants of social and private demand for education
• Define the concept and explain the purpose of cost-benefit analysis as well as cost-effectiveness analysis in education. • Identify the similarities and differences between cost-benefit analysis and cost-effectiveness analysis in education. • Apply the concept of cost-effectiveness analysis for building curriculum and teacher training. • Define the concept of private rate of return with demand for education and compute NPV, BCR and IRR. • Define the concept of social rate of return with socio-economic context of education and cost benefit analysis • Compute the private and social rate of return. • Explain general training, specific training and labor turnover rate in • on-the-job training.	**Unit V: Cost-Benefit Analysis in Education (11)** 5.1 Concept and purpose of cost-benefit and cost-effectiveness analysis in education 5.2 Similarities and differences between cost benefit and cost effectiveness analysis in education 5.3 Application of CEA in curriculum and teacher training 5.4 Private rates of returns in education 5.4.1 Computation of NPV, BCR and IRR in education 5.5 Social rate of return in education 5.5.1 Social rate of return and cost benefit analysis 5.6 On-the-job training 5.6.1 General training 5.6.2 Specific training Labor turnover rate
• Measure the internal and external efficiency of education. • Analyses the concept of cost recovery and cost sharing in education. • Compute the unit and cycle costs. • Explain the opportunity cost of education with proper examples.	**Unit: VI Efficiency of Education System (7)** 6.1 Measurement of internal and external efficiency 6.2 Concept of cost recovery and cost sharing in education 6.3 Concept, types and measurement of unit and cycle costs Opportunity cost of education

Note: *The figures within parentheses indicate the approximate teaching hours allocated to respective units.*

4. Instructional Techniques

The instructional techniques of this course are divided into two parts as follows:

(a) Lecture and illustration (b) Discussion
(c) Project work (d) Inquiry method
(e) Seminar (f) Question-answer

5. Evaluation Schemes

Formative (Internal) and summative (External), both the types of evaluation will be used.

5.1 Internal evaluation (40%)

Internal evaluation will be conducted by the course instructor based on the following activities:

S.N.	Activities	Points
1.	Attendance	5
2.	Participation in learning activities	5
3.	First assessment	10
4.	Second assessment (Paper submission)	10
5.	Final assessment	10

5.2 External evaluation (60 %)

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester.

S.N.	Nature of Questions	Number of Questions	Points
1.	Multiple choice	10× 1	10
2.	Short-answer questions (6 questions with TWO alternatives to any two questions)	6× 5	30
2.	Long-answer questions (2 questions with ONE alternative to any one question)	2× 10	20

6. Recommended Books and References

6.1. Recommended books

Blaug, M.(1972). *Economics of education* (volume I). Baltimore: English Language Books at Fsociety and Penguin Books (**For Unit V).**

Brewer, D. J., & McEwan, P. J. (Eds.). (2010). *Economics of education*. Place of Publication? Elsevier. **(For unit IV, V and VI)**

Carnoy, M. (1995). *International encyclopaedia of economics of education* (second edition), New York: Pergamon Elsevier Science Ltd (**For Unit II, III and VI).**

Creedy J. (1985). *The economics of higher education: Analysis of Taxes versos fees*. London: Edward Elgar Publishing Limited **(For Unit VI).**

Deutsch, J., Dumas, A., & Silber, J. (2013). Estimating an educational production function forfive countries of Latin America on the basis of the PISA data. *Economics of Education Review*, *36*, 245-262. (**For unit III)**

Githaiga, M. (2016). Introduction to Financing Education–Financial Flows. In *Workshop on*. **(For unit I)**

Hanushek, E. A. (1979). Conceptual and empirical issues in the estimation of educational production functions. *Journal of human Resources*, volume and issue no?,351-388. **(For Unit III).**

Hanushek, E. A., Machin, S. J., & Woessmann, L. (Eds.). (2016). *Handbook of the economics of education*. Place of publication? Elsevier**. (For Unit I)**

Jabbar, H. (2011). The behavioral economics of education: New directions for research. *Educational Researcher*, *40*(9), 446-453. **(For Unit I)**

Johnes, G. and Johnes, J. (2004). *Internal handbook on the economics of education*. London: Edward Elgar Publishing Limited (**For Unit I, II and IV**).

Monk, D. H. (1990). *Educational finance: An economic approach.* New York: McGrow-Hill Publishing Company (**For Unit I and IV**).

Psacharopoulos, G. and Patrinos A. (2004). *Human capital and rates of return* (Internal Handbook on the Economics of Education, Edited by Geraint Johnes and Jill Johenes). London: Edward Elgar Publishing Limited (**For Unit II and V).**

Sheehan, J. (1973). *The economics of education.* London: George Allen and Unwin Ltd. (For **Unit III and IV).**

Woodhall, M. (1990). *Student loan in higher education* (Western Europe and the USA). Paris: United Nations Educational, Scientific and Cultural Organization (**For Unit I).**

Woodhall, M. (1991). *Student loan in higher education* (Asia). Paris: United Nations Educational, Scientific and Cultural Organization **(For Unit I).**

6.2 References

Bray, M. (1996b). *Counting the full cost: Parental and community financing of education in east asia.* Washington DC: The World Bank in collaboration with UNICEF.

Bray, M. (1999a). *The private costs of public schooling: Household and community financing of primary education in cambodia*. Paris: UNESCO International Institute for Educational Planning in collaboration with UNICEF.

Card, D. (1999). *The causal effect of education on earnings* (Handbook of Labour Economics, Volume 3, Edited by O. Ashenfelter and D. Card). London: Elsevier Science Ltd.

Chattopadhyay, S. (2012). *Education and economics: Disciplinary evaluation and policy discourse.* New Delhi: Oxford University Press.

Hanushek, E. A. & Wobmann, L. (2007). *Education quality and economic growth.* Washington DC: The International Bank for Reconstruction and Development /The World Bank

Harbinson, F. and Myers, C. A. (1964). *Education, manpower and economic growth: strategies of human resource development.* New York: McGrow-Hill Service in International Development and Book Company.

Khanal B. (2073). *Shikshyako arthasasthra* (*Economics of education).* Kathmandu: Bidhyarthi Pustak Bhandar.

Metha, A. C. (2012). *Indicators of educational development with focus on elementary education: Concept and definitions* (ORSM Unit). New Delhi: National Institute of Educational Planning and Administration.

Metha, A. C. (2010). *Projection of population, enrolment and teacher* (ORSM Unit). New Delhi: National Institute of Educational Planning and Administration.

Palfreyman, D. (2004). *The economics of higher education*. UK: Oxford Centre for Higher Education Policies Studies.

Sheehan, J. (1973). *The economics of education.* London: George Allen & Unwin Ltd.

Siwakoti, D.R. & Paudel, M. R. (2073). Economics of education. Kathmandu: MK Publisher and Distributers.

Whalen, M. M. (2004). *The economics of higher education.* New York: Cornell University.

Woodhall, M. (ed.) (1990). *Student loans in higher education: Western europe and the USA.Educational Forum Series No.1*. Paris: UNESCO International Institute for Educational Planning.

Woodhall, M. (ed.) (1991a). *Student loans in higher education: Asia. Educational Forum Series No.2.* Paris: UNESCO International Institute for Educational Planning.

Woodhall, M. (ed.) (1991b). *Student loans in higher education: English-speaking Africa. Educational Forum Series No.3*. Paris: UNESCO International Institute for Educational Planning.

Woodhall, M. (ed.) (1993). *Student loans in higher education: Latin America and the Caribbean. Educational Forum Series No.4.* Paris: UNESCO International Institute for Educational Planning.

Ziderman, A. (2004). *Policy options for student loan schemes: Lessons from five ssian case studies*. Paris: UNESCO International Institute for Educational Planning and Bangkok: UNESCO Asia and Pacific Regional Bureau for Education.

Geography Education

Geo. Ed. 525: Climatology and Climate Change

Course No: Geo. Ed. 525 Nature of course: Theoretical

Level: M. Ed. Credit hours: 3

Semester: Second Teaching hours: 48

1. Course Introduction

This course has been designed for the students of Master's level to equip them with the knowledge and skills of climate and climate change. It also intends to acquaint the prospective teachers with structure, process and thermodynamic characteristics of atmosphere. It helps them to understand the climate change and its impact on human beings, economic activities and other environmental factors.

2. General Objectives

The general objectives of this course are to:

- equip the students with advanced knowledge of climate,
- acquaint the students with composition, process and atmospheric dynamics,
- equip the students with the deeper understanding of solar energy, its vertical and horizontal distribution and the mechanism of pressure change,
- enable the students to understand atmospheric circulation, weather disturbances and hydrodynamics of atmosphere,
- enhance the knowledge of students about the different types of climates, and
- Familiarize the students with global climate change, its impacts and mitigation measures.

3. Specific Objectives and Contents

Specific objectives	Contents
• Explain the scope and nature of climatology • Identify sub-fields of climatology • Explain the nature and origin of atmosphere • Describe the composition of the atmosphere • Illustrate the vertical thermal structure of the atmosphere	**Unit I: Climatology and Atmosphere (6)** 1.1 Nature and scope of climatology 1.2 Sub-fields of climatology 1.3 Nature and origin of atmosphere 1.4 Composition of the atmosphere 1.5 Vertical structure of the atmosphere
• Explain heat and temperature • Discuss radiation and heat budget • Describe variability of insolation • Analyze horizontal and vertical distribution of temperature	**Unit II: Energy and Temperature(6)** 2.1 Heat and temperature 2.2 Radiation and heat budget 2.3 Variability of insolation 2.4 Horizontal and vertical distribution of temperature

• Describe atmospheric pressure and its circulation systems • Identify different types of winds and factors affecting wind direction • Explain upper-level waves and jet streams Distinguish between air masses and fronts in terms of their characteristics and source regions • Analyze the flow perturbations in the middle and lower latitudes • Discuss the process of earth's energy balance • Illustrate the types, characteristics and formation processes of clouds • Assess the types, formation processes, and distribution patterns of precipitation	3.5 Flow perturbations in the middle and lower latitudes- cyclones, thunderstorms, tornadoes, hurricanes, atmospheric electricity, optical and acoustical phenomena 3.6 Earth's energy balance 3.6.1. Air-sea-land interaction 3.6.2. Advection of heat and water vapor, El Nino, La Nina, and the southern oscillation (ENSO) 3.7 Clouds: formation, types and characteristics 3.1 Precipitation: Process, forms and distribution
• Describe the approaches to climatic classification • Explain the climatic classification of Koppen and Thorn Waite • Recognize major climatic regions of the world Classify the climates of Nepal	**Unit IV: Classification of Climate (6)** 4.1 Approaches to climate classification 4.2 Classification of climate • Koppen's classification • Thorn Waite's classification 4.3 Major climatic regions -tropical, sub-tropical, temperate, tundra and polar regions 3.8 Climatic classification of Nepal
• Distinguish between climate and climate change • Identify the indicators of climate change • Discuss the causes and consequences of climate change in terms of regional and local climates • Analyze the impacts of change and human adaptation Identify mitigation measures to reduce adverse impacts of climate change	**Unit V: Climate Change (12)** 5.1 Climate and climate change 5.2 Indicators of climate change 5.3 Causes and consequences of climate change (natural and man-made) on regional and local climates 5.4 Impact of change and human adaptation Adaptations and mitigation measures
• Assess the importance of climate in mountain hydrology and hydropower • Describe the role of climate in tourism • Explain the role of climate in agriculture, forestry and animal husbandry Discuss the role of climate in human and animal health	**Unit VI: Applied Climatology (4)** 6.1 Mountain cryosphere, hydrology and hydropower 6.2 Climate and tourism 6.3 Agriculture, forestry and animal husbandry Human and animal health

Note: *The figures within the parenthesis indicate the approximate teaching hours.*

4. Instructional Techniques

The instructional techniques will be of two types - general and specific. General techniques will be common to all the units whereas the specific techniques will be applied according to the nature of topics in the units to be taught.

4.1. General instructional techniques

Varieties of techniques/methods can be applied for this course. The general methods applicable to this course include lecture, demonstration, question-answer, discussion, class assignment and presentation.

4.2. Specific instructional techniques

Unit	Activities and instructional techniques
I	Define climatology and explain its scope and sub-fields showing diagrams and charts.
II	Discussion and presentation of recorded data to show spatial variation in insolation and air temperature.
III	Analyze recorded data of wind speed and precipitation. Differentiate forms of precipitation through field observation (rain, snow, hailstone, etc.) and describe their characteristics. Differentiate periodic winds and their characteristics providing local examples.
IV	Identify different types of climate as classified by Thorn Waite and Koppen and show their distribution on map and make clear about spatial variation in climates.
V	Describe general scenario of climate change presenting long-term data of local areas. Visit local areas to observe impacts of climate change and prepare a report assessing the impact of climate change.
VI	Discuss the role of climate in different fields of application.

5. Evaluation

The achievement of the students will be assessed through internal and external examinations. Forty percent marks will be allotted to the internal examination and sixty percent for the external examination.

5.1. Internal evaluation (40%)

Forty percent marks are allotted to internal evaluation. Internal evaluation will be conducted by the course instructor based on the following activities:

Activities	Marks allotted
Attendance	5

Classroom activities	5
First assignment	10
Second assignment	10
Third assessment	10
Total	***40***

5.2. External evaluation (60%)

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester. Sixty percent of the marks are allotted to the final examination. The number and types of questions in the final examination will be as follows:

Types of questions	**Total questions to be asked**	**Number of questions to be answered and marks allotted**	**Total marks**
Group A: Multiple choice	10 questions	10 x 1 mark	10
Group B: Short-answer	6 with 2 'or' questions	6 x 5 marks	30
Group C: Long-answer	2 with 1 'or' question	2 x 10 marks	20
Total			

6. Recommended Books and References

6.1. Recommended books

Critchfield, H. J. (1987). *General climatology.* New Delhi: Prentice Hall. **(**Units I, II, III& IV)

Chunzai W. and Others, (2012). El Niño and Southern Oscillation (ENSO): A Review, retrieved from http://www.cgd.ucar.edu/cas/cdeser/Docs/submitted.wang.enso_review.pdf (Unit III)

IPCC (Various dates). *Climate change 1995- Impacts, adaptations and mitigation of climate change: Scientific-Technical analysis*, USA: Cambridge University Press. (Unit V & VI)

Lal, D. S. (1992). *Climatology.* Allahabad: C.S.Jain for Chaitanya Publishing House. (Unit I, II, III & IV)

National Climatic Data Center, (nd) *Global climate change indicators*, http://www.ncdc.noaa.gov/indicators/index.html(Unit V)

Pokhrel, K.P. (2012). *Climate change and food insecurity in Nepal: An ecological analysis*. Kathmandu: Color Printings (Unit V &VI)

6.2. References

Barry, R. G. & Chorley, R.J. (1976). *Atmosphere, weather and climate.* London: Methuen & Company. Ltd.

Crowe, P. R. (1971). *Concepts in climatology.* New York: St. Martin's Press Inc. Stringer, E.T. (1972). *Foundation of climatology.* San Francisco: W. H. Freeman and

Company Publishers.

Trewartha, G.T. & Horn, L. H. (1980). *An introduction to climate (5th ed).* New York: McGraw Hill Book Company.

UNFPA. (Recent date). *The state of world population.* New York: United Nations Population Fund.

Geo. Ed. 526: Applied Statistics for Geographical Research

Course No: Geo. Ed. 526 Nature of course: Theoretical
Level: M Ed Credit hours: 3
Semester: Second Teaching hours: 48

1. Course Introduction

This course is designed to provide knowledge and skills of applied statistics for the students of Master's level of geography education. This practice-based course aims to enable students to use different statistical techniques for drawing summary and making inferences or conclusions form statistical data. It helps students to develop skills of processing and analysis of geographical data using Statistical Packages for Social Sciences (SPSS).

2. General Objectives

The general objectives of this course are to:

- enable the students to describe the importance of statistical techniques in geographical research,
- introduce probability and explain the importance of sampling techniques in geographical research,
- develop skills of processing and analysis of geographical data using Statistical Packages for Social Sciences (SPSS),
- enable students to demonstrate skills for calculation and use of descriptive statistics for geographical data analysis,
- enable the students to make inferences and draw conclusions by testing hypotheses, and
- Develop skills in using statistics for qualitative data analysis.

3. Specific Objectives and Contents

Specific objectives	Contents
• Assess scientific methods in statistical analysis • Differentiate between exploratory and confirmatory approaches • Describe descriptive and inferential statistics • Identify the special considerations of spatial data • Discuss the importance of statistics on geographical research	**Unit I: Statistical Analysis in Geography (4)** 1.1 Introduction: Scientific method 1.2 Exploratory and confirmatory approaches 1.3 Descriptive and inferential methods 1.4 Special considerations with spatial data 1.5 Importance of statistics in geographical research

• Familiarize mathematical conventions and notations • Describe the concept of probability • Explain the properties of Normal distributions • Discuss the nature and types of sampling • Use SPSS for geographical data entry, processing and analysis	**Unit II: Probability and Sampling (10)** 2.1 Mathematical convention and notations 2.2Probability concept: Sample space random variable and probabilities 2.4 Normal distribution 2.5 Sampling: Non-spatial and spatial 2.6 Use of Statistical Package for Social 2.7 Sciences (SPSS): Data processing and analysis
• Explain the use of Centro graphic measures • Assess the patterns of spatial distribution using nearest neighbor techniques • Analyze the patterns of spatial distribution using quadrat measures • Use network analysis measures to identify the pattern Apply the Lorenz curve and Gini Coefficient for spatial data analysis	**Unit III: Descriptive Statistics (10)** 3.1 Overview of Centro graphic measures 3.2 Nearest neighbor analysis 3.3 Quadrat measures 3.4 Network measures Lorenz curve and Gini Coefficient
• Describe the basic idea and key components of hypothesis testing Test the hypothesis using different testing tools	**Unit IV: Inferential Statistics (8)** 4.1 Introduction, basic idea and key components 4.2 Hypothesis testing 4.2.1. $\chi 2$ test 4.2.2. t test 4.2.3.Z test 4.2.4.F test (ANNOVA)
• Use correlation techniques in geographical research Analyze simple time series of geographical data by using regression analysis	**Unit V: Correlation and Regression (6)** 5.1 Correlation 5.1.1. Scatter diagram 5.1.2. Spearman's Rank correlation 5.1.3.Pearson's correlation coefficient 5.2 Linear regression 5.2.1. Simple linear regression Regression with time series data
• Explain the approaches and processes of qualitative research Analyze qualitative data using frequency table, bar/pie charts and categorical statistics	**Unit VI: Qualitative Research and Data Analysis (10)** 6.1 Approaches and processes of qualitative research 6.2 Statistical analysis for qualitative data 6.2.1. Frequency distribution 6.2.2. Bar graph and Pie charts Categorical statistics

Note: *The figures within the parentheses indicate the approximate teaching hours.*

4. Instructional Techniques

The instructional techniques will be of two types - general and specific. General techniques will be common to all the units whereas the specific techniques will be applied according to the nature of topics in the units to be taught.

4.1 General instructional techniques

Varieties of techniques/methods can be applied for this course. The general methods applicable to this course include lecture, problem solving, question-answer, demonstration, class assignment and presentation.

4.2 Specific instructional techniques

Unit	Activities and instructional techniques
I	Discuss the explanatory and confirmatory approaches to research with examples and differentiate descriptive and inferential statistics with charts and examples.
II	Discuss the properties of Normal distribution with charts. Explain the types and procedures of sampling using charts. Class exercises to operate SPSS program (data entry, processing and analysis). Use of YouTube tutorial Videos for operation, data processing and analysis.
III	Familiarize students with descriptive spatial statistics by presenting and solving relevant problems in the class with repeated exercises.
IV	Present and conduct class exercises in the use of different statistics for testing hypotheses related to practical problems.
V	Develop skills in using simple correlation as well as regression with time series data through class presentation.
VI	Present and provide assignments on qualitative approaches to research. Conduct class exercises for construction of frequency table, bar/pie charts and categorical statistics.

5. Evaluation

The achievement of the students will be assessed through internal and external examinations. Forty percent marks will be allotted to internal examination and sixty percent to external examination.

5.1 Internal evaluation (40%)

Forty percent marks are allotted to internal evaluation. Internal evaluation will be

conducted by the course instructor based on the following activities:

Activities	**Marks allotted**
Attendance	5
Classroom activities	5
First assignment	10
Second assignment	10
Third assessment	10
Total	***40***

5.2 External evaluation (60%)

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester. Sixty percent of the marks are allotted to the final examination. The number and types of questions in the final examination will be as follows:

Types of questions	**Total questions to be asked**	**Number of questions to be answered and marks allotted**	**Total marks**
Group A: Multiple choice	10 questions	10 x 1 mark	10
Group B: Short-answer	6 with 2 'or' questions	6 x 5 marks	30
Group C: Long-answer	2 with 1 'or' question	2 x 10 marks	20
Total			***60***

6. Recommended Books and References

6.1 Recommended books

Analysis of categorical data. http://www.sagepub.com/upm-data/11887_Chapter_5.pdf. (Unit VI)

Bryman, A. (2012). *Social research methods (4th Ed*). Oxford: Oxford University Press (Unit II & VI).

Data Step Development (2004). *SPSS Step-by-Step Tutorial: Part 1 and 2*. (Unit II).

Fotheringham, A. S.; Brunsdon, C. & Charlton, M. (2007). *Quantitative geography:Perspective on spatial data analysis*. London: SAZE Publication Ltd. (Unit I).

IBM SPSS Statistics 24 Brief Guide (Unit II)

Johnson, R.B. & Christensen, L. (2014). *Educational research: Quantitative, qualitative and mixed approaches*. London: Suze Publications. (Unit VI)

Kellerman, A. (1981). *Centrographic measures in geography: Concepts and techniques in modern geography* (CATMOG, No 32). (Unit III).

Pal Saroj K., (1982). *Statistical techniques: A basic approach to geography.* New Delhi: Tata McGraw-Hill Publishing Company Limited. (Unit III, IV & V)

Qualitative data R Tutorial. http://www.r-tutor.com/elementary-statistics/qualitative-data (Unit VI)

Rijal, S. P. (2016). *Basic statistics for geographer*. (2nd Ed.). Kathmandu: Rhino Publication Pvt. Ltd. (Unit III).

Rijal, S. P. (2016). *Statistical techniques: A geographical context*. Kathmandu: Rhino Publication Pvt. Ltd. (Unit III, IV & V).

Rogerson, P.A. (2001). *Statistical methods for geography*. London: Saze Publication. (Uni I, II, III, IV & V).

*SPSS Basics*https://www.westga.edu/academics/research/vrc/assets/docs/spss_basics.pdf (Unit II)

6.2 References

Black, J. A. & Champion, D. J. (1976). *Methods and issues in social research*. New York: John Wiley & Sons Inc.

Daniel W. W. & Terrel, J. C. (1987). *Business statistics: Basic concepts and methodology*. Bostan: Houghton Mifflin Company.

Hall, M.& Richardson, T. (2016). Basic statistics for comparing categorical data for 2 or more groups, *Hospital Pediatrics* (American Academy of Pediatrics), 6(6): 383-385.

Kothari, C. R. (2004). *Research methodology: Methods and techniques*, New Delhi: New Age International (P0 Limited, Publishers

Matheus, J. A. (1981). *Quantitative and statistical approaches to geography: A practical manual*. Oxford: Pergamon Press.

McColl, D. (2017). *Simple statistical test for geography*. London: Taylor & Francis.

Ortiz, L.E. & Gross, S. (Eds.) (1975). *Methods and measures of centrography: A critical survey of geographic applications*, (Paper 8), Occasional publication of the Department of Geography, Geography Graduate Student Association, University of Illinois, USA.

Tailor, P. J., (1977). *Quantitative methods in geography: An introduction to spatial analysis.* USA: Houghton Mifflin Company.

Yeates, M. (1974). *An introduction of quantitative analysis in human geography*. New York: McGraw-Hill Compan

Geo. Ed. 527: Geographic Information Systems (GIS) and Remote Sensing (RS)

Course No: Geo. Ed. 527 Nature of course: Theory (2) Practical (1)

Level: M.Ed. Credit hours: 3

Semester: Second Teaching hours: 32 (Th)+ 32 (Pr) = 64

1. Course Introduction

This course **is** designed to provide students the knowledge of Geographic Information System (GIS) and Remote Sensing (RS). It deals with the fundamental concepts of GIS, data entry, GIS database management, analysis and output design as well as RS, different types of sensors sensing systems, images and techniques of image interpretation and mapping. It provides the knowledge of handling digital database. In addition, it also helps students to develop the teaching aids with the help of GIS and RS software in school and college levels. After this course, students will be able to handle spatial data of the real world to solve the geographical problems independently by using Personal Computer (PC) based GIS, Remote Sensing and Global Positioning System software and devices.

2. General Objectives

The general objectives of the course are to:

- enhance students' understanding of the fundamental concepts of GIS to handle spatial information of the real world with specific focus on education related applications (i.e. school mapping),
- familiarize the students with the handling of GIS software
- introduce students to fundamental principles of remote sensing data acquisition systems from the air and the space,
- acquaint the students with imageries, and its application in mapping geographical features
- enable the students to recognise image data,
- develop skills required for the integration of GPS data with GIS and RS for school mapping purposes.
- familiarize students with methods and materials essential for teaching GIS and RS.

3. Specific Objectives and Contents

Specific objectives	Contents
• Give an overview of GIS concepts • Identify the components of GIS • Explain the development of GIS. • Provide concept of spatial thinking with a focus on school mapping	**Unit I: Fundamentals of Geographic Information System (GIS) (4)** 1.1 Concepts of GIS 1.2 Components of GIS 1.3 Development of GIS and its application 1.4 Spatial thinking, learning and need identification 1.5 Map and cartography 1.6 Map types, application and products.
• Use of GIS Data • Identification of sources of GIS	**Unit II: Geographical Data, Types and Characteristics (5)**

Data • Familiarize with structure of GIS data and data model • Describe the process/es of data acquisition, storing and • management	2.1 Concept of geographical data, types and nature 2.2 Sources of geographical data – maps, imageries, areal photograph, GPS, field survey. 2.3 Data structures (Raster / Vector) and models Data acquisition, storing and data management
• Analyze the concept/s of spatial problems • Integrate GPS data on school mapping • Describe the dissemination process and their requirements for decision support	**Unit III: Spatial Data Handling (8)** 3.1 Identification of spatial agendas and issues on education 3.2 Handling discrete (positional, linear, areal) and continuous (surface, raster grid cells) geographical analysis 3.3 Handling data for school mapping (GPS location and field record) Output/ Cartographic design and dissemination of data process of geographical analysis
• Give an overview of Remote Sensing technology and its development • Explain the Electro Magnetic Energy/Electro Magnetic Radiation and its interaction with atmosphere and matter • Differentiate the sensor and sensing system	**Unit IV: Fundamentals of Remote Sensing (4**) 4.1 Nature and scope of Remote Sensing (RS) 4.2 Historical development of Remote Sensing 4.3 Electro Magnetic Energy/Electro Magnetic Radiation and theories 4.4 EMR interaction in the atmosphere and earth surface Sensors and sensing systems
• Access the pattern recognition of imageries • Prove knowledge of image classification • Illustrate the ideas to integrate ancillary data in image classification	**Unit V: Data/Information Acquisition Digital Image Processing from the Remote Sensing Imageries (8**) 5.1 Spectral pattern recognition – visual, digital 5.2 Unsupervised and supervised classification Ancillary data and their use
• Define GPS • Access the data capture and mapping system • Prepare lab work for working environment (establish hardware and software in the laboratory) • Input spatial data • Manage spatial data • Handle geo-processing tools • Work with satellite images • Recognize patterns • Process digital images • Prepare maps for change detection • Prepare school maps • Work on cartographic layout	**Unit VI : Concept and Application of GPS (3)** 6.1 Concept of GPS 6.2 Data capture and link to GIS & RS GPS mapping **Unit VII: Practical Application of GIS, Remote Sensing and GPS (16)** 4.1 Placing hardware, selection of software for the GIS and Remote Sensing work, 4.2 Selection of base maps and layers, geo-referencing of raw data and vectorization of the layers 4.3 Building concepts of Spatial Reference System (SRS) ,Map 4.4 Operation of geo-processing tools for spatial data - clip, select, proximity, overlay 4.5 Image download and rectification 4.6 Visual work with image data –Visual classification

	of the objects, identification of land cover/use, mapping land cover/use 4.7 Work with Digital Numbers (DN Values) - digital classification of the objects, identification of land cover/use, unsupervised and supervised classification, 4.8 Integration of GIS, RS and GPS and preparation of school mapping 4.9 Map elements and composition, dissemination School mapping exercise/GIS Project

Note: The figures within the parentheses indicate the approximate teaching hours related to respective units.

4. Instructional Techniques

4.1 General techniques

Both theoretical and practical techniques/methods can be applied for this course. The general techniques/ methods applicable to this course include lecture, question-answer, discussion, observation, class assignment and presentation as well as software-based practical exercises.

4.2 Specific techniques

Unit	Activities and instructional techniques
I	Provide theoretical concepts of the subject through local examples
II	Give ideas on GIS based on visual aids, Google Earth Maps and Models
III	Provide knowledge about data handling systems through the local examples and software based techniques
IV	Provide fundamental concepts of remote sensing with the help of graphic display and illustrations
V	Give ideas based on illustration of the imageries and maps
VI	Give knowledge through the handling of handheld Global Positioning System (GPS) and recording of position (latitude, longitude and elevation/ height) of geographical objects in local areas.
VII	• An intensive practical exercise of both GIS and Remote Sensing software: GPS device handling and application, Arc GIS software, and one of the image processing (Open General License) softwares will be used.

	• Map reading exercises to understand the different types of maps, i.e. general, thematic, Google earth, imageries, • An intensive practical exercise of both GIS and Remote Sensing software: GPS device handling and application, Arc GIS software, and one of the image processing (Open General License) softwares will be used.

5. Evaluation Schemes

Evaluation will be carried out both internally and externally.

Nature of Course	Internal Evaluation (40%)		External Evaluation (60%)		Total Marks
	Theory	Practical	Theory (Semester exam)	Practical	100%
Theory + Practical	25 marks (40% of 65)	15 Marks (40% of 35)	40 Marks (60% of 65)	20 Marks (60% of 35)	

Note: *Students must pass separately in internal evaluation, the external practical examination and the semester-final examination.*

5.1 Internal evaluation

Theory (25 Marks)

1.	Attendance	2 Marks
2.	Classroom Activities	3 Marks
3.	First Assignment	5 Marks
4	Second Assignment/ Assessment	5 Marks
5.	Third Assignment (Mid Term Examination) Assessment	10 Marks
Total		***25*Marks**

Practical (15 Marks)

1.	Lab Attendance	2 Marks
2.	Lab work	3 Marks
3.	Field report/ Project work	5 Marks
4	Record Book	5 Marks
Total		***15 Marks***

Note: *Internal evaluation will be conducted by the course instructor.*

5.2 External evaluation

Final examination (Theory)

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester. The types and number of questions to be included in the final examination are as follows:

Types of Questions	Total questions to be asked	Number of questions to be answered and points allocated	Total marks
Group A: Multiple Choice items	10 questions	10 X 1 points	10 Marks
Group B: Short-answer Questions	6 with 2 'or' questions	6X5points	30 Marks
Total			**40 Marks**

External evaluation (Practical)

External practical evaluation will be conducted in the Department by the expert appointed by Examination Division, Office of the Dean and the subject teacher.

1.	Practical exam / Lab work	5Marks
2.	Project work	5Marks
3.	Record book	5 Marks
4	Viva-voce	5 Marks
Total		***20 Marks***

Students need to acquire minimum pass marks in each component (5.1 and 5.2) individually for the completion of the course.

6. Recommended Books and References

6.1 Recommended books

Aronoff, S. (1989). *Geographic information system: A management perspective.* Ottawa: WDL Publishers.

Burrough, P.A. (1986). *Principles of geographic information systems for land resource assessment*. Oxford: Clarendon Press.

ICIMOD (2001). *GIS for beginners*. Kathmandu: ICIMOD.

Lillesand, T. M. & Kiefer, R. W.(1987). Remote sensing and image interpretation (2nd Edition). New York: John Wiley and Sons.

National Research Council (2006). Learning to think spatially: GIS as a support system in the K-12 curriculum, (Committee on the Support for the Thinking Spatially: The Incorporation of Geographic Information Science Across the K-12 Curriculum, Committee on Geography).National Academies Press online.

Poudel, K. P.(2010). *Geographic information science and technology: Building concepts in Nepalese perspectives*. Kathmandu: Nepal GIS Society.

Poudel, K.P.(2011). स्थानीय विकासमा भौलिक स्चना प्ाली(Geographic Information Systems in Local Development) Kathmandu: Nepal GIS Society.

6.2 References

Avery, Thomas Eugene, Berlin, Graydon Lennis, 1985. *Fundamentals of*

remote sensing and airphoto interpretation. NewYork, Macmillan Publishing Company

Chrisman, N.(1997). *Exploring geographic information systems*. New York: John Wiley and Sons, Inc.

DeMers, M. N.(1997). *Fundamentals of geographic information systems*. New York: John Wiley and Sons, Inc.

Donna J. Peuquet and Marble F. Duane (eds.) (1990). *Introductory reading in GISs*. New York. Taylor and Francis.

ESRI, 2005. ArcGIS® 9.x, Getting Started With ArcGIS®.

Redland: ESRI GIS Nepal bulletin of Nepal GIS Society,

Jawalakhel, Lalitpur,

GIS Newsletter of National Planning Commission Secretariat, Singhdurbar, Kathmandu, Nepal,

MENRIS, ICIMOD Publications,

http://www.negiss.org.np; http://esri.com; http:// unigis.org; http://icimod.org (GIS portal). http://gisworld/

Geo. Ed. 528: Geography of Resource Management

Course No: Geo. Ed. 528	Nature of course: Theoretical
Level: M. Ed.	Credit hours: 3
Semester: Second	Teaching hours: 48

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1. Course Introduction

This course is designed to provide the advanced knowledge of geography of resource management. It deals with the fundamental concepts, meaning, types, approaches, bases, and resource relationship and management practices. It aims to enhance the knowledge of resource management at global as well as local level. In addition, it seeks to develop the skills of resource management at micro level for the sustainable use of available resources (natural, human and cultural).

2. General Objectives

The general objectives of this course are to:

- enable the students to describe the nature, scope and the approaches to the study of resource management and resource geography,
- enable the students to classify resource bases, types and their spatial distribution,
- enhance the capacity of the students to measure the different dimensions of resources management with reference to carrying capacity,
- familiarize the students with different management practices for the sustainable development of the resources,
- enable the students to use the knowledge and skills of resource management in their daily life, and
- equip the students with innovative methods, techniques and materials of resource management practices at college level.

3. Specific Objectives and Contents

Specific objectives	Contents
• Describe the nature and scope of geography of resource management • Explain resource and resource management • Discuss the various approaches to the study of resource geography	**Unit I: Geography of Resource Management (8)** 1.1 Nature and scope 1.2 Resource and resource management 1.3 Approaches: Ecological, Cultural/Technological, Economic, Interdisciplinary and Innovative
• Examine the resource bases and their classification • Analyze the present status, conservation and management of forest, water, minerals aquatic and land resources • Explain the importance of population, perceptions, policy and desires to	**Unit II: Resource Bases and Typology (8)** 2.1 Resource base and its typologies-Perpetual, non-renewable, renewable, potential, human, and cultural 2.2 Natural resources and management • Forest resources • Aquatic and non-aquatic resources • Wetland resources

resource utilization • Discuss the role of tangible and intangible culture regarding resource generation	• Mineral resources • Land resources 2.3 Human-population, perceptions, appraisal and policy • Tangible and intangible resources (culture and cultural heritage)
• Describe the relationship between population and resources in Nepal • Explain the concept of carrying capacity regarding resource use • Analyze the resource endowments status, cropping efficiency and eco-spatial productive capacity • Assess the demand and supply of resources with reference to Nepal • Illustrate indigenous knowledge systems and resources management practices Discuss the impacts of climate change on resources	**Unit III: Population Pressure on Resources (9)** 3.1 Population and resources 3.2 Carrying capacity of the resources 3.3 Resource endowment status: cropping efficiency and eco-spatial productive capacity 3.4 Demand and supply of resource 3.5 Indigenous knowledge system and resources management practices in Nepal Climate change impacts on resources
• Examine the role of different agencies in resource management practices • Analyze the role of different user groups in resource management practices in Nepal • Explain the status of protected areas and biodiversity conservation • Describe the indigenous practices in common pool resources management Discuss the watershed management and conservation	**Unit IV: Resources Management Practices (8)** 4.1 Role of WWF, ICIMOD, UNEP, DNPWC and IUCN in resource management 4.2 Resource management practices in Nepal: CFUGs, WUGs and SFG 4.3 Protected areas and biodiversity conservation 4.4 Common pool resources management- public land, water and forest. Watershed management and conservation
• Identify the steps and frameworks of spatial resource planning • Analyze the role of community in the resource planning • Access the ways of adaptive practices in resource management in Nepal • Describe the power relation in resource uses and conflict management • Explain the importance of conflict management in resource planning and utilization • Map out the governance system and services on resources management and	**Unit V: Resource Planning and Management (10)** 5.1 Steps and frameworks of resource planning 5.2 Community participation in resource planning 5.3 Adaptive resource management practices 5.4 Power relation and resource use trends 5.5 Conflict management on resources planning and utilization Governance of resources

planning	
• Prepare a local level resource-based plan report • Prepare a local resource map of a nearby urban or rural municipality of Nepal	**Unit VI: Resource Management Technique (5)** **6.1** Resource-based plan at local level **6.2** Resource mapping

Note: The figures within the parentheses indicate the approximate teaching hours.

4.Instructional Techniques

The instructional techniques will be of two types - general and specific. General techniques will be common to all the units whereas the specific techniques will be applied according to the nature of topics in the units to be taught.

4.1 General instructional techniques

Varieties of techniques/methods can be applied for this course. The general techniques/ methods applicable to this course include lecture, question-answer, discussion, interactions, observation, class assignment and oral presentation.

4.2 Specific instructional techniques

Unit	Activities and instructional techniques
I	Provide theoretical concepts of the subject through local examples.
II	Give ideas on resource distribution using visual aids, Google Earth Maps and world atlas maps as well as online resources.
III	Provide knowledge of the calculation of population pressure on resources based on statistics of CBS and other available resources.
IV	Deliver ideas of resource management of WWF, IUCN, UNEP, and ICIMOD. Likewise, explain the role of NTNC, CFUGs, WUGs, and SFG for resource management in Nepal.
V	Deliver lectures based on local examples of resources management practices.
VI	Provide skills of resources identification, mapping and planning at local level – take a case from a rural or urban municipality specially at ward level and prepare a study report.

5. Evaluation

The achievement of the students will be assessed through internal and external examinations. Forty percent marks will be allotted to internal examination and sixty percent to external semester-final examination.

5.1 Internal evaluation (40%)

Forty percent marks are allotted to internal evaluation. Internal evaluation will be conducted by the course instructor based on the following activities:

Activities	**Marks allotted**
Attendance	5
First assignment	10
Second assignment	10
Third assessment	10
Total	***40***

5.2 External evaluation (60%)

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester. Sixty percent of the marks are allotted to the final examination. The number and types of questions in the final examination will be as follows:

Types of questions	**Total questions to be asked**	**Number of questions to be answered and marks allotted**	**Total marks**
Group A: Multiple choice	10 questions	10 x 1 marks	10
Group B: Short answer	6 with 2 'or' questions	6 x 5 marks	30
Group C: Long answer	2 with 1 'or' question	2 x 10 marks	20
Total			***60***

6. Recommended Books and References

6.1 Recommended books

Hunker, H.L. (1964). *Introduction to world resources*. New York: Herpar publication. (Unit I)

Kerr, J. M. (1997). *Natural resources economics, theory and applications*. New Delhi: Oxford Publication. (Unit I &III)

Mitchell, B. (1997). *Resource and environmental management*. London: Longman (Unit II) Mitchell, B. (2003). Models of resource management. In B. Thakur (Ed.) .

Perspectives in resource management in developing countries: Resource management theory and techniques Vol. I), New Delhi. Concept Publishing Company. (Unit II)

Mitchell, B. (1989). *Geography and resource analysis*. (2nd Ed.). England: Longman Group UK, Ltd. (Unit III).

Omara-Ojungu, P.H. (1992). *Resource management in developing countries*. London: Longman Scientific and Technical. (Unit I, II, and III)

Poudel, K. P.(2012). *Fundamentals of resource management: Principles and practices,*

Germany: LAP Lambert Academic Publishing. (Unit I, II, III, IV, and V)

Pokhrel, K.P. (2011). *Resources development (Land, water and forest) in Nepal: An enquiry*

Kathmandu: Acme Global Education Pvt. Ltd. (Unit II, III, IV & V)

Sharma, R.C. (2018). *Resource management*. New Delhi: SAGE Publication (Unit I, III & VI)

Singh, S. (2016). *Environmental geography*. Allahabad: Prayag Pustak Bhawan. Available at: https://teligram.me./UPSC.civilservice (Unit I, Ii & V)

Upreti, B.R. (2005). *Management of social and natural resources conflict in Nepal: Realities and alternatives.* New Delhi: Adroit Publisher. (Unit V & VI)

Upreti, B. R. (2003). *Resource governance, resource scarcity and conflict in Nepal. A discussion paper.* The Mountain Forum / mfsupport@mtnforum.org

Washington, O.O; Pescal, C. S.;& Issac, B. (2010). *Managing natural resource for development: A resource book*. Nairobi: University of Nairobi. Available at: https: www.ldrc.ca. (I, III, IV & V).

Zimmermann, E. W. (1951). *World resources and industries: A functional appraisal of the available agricultural and industrial materials* (Revised edition). New York: Harper and Brothers Publishers (Unit I)

6.2 References

Caulfield, R. A. (2004). Resource Governance. In *AHDR (Arctic Human Development Report) 2004*. Akureyri: Stefansson Arctic Institute. Pp.121-138.

ESCAP (2003). *A guide to the application of public participation in planning and policy formulation towards sustainable transport development*. New York: Economic and Social Commission for Asia and The Pacific, United Nations

Gaventa, J. (2006). Finding the spaces for change: A power analysis.*IDS Bulletin* Institute of Development Studies, 37 (6), 23-33.

GOFC-GOLD (2009). *Reducing greenhouse gas emissions from deforestation and degradation in developing countries: A sourcebook of methods*

and procedures for monitoring, measuring and reporting, Alberta, Canada,: GOFC-GOLD Report version COP14-2, (GOFC-GOLD Project Office, Natural Resources Canada,

Ojha, H.R., Timilsina, N.P., Chhetri, R. B. & Poudel, K.P. (2007). *Knowledge system and natural resources: Management practice in Nepal*. UK: Cambridge University Press.

Poudel, K. P. (2003). *Watershed management in the Himalayas: A resource analysis approach.* New Delhi: Adroit Publishers.

Poudel, K. P.& Poudel, Upendra. (2011). *रुँको भूगोल: भौतिक अध्ययनको नयाँ आयाम ।*

स्याङ्जाःश्री हरिभक्त पौडेल वंश स्मृति प्रतिष्ठाने, ९७लष्त ख्त्०

Pokhrel, K.P.(2011). *Culture, climate change and food insecurity in Nepal: An ecological approach.* Kathmandu: Genuine Color Printing (GCP) Pvt. Ltd.

पोखेल, कवि प्रसाद, (२०६८) *प्राकृतिक स्रोत व्यवस्थापन* । काठमाडौं : क्षितिजप्रकाशन ।

राष्ट्रिय योजनाआयोग (२०१९). *पन्ध्रौ पंञ्चवर्षिय योजनाको आधारपत्र (२०१९/२० -२०२४/२५)*

काठमाडौं: राष्ट्रिय योजनाआयोग .

Paul, S. and Ramanandan, A. (2002). Conservation of rural biodiversity through indigenous knowledge. *Kurukshetra*, Vol. 50

Thakur, B.(ed.) (2003). Perspectives in resource management in developing countries *Resource management theory and techniques,* Vol. I, New Delhi. Concept Publishing Company.

Thomson. B. C. (2001). A livelihood perspective on natural resources management and environmental change. *Economic Geography* Vol. 53

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English Education

Eng. Ed. 525: Linguistics in Application

Nature of the course: Theoretical

Course No.: Eng. Ed. 525 Credit hours: 3

Level: M. Ed. Teaching hours: 48

Semester: Second

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1. Course Introduction

This course makes an attempt in exploring the basic ideas of applied linguistics acquainting the learners with the key issues in applied linguistics so as to prepare them for continuing their studies in this field. It aims to meet the needs of people wishing to apply linguistics in various professional fields; focusing upon the central aspects of the discipline and it also aims to develop learners' basic knowledge and skills in these areas. The first unit deals with a basic understanding of applied linguistics and the development of the discipline along with the research trends and applications of linguistics to language teaching. The second unit is about World Englishes, implication of the global spread of English for ELT, English as a lingua franca and the historical context of English in relation to the Nepalese context. Likewise, unit three deals with contrastive and error analysis. Units four, is about the various intercultural approach and its practices in ELT. The last unit deals with the various approaches and interpretations of critical pedagogy in language learning.

2. General Objectives:

The general objectives of the course are as follows:

- To acquaint the students with the basic concepts, need, scope, development and research trends of applied linguistics.
- To provide insights on the role of linguistics in language teaching.
- To make the students able to carry out studies on contrastive analysis and error analysis.
- To familiarize the students with the application of the intercultural approach in language teaching.
- To help the students evaluate the role of critical pedagogy in ELT with reference to the context of Nepal.

3. Specific Objectives and Contents

Specific objectives	Contents
• Introduce applied linguistics in terms of its definition, need, scope and development. • Demonstrate an understanding of Applied Linguistics and its related fields of study • Enumerate the professional	**Unit I: Linguistics in Action and Interaction (10)** 1.1. Introducing applied linguistics 1.2. Relationship between linguistics and applied linguistics 1.3. Views on applied linguistics: theory, practice, activity and critical applied linguistics views 1.4. Development and scope of applied linguistics 1.5. Applied linguistics and related fields of study

discourse of applied linguistics along with the research trends in the discipline. • Survey and analyze how applied linguistics is related to other concerned areas of language studies. • Explain the application of linguistics in language teaching. • Explain the application of pure linguistics in language teaching	1.5.1 Anthropological linguistics and ethno-linguistics, 1.5.2 Psycholinguistics and sociolinguistics 1.5.3 Neuro-linguistics and language pathology 1.5.4 Clinical linguistics and forensic linguistics 1.5.5 Mathematical linguistics and computational linguistics 1.5.6 Translation and interpretation Stylistics and literacy 1.5.7 Discourse analysis and pragmatics 1.5.8 Lexicography and corpus linguistics 1.5.9 Language teaching and second language acquisition 1.5.10 Language policy and planning 1.5.11 Second language teacher education 1.5.12 Bilingualism/multilingualism 1.5.13 Language testing and CALL 1.6. Applied linguistics as a professional discourse 1.7. Application of linguistics in language teaching 1.5.7 Research practices in applied linguistics in Nepal.
• Explore the context of world Englishes. • Describe the spread and role of English in center and periphery countries. • Analyze the debate of the native vs. non-native Englishes, world Englishes and English as a lingua franca. • Analyze the role of the English language in relation to the historical context in Nepal. • Describe new Englishes and their model of teaching.	**Unit II: Recent Trends in World Englishes (8)** 2.1. Introducing World Englishes 2.2 Spread of English: Inner, expanding and outer circle or center and periphery 2.3. Implication of the global spread of English for ELT 2.4. Models for non-native Englishes 2.4.1 Stages of development of Non-native varieties 2.5. English as a Lingua Franca (ELF): Definition, Rationale, Critique 2.6. Historical context of English(es) in Asia and Nepal 2.7. New Englishes and teaching models (Ferguson, 2006) 2.7.1 Sociolinguistic context of the global use of English 2.7.2 Defining New Englishes: Phonology, Grammar, Lexis and Discourse 2.8. Use of World Englishes in EFL classroom (Baratta, 2019)
• Discuss CA and EA in terms of their definition, historical development, theoretical assumptions and role in language teaching. • Relate their theoretical knowledge with research study.	**Unit III. Contrastive Analysis and Error Analysis (10)** 3.1. Contrastive analysis 3.1.1. Contrastive analysis 3. 1.2. Historical perspectives 3.1.3. Assumptions 3.1.4. Role of CA in language teaching 3.1.5. A contrastive analysis of Persian

Carry out small-scale projects on various issues of CA and EA.	and English vowels and consonants 3.2. Error analysis and the scope 3.2.1 Classification and description of errors 3.2.2 Errors in the use of English grammar 3.2.3 Levels of error 3.2.4 Error gravity and error evaluation 3.2.5. Learners' errors and their evaluation 3.2.6. Error correction Analysis of errors in written English
• Show the relationship between culture and language. • Describe what intercultural approach and intercultural communication are. • Evaluate the implementation of intercultural approach to language teaching • Analyze the role of ethnography in the study of language. • Discuss the role of culture in ELT. • Explain the issue of appropriating methodology in ELT. • Describe the role of popular culture • in ELT.	**Unit IV. Culture in Language Teaching and Learning (10)** 4.1 Introduction to intercultural approach 4.2 Developing exercises using intercultural approach 4.3 Relationship between language and culture 4.4 Culture in ESL and EFL classroom 4.5 Culture in ELT: Sowden's study 4.6 Intercultural language teaching for teacher inquiry 4. 7 Appropriating methodology 4.7.1 Learning about the classroom 4.7.2 The prerequisites of an appropriate methodology 4.7.3 Ethnographic-action research 4.7.4 Achieving appropriate methodology 4.8 Popular culture: Murray's study 4.9. Stereotypes in Intercultural communication
• Describe and interpret critical pedagogy and explain its role in language learning and teaching. • Enumerate the role of critical educator in critical pedagogy in relation to different schools of thought. • Analyze discourse of the politics and pedagogy of the English language with the focus on appropriating methods in the local context. • Interpret critical pedagogy and explain its role in	**Unit 5. Critical Pedagogy and Language Learning (10)** 5.1. Critical pedagogy 5.1.1 Introduction 5.1.2 Various interpretations: critical language awareness, issue based teaching and participatory education 5.1.3 Transforming lives: introducing critical pedagogy in ELT classrooms 5.1.4. Teacher education and democratic schooling 5.2 Implications of critical pedagogy in second language classroom 5.3 The politics and pedagogy of appropriating discourses of ELT 5.3.1 Ideologies of English

language learning and teaching in Nepalese context.	5.3.2 The 'third way' 5.3.3 Language debates 5.3.4 Pedagogy of appropriation: theorising appropriation and developing appropriate methods 5.4. Critical pedagogy in Nepalese context

Note: The figures in the parenthesis indicate approximate teaching hours for respective units.

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. First group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to the particular units.

4.1. General instructional techniques

- Lecture
- Discussion
- Explanation and illustration
- Self-study and small-scale research
- Group and pair works
- Discovery and inquiry
- Read, discuss, write and share (ReDWis)

4.2 Specific Instructional Techniques

Unit	Activities and instructional techniques
I	Book/article review and presentation
II	Small scale research and presentation
III	Compare English and Nepali or students' mother tongue
IV	Group work on a given topic
V	Project work on how English is taught in Nepal

5. Evaluation

5.1 Internal Evaluation 40%

Internal evaluation will be conducted by the instructor based on the following activities:

- Attendance 5 marks
- Participation in learning activities 5 mark

- First assignment/assessment 10 marks
- Second assignment/assessment 10 marks
- Third assignment/assessment 10 marks

Note: The course teacher can develop multiple activities for assignments, depending on the nature of the course/topic and students' interests. Such activities may include book review, article review, term paper on specific issue/topic, or unit test\quiz, project work, case study, survey/field study, individual/group report writing, literature review and a research article based on primary and/or secondary data.

5.2 External Evaluation (Final Examination) 60%

Examination Division, Office of the Dean, Faculty of Education will conduct final examination at the end of the semester.

1. Objective questions (multiple choice questions) (10 x 1) = 10 marks
2. Short answer questions (6 questions with 2 OR questions) (6x 5) = 30 marks
3. Long answer questions (2 questions with 1 OR question (2 x 10) = 20 marks

6. Recommended Books and References

6.1 Recommended Books/Texts

Akbari, R. (2008). Transforming lives: Introducing critical pedagogy into ELT classrooms. *ELT Journal.* 62.doi:10.1093/elt/ccn025

Baratta, A. (2019).*World Englishes in English language teaching.* Manchester: Palgrave macmillan.

Canagarajah, S. (1999*).Resisting linguistic imperialism in English teaching*. Oxford: OUP. (Unit V) (pp.173-193)

Corbett, J. (2003). *An Intercultural approach to English language teaching*. Clevend: Multilingual Matters. (Unit IV) (pp.31-46, 191-204)

Darder, A., Baltodano, M.P & Torres, R.D. (Eds.) (2009) *The critical pedagogy reader.* New York, Routledge (Unit V) (pp. 27-51, 438-459)

Ferguson, G. (2006*). Language planning and education*. Edinburgh: Edinburgh UP. (Unit I & II) (pp.110-171)

Giri, A (2010). Errors in the Use of English Grammar. *Journal of NELTA 15/1-2, 54-63.* (Unit III) Holliday, A. (1994). *Appropriate methodology and social context*. Cambridge: CUP. (Unit IV)

(pp.160-177)

Hunston, s. & Oakey, D. (Eds.) (2010). *Introducing applied linguistics*. New York: Routledge (Unit I & IV) (pp. 132-144)

James, C. (1980). *Contrastive analysis*. London: Longman. (Unit III) (pp.1-27)

James, C. (1998). *Errors in language learning and use: Exploring error analysis*. London: Longman. (Unit III)

Jiang, W. (2000).The relationship between culture and language.*ELT Journal Volume 54/4, 328-334.*

(Unit IV)

Kachru, B. (1992). *The other tongue.* Chicago: University of Illinois Press. (Unit II) Kachru, B.B. (2006). *Asian Englishes beyond the canon.* Hongkong: HUP(Unit II) (pp.7-27)

Kachru,B.B., Kachru, Y. & Nelson, C.L. (Eds.) (2006). *The handbook of world Englishes.* NewYork: Blackwell Publishing(Unit II) (pp.130-144)

Kaplan, R. B. (Eds.). (2002). *The Oxford handbook of applied linguistics*. Oxford: OUP. (Unit I) (pp.3-23)

Kirkpatrick, A. (Ed.) (2010). *The routledge handbook of world Englishes.* New York, Routledge (Unit II) (pp. 471-488, 673-689)

Maharjan, L.B (2009).Learners errors and their evaluation. *Journal of NELTA 14/1-2, 71-81.* (Unit III)

Menard-warwick, J. (2009) Co-Constructing Representations of Culture in ESL and EFL Classrooms: Discursive Faultlines in Chile and California. *The Modern Language Journal*, 93, i, 30–45. (Unit IV)

Moradi, H. & Chen, J. (2018). A contrastive analysis of Persian and English vowels and consonants. In Lege artis. Language yesterday, today, tomorrow. *The journal of University of SS Cyril and Methodius in Trnava*. Warsaw: De Gruyter Poland, 2018, III (2), DOI: 10.2478/lart-2018-0016 ISSN 2453-8035 (Unit 3)

Murray, G. (2008). Pop Culture and Language Learning: Learners' Stories Informing EFL. *Innovation in Language Learning and Teaching* Vol. 2, No. 1, 2-17.(Unit IV)

Norton, B. and Toohey, K. (Eds.) (1997).Critical pedagogies and language learning. Cambridge: CUP. (Unit V) (pp.1-18, 271-290)

Pennycook, A. (1994). *Cultural politics of English as an international language.* London: Longman. (UnitV) (pp.295-321)

Rampton, M. B. H. (1990). Displacing native speaker: expertise, affiliation and inheritance.*ELT Journal*, vol. 44/2, 97-101. (Unit II)

Rubenfel, S. (2006). Second Language Learning and Cultural Representations: Beyond Competence and Identity. *Language Learning* 56:4, 609–632. (Unit IV)

Schmitt, N. (2002). *Applied linguistics.* London: Arnold. (Unit I)

Sermsook,K.,Liamnimitr, J. Pochakorn,R (2017). An analysis of errors in written English Sentence: A case study of Thai EFL students. English Language Teaching. 10/3III (2), doi: 10.5539/elt.v10n3p10 (Unit III)

Shabashvili,G., Gochitashvili,K. (2017). Implications of critical pedagogy in second language classroom education: A Georgian study. Social Science and Educational Research Review.(4) 2 139-160, ISSN 2392-9683 (Unit-III)

Simpson, J. (Ed.) (2011). *The Routledge Handbook of applied linguistics.*270 Madison Avenue, New York, Routledge (pp.1-8, 9-11, 373-387)

Sowden, C. (2007). Culture and the 'good teacher' in the English Language classroom. *ELT Journal* Volume 61/4, 304-310. (Unit IV)

Tolosa,C, Biebricher,C.,East,M and Howard,J. (2018). Intercultural language teaching as a catalyst for teacher identity. *Teaching and teacher education.* 70/227-235 (Unit IV)

6.2 References

Byram, M. (Eds.).(2004). *Routledge encyclopaedia in language teaching and learning*. London:Routledge.

Johnson, K. and Johnson, H. (Eds.).(1999). *Encyclopaedia dictionary of applied linguistics*. Blackwell:Blackwell Publishing.

Lyons, J. (2002). *Language and linguistics*.Kundli, India: CUP

Philipson, R. (2009). *Linguistic imperialism continued*. hyderabad: Orient BlackSwan. Robins, R. H. (1989). *General linguistics*. Essex, England: Longman Group UK Limited.

Eng. Ed. 527: Critical Discourse Analysis (CDA)

Nature of Course: Theoretical

Code No: Eng. Ed. 527
Level: M. Ed. Credit Hours: 3

Semester: Second Teaching Hour: 48

1. Course Introduction

This course aims at equipping the students with the knowledge and critical skills of analyzing discourse in different social contexts. This course is organized into four units. The first unit introduces the basic concepts of discourse and discourse analysis along with its relation to ideology and its discursive structure. The second unit of the course presents the overview of CDA in relation to language education and educational research, in addition, this unit reviews the history, principles, objectives of CDA, and engages students in discussions about how CDA differs from discourse analysis. The third unit deals with the commonly used methodologies for critical discourse analysis. The fourth unit that is the application of critical discourse analysis provides the students with opportunity to analyze different types of discourses critically.

2. General Objectives

The general objectives of the course are as follows:

- To acquaint the students with the basic concepts of discourse analysis.
- To familiarize the students with the history, principles, aims, common topics and concerns of CDA, and to engage them in discussions about how CDA differs from discourse analysis.
- To expose the students to different approaches and methodologies used in the field of CDA.
- To enable the students to analyze different discourses critically.

3. Specific Objectives and Contents

Learning Outcomes	**Contents**
• Describe discourse analysis from different perspectives. • Show relationship between discourse and ideology Discuss the nature of discursive structure.	Discourse Analysis (11) 1.1 Discourse, discourse studies and discourse analysis 1.2 Uses of discourses analysis 1.3 Discourse analysis and text analysis 1.3.1 Text, discourse and language 1.3.2 Approaches to text analysis 1.3.3 Text, meaning and interpretation 1.3.4 Texts and author 1.4 Cohesion (grammatical and lexical) and coherence in discourse analysis 1.5 Different views on discourse analysis 1.6 Cultural theory and critical theory

	1.7 Cultural theory and models of discourse 1.8 Michel Foucault and discourse 1.9 Literature as a discourse 1.10 Discourse and ideology 1.10.1 Ideology and truth 1.10.2 Language, discourse and ideology 1.11 Althusser and ideology 1.12 Gramsci and ideology 1.13 Discursive structure 1.13.1 The episteme 1.13.2 The statement 1.13.3 Discourse/discourses 1.13.4 The archive 1.13.5 Exclusion within discourse 1.13.6 Circulation of discourses 1.14 Pragmatics and discourse analysis
• Give an account of CDA. • Review history, agenda, aims principles and aspects of CDA • Evaluate the role of critical discourse analysts. • Compare and contrast CDA and DA. • Discuss the applications of CDA in EFL classroom as well as in social science research. • Discuss history, agenda, aims, aspects and principles of CDA. • Explain the preferred topics and domains of CDA. • Analyze and interpret CDA as a method of scientific research. • Discuss CDA as a research tool.	2. Critical Discourse Analysis (CDA) (14) 2.1 Critical discourse analysis (CDA): An overview 2.2 Differences between critical discourse analysis and discourse 2.3 Critical applied linguistics and language education 2.4 Major proponents of CDA 2.5 Key issues 2.6 History, agenda, and aims of CDA 2.7 Aspects of CDA 2.8 Principles of CDA 2.9 Topics and domains of CDA 2.10 Critical discourse analysis and critical thinking 2.11 Critical discourse analysis in educational research 2.12 CDA and systematic functional linguistics 2.13 Critical discourse analysis as a method of social scientific research 2.14 Critical discourse analysis in EFL classroom 2.15 Assessing CDA 1.9 New directions in CDA

• Describe different theoretical and methodological aspects of CDA. • Make application of the framework for CDA and apply it in their own • Describe and distinguish different approaches to CDA.	3. Approaches and Methods to CDA Research (15) 3.1 CDA as a theory and method 3.2 Methods for CDA 3.3 Framework for CDA 3.4Doing a critical discourse analysis 3.5 Approaches to CDA 3.5.1 CDA as dialectical reasoning 3.5.2 The Discourse-historical approach 3.5.3 Corpus-based approaches 3.5.4 Multi-modal critical discourse analysis/Multimodal Social Semiotic approach 3.5.5 Cultural approach to CDA (CCDA): From theory to practice 3.5.6 Ethnography and critical discourse studies 3.5.7 Pragmatics and critical discourse studies 3.5.8 Critical discourse analysis and media studies 3.5.9 Critical discourse analysis and ecology 3.5.10 Feminist critical discourse analysis 3.5.11 Colonial and postcolonial approach 3.5.12 Marxist approach 3.5.13 Neoliberalism, globalization and critical discourse studies
• Make critical reading of different discourse genres such as legal, bureaucratic, business and media. • Make critical analysis of written as well as oral discourse.	4. Application of Critical Discourse Analysis (8) 4.1 CDA of legal discourse 4.2 CDA of bureaucratic discourse 4.3 CDA of newspaper discourse 4.4 CDA of press conference 4.5 CDA of literary genres 4.6 CDA of classroom discourse 4.7 Analyzing print text 4.9 Research in CDA 4.91 Digital meaning-making across content and practice in social media critical discourse studies 4.9.2 Accumulating discursive capital, valuating subject positions. From Marx to Foucault 4.9.3 Doing critical discourse studies with multimodality: From meta-functions to materiality 4. Post-Marxist reflections on the value of our time. Value theory and the (in)compatibility of discourse theory and the critique of political economy

Note: The figures in the parenthesis indicate approximate teaching hours for respective units

5. Instructional Techniques

The instructional techniques for this course are divided into two groups. First group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to the particular units.

4.1 General Techniques

- Lecture and discussion
- Reading, discussing, writing and sharing (ReDWiS)
- Demonstration
- Explanation and illustration
- Self-study

4.2 Specific Instructional Techniques

Unit	Activities and Instructional Techniques
Unit One	Reading, discussion and reflective writing
Unit Two	Instructor-guided self-study, group discussion and classroom presentation, reflective writing
	Presentation (Different articles are prescribed for each of these sub-units, and teaching should be based on them.)
Unit Four	Individual/pair/ group work: Critical Discourse Analysis of Sample Texts and Presentation of findings, Project work: The students will apply CDA to varieties of texts as practical activities (Different articles are prescribed for each of these subunits, and teaching should be based on them)

6. Evaluation

5.1 Internal Evaluation 40%

Internal evaluation will be conducted by course teacher based on following activities:

1.	Attendance	5 marks
2.	Participation in learning activities	5 marks
3.	First assignment/assessment	10 marks
4.	Second assignment/assessment	10 marks
5.	Second assignment/assessment	10 points
	Total	**40 marks**

Sample Assignments

1: Define critical discourse analysis from different perspectives and describe its role in society. (1500 words)

*2:*Analyze a discourse of your choice by using one of the approaches discussed in unit three. (2000 words)

*3: A*nalyze any of the genres of discourses discussed in unit four by using

any one of the approaches discussed in unit three. (2000 words)

5.2 External Evaluation (Final Examination) 60%

Examination Section, Office of the Dean, Faculty of Education will conduct final examination at the end of the semester.

6. Objective questions: Multiple choice questions(10 × 1) = 10 marks
7. Short answer questions (6 questions with 2 OR questions(6× 5) = 30 marks
8. Long answer questions (2 questions with 1 OR question (2 × 10) ` = 20 marks

Total **60 marks**

6. Recommended Texts and References

6.1. Prescribed Texts

Angermuller, J. (2018). Accumulating discursive capital, valuating subject positions: From Marx to Foucault. *Critical Discourse Studies,15*(4), 414-425.

Bhatia, A. (2009). Critical discourse analysis of political press conference. *Discourse and Society*, *17*(2), 173-203. (Unit IV)

Cots, J. M. (2006). Teaching with an attitude: Critical discourse analysis in EFL teaching. *ELT Journal,60*(4), 336-345.

Fairclough, N. (2003). *Analyzing Discourse.* London & New York: Routeledge. (Unit I) Fairclough, N. (2010). *Critical discourse analysis* (Second Edition). London: Pearson. (Unit

I, II, III, IV)

Figueiredo, D. C. (2004). Representations of rape in the discourse of legal decisions. In Young, L. Harrison, C, *Systemic functional linguistics and critical discourse analysis* (pp. 217-230). New York: Continuum. (Unit IV)

Flowerdew, J. & Richardson, J.E. (2018). *The Routledge handbook of critical discourse Studies.*London and New York: Routledge. (Unit III)

Flowerdew, J. (2016). *Discourse in English Language Education.* London & New York: Routeledge. (Unit I & II)

Hakam, J. (2009). The `cartoons controversy': A critical discourse analysis of English- language Arab newspaper discourse. *Discourse &Society, 20*(1), 33-57. (Unit IV)

Jonstone, B. (2008). *Discourse analysis*. Singapore: Blackwell Publishing.

KhosraviNik , M. (2022). Digital meaning-making across content and prac

tice in social media Critical discourse studies. Critical Discourse Studies, *19*(2), 119-123.

Koller, V. (2005). Critical discourse analysis and social discourse. *Discourse & Society, 16*(2), 199-224.

Kumarvadivelu, B. (1999). Critical classroom discurse Analysis. *TESOL Quarterly*, *33*(3), 453-484. (Unit IV)

Locke, T. (2005). *Critical discourse analysis.*London: Continuum. (Unit IV)

Lynne, Y, & Claire. H. (2004). Bureaucratic discourse: Writing in the comfort zone. In Lyne,

Y. & Clare, H. Young, *Systemic linguistics and critical discourse analysis* (pp. 231- 246). New York: Continuum. (Unit IV)

Mills, S. (2004). *Discourse analysis.* London : Routledge. (Unit I)

Norris, S. (2004). Multimodal discourse analysis: A conceptual framework. In P. Le Vine &

R. Scollon (Eds.), *Discourse and technology. Multimodal discourse analysis (*pp. 101- 115). Washington, D.C: Georgetown University Press. (Unit IV)

Per Ledin, P.,& Machin, D. (2016). Doing critical discourse studies with multimodality: From metafunctions to materiality. *Critical Discourse Studies*,*26*(1), 1-18.

Rodgers, R. (2011). *An introducation to critical discourse analysis in education.* New York : Routledge. (Units I, II, III, IV)

Rogers, R, & Christian, J. (2007). What would I say? A critical discourse analysis of the construction of race in children's literature. Race Ethnicity and Education, *10* (1), 21,46.

Scollon, P. L. (2004). *Discourse and technology: Multimodal discourse analysis.* (P. L. Sollon, Ed.) Washington: Georgetown University Press. (Unit IV)

Tunderman, S. (2021). Post-Marxist reflections on the value of our time. Value theory and the (in)compatibility of discourse theory and the critique of political economy. *Critical Discourse Studies*, *18*(6), 655-670.

Van Dijk, T. A. (1993). Principles of critical discourse analysis. *Discourse & Society*, *4*(2), 249-283. (Unit II)

Van Dijk, T. A. (1995). Aims of critical discourse analysis. *Japanese Discourse, 1*, 17-27. (Unit I)

Wodak, R. and Mayer, M. (2001). *Methods of critical discourse analysis.* London: Sage Publication. (Unit III)

Wodak, R., & Chilton P. *A new agenda in critical discourse analysis* (pp. 53-70) London: John Benjamin Publishing Company.

Woodak, R. (n.d.). *Aspects of critical discourse analysis*. ((Unit III)

Young, C. H. (2004). Bureaucratic discourse: Writing in the'comfort zone'. In C. H. Young, *Systemic linguistics and critical discourse analysis* (pp. 231-246). New York: Continuum. (Unit IV)

6.2 References

Caldas-Coulthard, C.R, & Coulthard, M. (1996).*Texts and practices: Readings in critical discourse analysis.* London: Routledge.

Fairclough, N. (1995). *Critical discourse analysis: The critical study of language*. London: Longman.

Foucault, M. (1971**).** The archaeology of knowledge(A. M. Smith, Trans.). London and New York: Routledge. (Unit I)

Gee, J. P. (1999). *An introduction to discourse analysis: Theory and method*. London: Routledge

Hakam, J. (2009). The `cartoons controversy': A critical discourse analysis of English- language Arab newspaper discourse. *Discourse Society, 20*(1), 33-57. (Unit IV) *http://www.carleton.ca/~jsheyhol/cda.htm*

Leeuwen, T.V. (2008). Discourse and practice: New Tools for Critical Discourse Analysis. Oxford University: Oxford.

Pennycock, A. (2001). *Critical applied linguistics: A critical introduction*. London: Lawrence Erlbaum Associates, Inc.

Richardson, J. E. (2007). *Analysing newspaper: An approach from critical discourse analysis.* New York : Palgrave Macmillan. (Unit IV)

Salkie, R.(1995). Discourse analysis. Routledge: London.

Weiss, G. & Wodak, R.(eds) (2003). *Critical discourse analysis: Theory and interdisciplinarity*. London: PalraveMcmillan.

Woodak, R., & Chilton, P.(2005). A new agenda in (Critical) discourse analysis. Armsterdem: John Benjamin Publishing Company.

Wooffitt, R.(2005). Conversational analysis and discourse analysis. London: Sage publication.

Eng. Ed. 528: Readings in English Part- I
Course No.: Eng. Ed. 528 Nature of the course: Theoretical
Level: M.Ed. Credit hours: 3
Semester: Second Teaching hours: 48

1. Course Description

Readings in English Part-I is an advanced level reading course which builds on Interdisciplinary Readings (Eng. Ed 517) of the first semester. The course has eight units. It consists of advanced academic texts, which are organized under various themes, namely Education, Literature, Art and Culture, Contemporary Issues, Human Conditions, while literary texts have been organized under major genres of literature. Both types of texts expose the students to content knowledge and strengthen their linguistic resources useful for communication to the wider readership. The course presents the best of authentic academic and literary texts by the prominent authors from diverse geo-cultural and other relevant backgrounds. The course seeks to explore the cross-disciplinary links and their relevance to the contemporary world.

2. General Objectives

The general objectives of the course are as follows:

- To familiarize the students with the contemporary world of art-film, music, philosophy so that they can develop skills of appreciating the contemporary literary art form expressed in different ways.
- To develop their taste through interdisciplinary media so that this serves as motivation for language learning.
- To develop their ideas about elevated and formal styles and use the same in reading and (creative) writing skills.
- To enable them critically analyze literary and non-literary texts prescribed for different levels of academic (teaching) institutions.
- To help them employ analytical skills in their own writings the literary devices like symbols, metaphors, similes, alliteration, allusion, allegories etc.

4. Specific Objectives and Contents

Specific Objectives	**Contents**
• Analyze the concept of education from various perspectives • Present their own thoughts on and attitudes towards global education tradition, • Compare and contrast different points of views on education and argue for the one suitable to the	**Unit I: On Education (3)** What Is Wrong With Our System of Education? by George Bernard Shaw Essay on Education by Arthur Lee Jacobson Education is Not Filling of a Pail But Lighting of a Fire by G. R. Bhattarai

Nepalese context	
• Explore different types of (literary) texts written by world renown writers • Show interconnections between, literature, art and culture • Present great works in the summary form • Employ the prescribed texts as models for their own writing • Survey the present condition of Nepalese art and literature	**Unit II: On Literature, Art and Culture (3)** 4. Literature and History by Gunter Grass 5. An Interview with Aldus Huxley 6. Freedom to Write by Orhan Pamuk 7. No Celebrity Supernova Burned Brighter than Michael Jackson at the Peak of his Career byRichard Corliss
• Discuss the contemporary issues from multiple perspectives • Explore more issues such as child rights, animal rights, violence in movies, etc based on their reading, observation and experience.	**Unit III :On Contemporary Issues (4)** 8. Postmodernism and Philosophy by Stuart Sim 9. Four Phases of Diaspora Studies by Robin Cohen 10. Introduction to Ecocriticism by Cheryll Glotfelty 11. Translation and the pedagogy of Literature by Lawrence Venuti 12. Cyberculture by Victor E. and Charles Winquist
• Appreciate through their writing how people are honored for noble causes • Explore the features of the high elevated language used in the formal setting. • Write a short biography of the national figures they have chosen.	**Unit IV : On Human Conditions (6)** 13. 54th Annual Emmy Awards Famous Speech by Oprah Winfrey 14. Martin Luther King's Famous Speech by Indira Gandhi 15. To Cambridge's Women by Virginia Woolf 16. The Beautiful and the Ugly by Aung San SuuKyi 17. Work and its Secret by Swami Vivekananda 18. Preface to American Prometheus by Kai Bird and Martin J. Sherwin

• Discern the different perspectives presented by the writers through their essays. • Compare and contrast the styles of different writers. • Find out elements of essay and produce expository, narrative, argumentative and reflective essays.	**Unit V: Literary Essays (6)** 19. The Lost Childhood by Graham Green 20. Stranger in the Village by James Baldwin 21. What there is to See at the zoo by Marianne Moore 22. To Err is Human by Lewis Thomas 23. A Day in Samoa by Margaret Mead 24. A Hanging by George Orwell 25. The Medusa and the Snail by Lewis Thomas
• Appreciate the contexts and styles of story writing art. • Analyze the major aspects of life focused in the stories • Find out different themes of story • Employ the major elements of story to write their own short stories.	**Unit VI: Short Fiction (6)** 26. The Guest by Albert Camus 27. And of Clay Are We Created by Isabel Allende 28. The Swimmer by John Cheever 29. The Dog of Titwal by Saadat Hasan Manto 30. His First Flight by Liam O' Flaherty 31. Dear Life by Alice Munro 32. The Bet by Anton Chekhov
• Find out all literary devices used in poetry. • Compare poems from different continents in terms of themes and styles. • Analyze and interpret poems from linguistic, thematic and cultural perspectives.	**Unit VII: Poetry (6)** 33. **Lady Lazarus** by Sylvia Plath 34. **Anthem** by W H Auden 35. **Phenomenal Woman** by Maya Angelou 36. **If you Forget Me** by Pablo Neruda 37. **Television** by Roald Dahl 38. **I am not Yours** by Sara Teasdale 39. **First Love** by John Clare **40. My Africa, Unite to Rewrite Her Story** by Chuma Okonkyo
• Work on the elements of novel. • Compare the prescribed novels in terms of their settings, themes, language and styles • Analyze the diasporic elements in **Half a Life**. • Survey the African cultural and language flavor in **Things Fall Apart** • Analyze the theme of The Handmaid's Tale critically • Synthesize and interpret the main	**Unit VIII: Long Fiction (14)** 41. Hitler and the Jews by B.P. Koirala 42.The Handmaid's Tale by Margaret Atwood 43. Half a Life by V. S. Naipaul 44.The Reluctant Fundamentalist by Mohsin Hamid 45. Things Fall Apart by Chinua Achebe

message of The Reluctant Fundamentalist	

Note: The figures in the parenthesis indicate approximate teaching hours for respective units.

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. First group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to the particular units.

4.1 General Instructional Techniques

- Lecture
- Discussion
- Explanation and illustration
- Self-study and small-scale research
- Group and pair work
- Discovery and inquiry
- Read, discuss, write and share (ReDWis)

4.2 Specific Instructional Techniques

Unit	**Activities and Instructional Techniques**
Unit One	Mini-survey, Expository and Argumentative Writing
Unit Two	Project Work
Unit Three	Reflective Creative Writing
Unit Four	Argumentation
Unit Five	Writing Reflective Essays
Unit Six	Writing Reminiscences and Memoirs
Unit Seven	Textual Analysis Critical Analysis
Unit Eight	Review and Critical Review Compare and Contrast

5. Evaluation

5.1 Internal Evaluation 40%

Internal evaluation will be conducted by the instructor based on the following activities:

- Attendance 5 marks
- Participation in learning activities 5 mark
- First assignment/assessment 10 marks
- Second assignment/assessment 10 marks
- Third assignment/assessment 10 marks

Note: The course teacher can develop multiple activities for assignments, depending on

the nature of the course/topic and students' interests. Such activities may include book review, article review, and term paper on specific issue/topic, or unit test\quiz, project work, case study, survey/field study, individual/group report writing, literature review and a research article based on primary and/or secondary data.

5.2 External Evaluation (Final Examination) 60%

Examination Division, Office of the Dean, Faculty of Education will conduct final examination at the end of the semester.

Objective questions (multiple choice questions) (10 x 1)	10 marks
Short answer questions (6 questions with 2 OR questions) (6x 5)	30 marks
Long answer questions (2 questions with 1 OR question) (2 x 10)	20 marks
Total	**60 Marks**

6. Recommended Books

Hitler and the Jews by B. P. Koirala
The Handmaid's Tale by
Margaret Atwood Half a Life
by V. S. Naipaul
The Reluctant Fundamentalist by
Mohsin Hamid Things Fall Apart by
Chinua Achebe

Eng. Ed. 529: Language, Society and Power
Nature of the course: Theoretical Credit hours: 3
Course No.: Eng. Ed. 529 Teaching hours: 48 Level: M. Ed.
Semester: Second

1. Course Introduction

This course aims at exposing the students to theoretical and empirical knowledge on the issue related to language, society, and power. The course engages students in researching the relation between language and power. The course comprises four units. The first unit deals with some major concepts related to language, society, and power. The second unit focuses on the theories of understanding language-power relations. The third unit exposes the students to the issues of language ideology and language policy. The last provides students with insights into understanding the role of language in social justice.

2. **General Objectives**

The general objectives of this course are as follows:

- To familiarize the students with the basic ideas related to language, society and power.
- To enhance the students' skills to analyze language-power relations using the major theories as specified in the course.
- To develop their critical insights into understanding and analyzing language policies from language ideological point of views.
- To develop the students' skills to explore and analyze the role of language in social (in) justice.

3. **Specific Objectives and Contents**

Specific objectives	**Contents**
• Explain the relation between language, society and power. • Describe the construction of hierarchy in multilingual settings. • Elaborate the relationship between language and power. • Explain ethnography of communication, speech act theories and solidarity and politeness principles. • Discuss the role of language in the construction of gender and other identities.	**Unit I: Language, Society and Power (12)** 2.1 Sociolinguistics and sociology of language 2.2 Multilingualism and hierarchy of languages 2.3 Language-power relations 2.3.1 Language as power 2.3.2 Discursive power 2.3.3 Social power 2.3.4 Political power 2.3.5 Economic power 2.4 Ethnography of communication (Hymes' approach) 2.5 Speech act theories (Austin and Searle) 2.6 Solidarity and politeness 2.7 Language and gender (sexism) 2.8 Language and identity
• Describe the relation between	**Unit II: Theories of Language and Power (12)**

language and power • Describe and analyze language-power relations from Bourdieuian perspectives. • Analyze the relationship between language and social class using Bernstein's theory. • Synthesize and interpret the notion of hegemony and linguistic imperialism in relation to ELT.	2.1 Language as symbolic power: Pierre Bourdieu 2.1.1 Habitus and language 2.1.2 Language and capital: economic capital, cultural capital, and social capital 2.1.3 Legitimate language and the politics of official language 2.1.4 Censorship and euphemism 2.2 Codes, class and cultural reproduction: Basil Bernstein 2.2.1 Codes, control and social class • General codes and specific codes • Distribution of power and control 2.2.1 Elaborated and restricted codes • Orientations, locations, distribution and performance 2.3 Language and hegemony: Antonio Gramsci 2.3.1 Hegemony and language politics 2.3.2 Language, philosophy and intellectuals 2.3.3 Language and nation 2.3.4 Grammars of hegemony 2.4 Linguistic imperialism: Robert Phillipson 2.4.1 Linguistic imperialism and linguicism 2.4.2 English language teaching (ELT) and linguistic imperialism • History of ELT aids • Tenets/fallacies of ELT
• Explain the notions of language ideology and language policy. • discuss organization and types of language ideologies. • Describe orientations and approaches to language policy. • Assess language policy in Nepal from an ideological perspective.	**Unit III: Language Ideology and Language Policy(12)** 3.1 Understanding language ideology 3.2 Organization of language ideology 3.3 Types of language ideology 3.3.1 Standard language ideology 3.3.2 Language purism 3.3.3 Linguistic nationalism 3.3.4 Mother tongue ideology 3.3.5 Neoliberal language ideology 3.4 Language policy and planning 3.4.1 Orientations of language in language planning 3.4.2 Politics of language policy 3.4.3 Approaches to understanding language policy • Neoclassical • Historical-structural (critical) • Ethnographic 3.4.4 Language policy in Nepal • History and ideologies

	• Language activism • Mother tongue-based multilingual education
• Describe the concept of linguistic human rights and analyze its history and scope. • Explore the role of language in social justice. • Analyze the role of language in creating barrier or resource in education, at work and social participation.	**Unit IV: Language, Rights and Social Justice(12)** 4.1 Linguistic human rights 4.1.1 History of linguistic human rights 4.1.2 International covenants in linguistic human rights 4.1.3 Scope of language rights in language education 4.1.4 Racism, ethnicism and linguicism 4.2 Language and social justice 4.2.1 Linguistic diversity and social justice 4.2.2 Subordination of linguistic diversity • Grassroots language learning • Judging speakers 4.2.3 Linguistic diversity at work • Multiple vulnerabilities • Survival employment and deskilling 4.2.4 Linguistic diversity in education • Submersion education • Denying the benefits of multilingual education 4.2.5 Linguistic diversity and participation • Micro-aggression • Linguistic alienation

Note: The figures in the parenthesis indicate approximate teaching hours for respective units.

4. **Instructional Techniques**

The instructional techniques for this course are divided into two groups. First group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to the particular units.

4.1 General Instructional Techniques

- Lecture
- Discussion
- Explanation and illustration
- Self-study and small-scale research
- Group and pair works
- Discovery and inquiry
- Read, discuss, write and share (ReDWis)

4.2 Specific Instructional Techniques

Unit	Activities and instructional techniques
I	Reflective writing on the issues of language and society, Instructor-guided self-study, open class discussion, project work (e.g. analyzing languages using ethnography of speaking model)
II	Critical reading, project work (analyzing language using the theories given in the course), instructor guided seminar paper, open class discussion, presentation, analytical debate on the role of language and power
III	Critical reading, lecturer and discussion, presentation, reflective writing on language planning and literacy; project work (exploring and analyzing parent, teacher, and learner ideologies)
IV	Project work, practical analysis of language in relation to language and social justice, reflective writing

5. **Evaluation**

5.1 Internal Evaluation 40%

Internal evaluation will be conducted by the instructor based on the following activities:

- Attendance 5 marks
- Participation in learning activities 5 mark
- First assignment/mid-term exam 10 marks
- Second assignment/assessment 10 marks
- Third assignment/assessment 10 marks

The course teacher can develop multiple activities for assignments, depending on the nature of the course/topic and students' interests. Such activities may include book review, article review, term paper on specific issue/topic, or unit test\quiz, project work, case study, survey/field study, individual/group report writing, literature review and a research article based on primary and/or secondary data.

5.2 External Evaluation (Final Examination) 60%

Examination Division, Office of the Dean, Faculty of Education will conduct final examination at the end of the semester.

Objective questions (multiple choice questions) (10 x 1) = 10 marks

Short answer questions (6 questions with 2 OR questions) (6x 5) = 30 marks

Long answer questions (2 questions with 1 OR question (2 x 10) = 20 marks

6. Recommended Books and References

6.1 Recommended Books/Texts

Bernstein, B. B. (2003). *Class, codes and control: Applied studies towards a sociology of language* (Vol. 2). New York: Routledge. (Unit II)

Bourdieu, P. (1991). *Language and symbolic power*. Cambridge, Massachusetts: Harvard University Press. (Unit II)

Craith, M.N. (Ed.) (2007) . *Language, Power and Identity Politics*. New York: Palgrave Macmillan (Unit I)

Gramsci, A. (1971). *Selections from the prison notebooks (*ed. and trans.). Quintin Hoare and Geoffrey Nowell Smith. (Unit II)

Holborow, M. (2007). Language, ideology and neoliberalism. *Journal of Language and Politics*, *6*(1), 51-73. (Unit III)

Holmes, J. (2008). *An Introduction to Sociolinguistics.* London: Longman. (Unit I)

Horner, K., & Weber, J. J. (2017). *Introducing multilingualism: A social approach*. Routledge. (Unit III)

Ives, P. (2004). *Language and hegemony in Gramsci* (pp. 144-160). London: Pluto Press. (Unit II)

Kroskrity, P. V. (2004). Language ideologies. *A Companion to Linguistic Anthropology*, 496-

517. (Unit III)

Phillipson, R. (2007). *Linguistic Imperialism*. Oxford: Oxford University Press (Unit II)

Piller, I. (2016). *Linguistic diversity and social justice: An introduction to applied sociolinguistics*. Oxford University Press. (Unit IV)

Ricento, T. (2000). Historical and theoretical perspectives in language policy and planning. *Journal of Sociolinguistics*, *4*(2), 196-213. (Unit III)

Skutnabb-Kangas, T., & Phillipson, R. (2009). *Linguistic human rights, past and present*. (Unit IV)

Thomas, L & Wareing, S. (Eds.) (2005). *Language, Society and Power: An introduction*. London and New York: Routledge (Unit I)

Wardhaugh, R. (2012). *An Introduction to Sociolinguistics*. Oxford: Blackwell. (Unit I)

6.2 References

Bayley, R. & Lucas, C. (2007). *Sociolinguistic Variation: Theories, Methods, and Applications.* Cambridge: Cambridge University Press

Crystal, D. (2009). *Language Death*. New Delhi: Cambridge University Press

Cummins, J. & Swain, M (Eds.) (1986).*Bilingualism in Education.* London and New York: Longman

Cummins, J. (2000)**.** *Language, Power and Pedagogy: Bilingual Children at Crossfire.*

Coulmas, F. (Ed.).1998.*The Handbook of Sociolinguistics.Blackwell Publishing.*Blackwell Reference Online.28 December 2007 http://www.blackwellreference.com/subscriber/tocnode?id=g9780631211938_chunk_g97806312119381

Eppele, J.W., Lewis, M.P. , Regmi, D.R., Yadava, Y.P. (Eds.). (2012). *Ethnologue: Languages of Nepal.* Kathmandu: SIL International Nepal & Central Department of Linguistics, TU

Giri, R. A. (2010). Cultural anarchism: The consequences of privileging languages in Nepal. *Journal of Multilingual and Multicultural Development*, *31*(1), 87-100.

Grace, S. & Gravestock, P. (2009).*Inclusion and Diversity: Meeting the Demands of Students*. London and New York: Routledge

Hudson, R.A. (1996). *Sociolinguistics.*Cambridge: Cambridge University Press

Jourdan, C. & Tuite, K. (Eds.) (2006).*Language, Culture and Society.*Cambridge: Cambridge University Press

Kachru, B. (1992). *The Other Tongue: English across Cultures.* Urbana: University of Illinois Press

McColl Millar, R. (2005). *Language, Nation and Power: An Introduction*. New York: Palgrave Macmillan

Omoniyi, T. and Fishman, J.F (2006).*Explorations in the Sociology of Language and Religion*.

Amsterdam, The Netharlands: John Benjamins Publishing Co.

Phyak, P. (2013). Language ideologies and local languages as the medium-of-instruction policy: A critical ethnography of a multilingual school in Nepal. *Current Issues in Language Planning*, *14*(1), 127-14

History Education

Hist. Ed. 525: History of Travel and Tourism in Nepal

Course No: Hist. Ed. 525 | Nature of course: Theoretical
Level: M. Ed. | Credit hours: 3
Semester: Second | Teaching hours: 48

1. Course Description

This course is a specialization course in History Education. It aims to give a vivid picture of the history of travel and tourism with global and Nepali context. The course intends to provide theoretical knowledge through both regular classroom teaching and practical activities.

2. General Objectives

The general objectives of this course are as follows:

- To acquaint the students with different aspects of Tourism and Tourists.
- To develop indepth understanding of the History of Tourism among students.
- To provide the students with the knowledge of the Nature of Tourism.
- To acquaint the students with the Tourism Trade.
- To provide a better understanding of the Tourism Education in Nepal

3. Specific Objectives and Contents Part I: Theoretical (32 Periods)

Specific Objectives	Contents
• Describe the meaning and nature of tourism and tourist • Determine the scope of tourism • Evaluate the significance of tourism • Differentiate the types of tourists • Classify the different types of tourism in Nepal	**Unit I: Introduction of Tourism and Tourist (15)** 1.1 Meaning and nature of Tourism and tourist 1.2 Scope of tourism 1.3 Significance of tourism 1.4 Types of tourists 1.4.1 Holiday tourists 1.4.2 Religious tourists 1.4.3 Business tourist 1.4.4 Cultural tourists 1.4.5 Adventure tourists 1.4.5 Medical treatment tourist 1.4.6 Sports tourist 1.5 Classification of tourism 1.5.1 Adventure tourism 1.5.2 Agriculture tourism 1.5.3 Archaic tourism 1.5.4 Dark tourism 1.5.5 Eco tourism 1.5.6 Drug tourism 1.5.7 Extreme Tourism 1.5.8 Cultural Tourism 1.5.9 Health or Medical Tourism 1.5.10 Space tourism, Banzi jumping, cable car and hand gliding 1.5.11 Sport tourism 1.5.12 Business tourism 1.5.13 Museum tourism

• Evaluate the impact of tourism on life of people	1.5.14 Historical tourism 1.6 Impact of tourism in society 1.6.1 Negative and positive impact on life of people
• Describe the history of world tourism • Explain the history of tourism in Nepal	**Unit II: History of Tourism ()** 2.1 History of world tourism 2.2 History of tourism in Nepal 2.3 Internal tourism: hotel, home stay
• Discuss the nature and socpes of tourism in Nepal	**UnitIII: Nature of Tourism (6)** 3.Nature of Tourism in Nepal 3.1 Trekking 3.2 Mountaineering 3.3 Wild life watching, 3.4 Jungle safari 3.5 Sight scene 3.6 Pilgrimage tourism
• Describe the Tourism Trade • Analyze the Tourism Trade Activities in Nepal	**Unit IV: Tourism Trade (6)** 4.1 Introduction of tourism trade 4.2 Tourism trade activities in Nepal 4.2.1 Hotel management 4.2.2 Travel agencies 4.2.3 Trekking agencies 4.2.4 Nepal Mountaineering Association 4.2.5 Rafting agencies 4.2.6 Wild Life parks of government
• Make Planning for Tourism • Identify the Co-ordination in Planning • State the tourist demand and supply • Explain the importance of tourism planning • Elucidate the job opportunity in tourism • Describe the tourism and its social evils	**Unit V: Tourism Planning and Development (9)** 5.1 Planning for tourism and its process 5.2 Co-ordination in planning 5.3 Demand and supply of commodities for Tourist 5.4 Importance of tourism planning 5.5 Job opportunities in Tourism 5.6 Tourism and its social evils.
• Explain the concept of Tourism Education • Discuss Tourism Education in Nepal • Describe relation Tourism Education and Private Sectors	**Unit VI: Tourism Education (6)** 6.1 Concept of tourism education 6.2 Tourism education in Nepal 6.3 Tourism education and private sectors

4. Instructional Techniques

Two types of instructional techniques have been recommended. The first type comprises common techniques applicable to most of the units. The second type

includes such instructional techniques which should be applied to teach specific unit.

4.1 General Instructional Techniques

Due to the theoretical nature of the course, teacher directed, guided and instructed techniques will be mostly adopted. To impart the required knowledge of the concerned units the teacher will adopt the following methods and techniques.

- Lecture
- Discussion
- Paper presentation of the project
- Brain-storming and buzz session
- Report writing assignment

4.2 Specific Instructional Techniques

Units	Activities and Instructional techniques
Unit I: Introduction of Tourism and Tourist	Field visit and group discussion
Unit II: History of Tourism	Individual report writing, Group discussion and presentation
Unit III : Nature of Tourism	Case study
Unit IV: Tourism Trade	Book review
Unit V: Tourism Planning and Development	Project Work and Term paper
Unit VI: Tourism Education	Group report, home assignment presentation

5. Evaluation

5.1 Internal Evaluation 40%

Internal evaluation will be conducted by course teacher based on following activities

Attendance	5 Marks
Participation in Learning activities	5 Marks
First assignment	10 Marks
Second assignment (Midterm exam) assessment	10 Marks
Third assignment/ assessment	10 Marks
Total	**40 Marks**

Unit wise activities and work for internal evaluation

Units	Activities and work for internal evaluation
Unit I: Introduction of Tourism and Tourist	Make post card(tourists) and prepare card paper writing with meaning, scope of tourism and present in class (Participation in Learning activities, 2)
Unit II: History of Tourism	individual report writing based on history of tourism and present in class (1st assignment, 2)
Unit III: Nature of Tourism	Make table on the basis of Nature of tourism and its features. (1st assignment, 3)
Unit IV: Tourism Trade	List out the tourism trade and present it among classmate (2nd assignment, 1)
Unit V: Tourism Planning and Development	Write proposal after report to develop tourism in Nepal based on secondary data (2nd assignment, 4) or Students will visit tourisim board, discuss with policy-makers and board members, and prepare a report and present it.
Unit VI: Tourism Education	Review tourism related books (3rd assignment, 5)

5.2 **External Evaluation (final examination) 60%**

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester. The types and number of questions to be included in the final paper are as follows.

Objective type question (multiple choice 10x1 point)	10 Marks
Short answer question (6 questions with 2 or x5 points)	30 Marks
Long answer questions (2 questions with 1 or x 10 points)	20 Marks
Total	**60 Marks**

6.Recommended Books and References

6.1 Recommended Books

Agrawal, M.K. and Upadhyaya, R. (2006). *Tourism and Economic Development in Nepal,* New Delhi: Northern Book Centre, **(Unit I-VI)**

Bhatiya, A.K., (1997). *Tourim Development, Principles and Practice*, Delhi: Sterling Publishers Pvt. Ltd. **(Unit I-VI)**

Dhungel, R,(1981). *Economics of Tourism in Nepal,* Kathmandu: Kathmandu Development Research and Communication Group, Nepal. **(Unit I-VI)**

Dwiwedi, P.K.(2004). *Museum in Nepal*, Kathmandu: Niva Publication, 1996. **(Unit I-VI)**

Ghimire, Ananda, *Teavel and Tourism- an Introduction,* (4th ed.), Kathmandu: Ekata Books,.

(Unit I-VI)

Khatiwada, S. P. &Dahal, K., (2070). *Nepal Ko Sanskritik Paryetan*, Kathmandu: M.K. Publishers and distributors, **(Unit I-VI)**

Pradhan, I. K.,(1972).*Travel and Tourism in Perspective*, Kathmandu: Nepal Research

Centre,. **(Unit I-VI)**

Rakesh R. D.,(2001). *Pilgrimage Tourism in Nepal*, Kathmandu: safari Nepal,. **(Unit I-VI)** Satyal, Y. R.,(1999).*Tourism in Nepal,* New Delhi: Adroit Publishers. **(Unit I-VI)** Shrestha H.P. (2000).*Tourism in Nepal- Marketing Challenges*.New Delhi: Nirala

Publication, . **(Unit I-VI)**

6.2 References

Bista, D. B. (2039 B.S.).T*he People of Nepal*.Kathmandu: Ratna Pustak Bhandar.

Bryden, J.M., (1973). *Toursm and Development*, Cambridge: Cambridge University Press, 1973.

Burkart, A.J. and Mediks (1976).*Tourism: Past, Present and Future*, London: Heinemann. Goeldner, C. R. and Brent Ritchie, J.R. (2003).*Principles, Practice and Philosophy of*

Tourism, New Jersey: John Willey & Sons.

Joshi, S. M. (2039 B.S). *Nepali Chadprava*, Kathmandu: Royal Nepal Academy.

Kotler, P. and *et al (2005).Marketing for hospitality and Tourism,* Delhi: Pearson Education. Kuwar, RR, (1997). *Tourism and Development.* Kathmandu: Laxmi Kuwar.

Swain, S. K., and Mishra, J.M. (2012). *Tourism Principles and Practices,* New Delhi: Oxford Universiy Press.

Seth, P.N.& Bhat, S.S. (1994).A*n Introduction toTravel and Tourims.* New Delhi: Sterling Publishers Pvt.Ltd.

Stephen, B. (1986). *A guide to Trreking in Nepal.* Kathmandu: Sahayogi Press. Thapa, N. B. (n.d.).*A Short History of Nepal*, Kathmandu: RatnaPustakBhandar. *Editor-in-chief (200). Trekking in Nepal*, Kathmandu: Nepal Tourism Board.

Hist. Ed. 526: Socio-cultural History of Nepal
Course No: Hist. Ed. 526 Nature of course: Theoretical
Level: M. Ed. Credit hours: 3
Semester: Second Teaching hours: 48

1. Course Description

This course is designed to specialize in History Education. It aims to give a vivid picture of Nepali society and culture. This course includes the nature of Nepali society and culture, life- style, education system, social behaviors and costumes, social purifications, trends of social evils, religious situation, Nepali costumes and festivals from Lichchhavi period to Modern period of Nepal.

2. General Objectives

The general objectives of this course are as follows:

- To make the students familiar with the nature of Nepali society and culture.
- To provide a deeper understanding of the life-style of Nepali society.
- To provide the students with the knowledge of the education system in Nepal.
- To acquaint the students with the social behaviors and costumes of Nepal.
- To enable the students to analyze the social purifications in Nepal critically.
- To provide a better understanding of the trends of social evils in Nepal.
- To acquaint the students with the religious institutions, religious situation Nepal.
- To develop critical perspective among the students about the Nepali festivals.

3. Specific Objectives and Contents Part One: Theoretical (32 Periods)

Specific Objectives	Content
• Describe the nature of pre-Lichhavi period society of Nepal • Explain the Lichchhavi period society in Nepal • State the Medieval period society of Nepal • Analyse the modern period society of Nepal	**Unit I: Nature of Nepali society (6)** 1.1 Pre-lichhavi period 1.2 Lichhavi period 1.3 Medieval period 1.4 Modern Period
• Explain the family management in Nepal. • Describe the village and urban settlement in Nepal. • Analyze the Nepali costumes	**Unit II: Nepali Life Style (3)** 2.1 Family Management 2.2. Village and Urban settlement 2.3. Nepali Costumes
• Acquaint traditional Education system of Nepal • Discuss modern education system in Nepal • Analyze the impact of western education in Nepal	**Unit III: Education System in Nepal (3)**3.1. Traditional Education 3.2. Modern education 3.3. Impacts of western education in Nepal

• Enumerate the feeding and drinking • Trace the entertainment system in Nepal • Identify the clothes and ornaments in Nepali culture • Describe Goshthies and Guthies in Nepal • Analyze the social status of women in Nepali society	**Unit IV: Social Behavior (6)** 4.1. Food and drinks 4.2. Entertainment 4.3. Clothes and ornaments 4.4 Gosthi and Guthies in Nepal 4.5. Status of women in Nepali society
• Evaluate the Sati system in Nepal • Explain the slavery system in Nepal • Discuss Child marriage • Trace polygamy in Nepal • State Chaupadi in Western Nepal • Describe Devaki system in Western Nepal • Analyse woman trafficking in Nepal • Elaborate Kamalari system in Nepal • Evaluate the dowry system • Discuss witchcraft practice in Nepal	**Unit V: Social Evils in Nepal (9)** 6.1 Sati system 6.2. Slavery system 6.3, Child marriage 6.4. Polygamy 6.5. Chhaupadi system 6.6. Dewaki System 6.7. Woman Trafficking 6.8. Kamlari System 6.9. Dowry System 6.10. Witchcrafts Practice
• Describe Shaivism in Nepal • Describe Bashnavism in Nepal • Explain Buddhisim in Nepal	**Unit VI: Religious situation (3)** 7.1. Shaivism 7.2. Bashnavism 7.3. Buddhism
• Describe Dashain festival in Nepal • State Tihar festival in Nepal • Analyze Holi festival in Nepal • Explain Tij festival in Nepal • Discuss the Maha Shivaratri festival in Nepal • State Gaijatra festival in Nepal • Describe Janai Purnima in Nepal • Describe Lohochhar Prava festival in Nepal • Discuss Chhath festival in Nepal • Describe Maghi festival in Nepal • State Buddha Jayanti festival in Nepal • Examine the importance of SakelaUdhaunli, Ubhaunli festival in Nepal • State Christamas festival in Nepal	**Unit VII: Nepali Festivals(18)** 7.1. Dashain 7.2. Tihar 7.3. Holi 7.4. Tij 7.5. Maha Shivaratri 7.6. GaiJatra 7.7. Janai Purnima 7.8. LohochharPrava 7.9. Chhath 7.10. Maghi 7.11 Gaura Parva 7.12. Buddha Jayanti 7.13. SakelaUdhaunli, Ubhaunli 7.14. Christmas 7.15. Ramjan, Bakar Ed, IdulFitra

• Describe Ramjan, Bakar Ed, IdulFitra festival in Nepal • Describe GurunanakJayanti festival in Nepal	7.16, GurunanakJayanti

4. Instructional Techniques

Two groups of instructional techniques have been recommended. The first group comprises common techniques applicable to most of the units. The second group includes such instructional techniques which should be applied to teach specific unit.

4.1 General Instructional Techniques

Due to the theoretical nature of the course, teacher directed, guided and instructed techniques will be mostly adopted. To impart the required knowledge of the concerned units the teacher will adopt the following methods and techniques.

- Lecture
- Discussion
- Paper presentation of the project
- Brain storming and buzz session
- Report writing assignment

4.2 Specific Instructional Techniques

Units	Activities and Instructional Techniques
Unit I: Nature of Nepali society	Group Discussion and presentation
Unit II: Nepali Life Style	individual report writing
Unit III: Education System in Nepal	Home assignment
Unit IV: Social behavior and costumes	book review
Unit V:Trends of social evils in Nepal	Case study
Unit VI: Religious situation	Panel Discussion
Unit VII: Nepali festivals	Home assignment, Term Paper Presentation

5. Evaluation

5.1 Internal Evaluation 40%

Internal evaluation will be conducted by course teacher based on following activities:

Attendance	5 Marks
Participation in Learning activities	5 Marks
First assignment	10 Marks
Second assignment (Midterm exam) assessment	10 Marks
Third assignment/ assessment	10 Marks
Total	**40 Marks**

Unit activities and work for internal evaluation wise

Units	Activities and work for internal Evaluation.
Unit I: Nature of Nepali society	group discussion and presentation (Class work for overall activities)
Unit II:Nepali Life Style	Invite two resource persons who belong to village and urban Nepali life style in class. (Participation in learning activities,2)
Unit III: Education System in Nepal	Make comparative table of Nepal for Education system of Nepal (1st assignment,2)
Unit IV:Social behavior and costumes	Prepare report based on Social behavior and costumes wherever you live currently(1stassignment,3) or Ask student to make field visit (culture, Rituals) and to write Report.
Unit V:Trends of social evils in Nepal	Make List of trends of social evils in Nepal; discuss and point out how to reduce it. 2ndassignment,3)
Unit VI: Religious situation	Explain religious harmony situation of his/her place 2ndassignment. Or teacher will organize an excursion tour for visting historical religious sites and cultural places, report writing and presentation and will assign students to write report and make presenation in the class.
Unit VII: Nepali festivals	Review festival related books (3rd assignment,5)

5.2 External Evaluation (final examination) 60%

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester. The types and number of questions to be included in the final paper are as follows.

Objective type question (multiple choice 10x1 point)	10 Marks
Short answer question (6 questions with 2 or x5 points)	30 Marks
Long answer questions (2 questions with 1 or x 10 points)	20 Marks
Total	**60 Marks**

6. Recommended Books and References

6.1 Recommended Books

Acharya, C.N.S. (2045 B.S.., *Hamra Chad PravaHaru*.Kathmandu: Sanatan Dharma SewaSamiti. **Unit V, VII, VIII**

Anderson, M. M. (1971).*Festivals of Nepal.* London: George Allen and Unwin. **Unit VIII**

Brown, Kerry(Ed) (1983), *The Essential Teaching of Hinduism***,** London: Brookmount House.

Unit VI

Budhathoki, C. B. (2039 B.S.).*JayasthiMallaKoSudhar***.** Pulchok: SajhaPrakshan. **Unit II**

Gautam, R. and Magar Thapa, A.K.(1994).*Tribal Ethnography of Nepal,Vol. II Book*. Delhi: Faith India. **Unit IV**

Locke, S.J. and John K. (1975).*RatoMatsyendranath of Patan and Bungamati*. Kirtipur: Institute of Nepal and Asian Studies, Tribhuvan University. **Unit VIII**

Maududi, M., and Saiyemad A. A. (2056 B.S.).*Islam Darshan,* Kathmandu: All Hera Education Society. **Uint VIII**

Rakesh, R. D. (1990). *Folk Culture of Nepal: an analytical Study*. Jayapur: Nirala Publishing.

Unit VII, VIII

Regmi, J. C. (1988).*A Glossary of Himalyan Buddhism***.** Jayapur: Nirala Publishing. **Unit VI**

Sharma J. L. (2049 B.S.). *HamroSamaj :EkAddhyan***.** Kathmandu: DittiyaSanskaran.

SajhaPrakashan. **Unit I-VIII**

Tandan, G. (2052 B.S.). *Nepal Ma GuthiByabastha***.** Kathmandu: Nepal AddhyanSamuha.

Unit VII

Thapa, K. B. (1985).*Main Aspect of Social, Economic and Administrative History of Modern Nepal***.** Kathmandu: Mrs. AmbikaThapakalikasthanGhattekulo.

Thapa, K. B. (1985).*Women and Social Change in Nepal (1951-1960).* Kathmandu: Mrs. AmbikaThapa. **Unit VII**

Upadhyaya, S. P. (2069).*Nepal KoSamajik, ArthikTathaPrashasanikItihas***.** Kathmandu: RatnaPustakBhandar. **Unit I-VIII**

Vaidhya, T.R., Manadhar, T. R. and Joshi, S. L. (1993).*Social History of Nepal***.**New Delhi: Anmol Publications. **Unit I-VIII**

References

Baral, B. (2044 B.S.). *HunduSamajikSangamKoPrarup***.** Kathmandu: SajhaPrakashan. Bhandari, D. R. (2027 B.S.). *Nepal KoAlochanatmakItihas*. Baranasi: BabuMadhav Prasad Sharma.

Bjracharya, P. (2043 B.S***.).***Hamro Chad Prava**.** Kathmandu: RatnaPustakBhandar. Gautam, R. (2043 B.S.). *RanaKalin Nepal KoEkJhalak: Prashasnik***.** *SamajikTatha ShaikshikItihas***.** Katmandu: RantnaPustakBhandar.

Jawanli, S. B. (2034 B.S.).*ItihasKa Kura***.** Kathmandu: RajkiyaPragyanPratishthan. Kirkpatrik, C. (1975). *An account of the Kingdom of Nepal***.** New Delhi: Asian Publishing Service.

Panta, D. R. (2038 B.S.). *Nepal Ko Itihas Ka Kehi Pana*. Kathmandu: ShajaPrakashan. Sharma, B.C. (2033 B.S.).*Nepal KoIaitihasik Rup Rekha.* Baranasi: Tritiya Sanskaran.

BabuMadhav Prasad Sharma.

www.wikipedia.com

Hist. Ed. 527: International Relations of Nepal

Course No: Hist. Ed. 527	Nature of course: Theoretical
Level: M. Ed.	Credit hours: 3
Semester: Second	Teaching hours: 48 hours

1. Course Description

This course is to specialize on International Relation of Nepal (Pre-historic to 1990). It gives the emphasis on the historical relation with five countries along with UN and SAARC. It gives the glimpse of Nepal's relation with India, British India and China from the pre-historic period to 1990. Along with this, it discusses the relationship after the dawn of democracy in 1951. It also deals with the relation with UNO, SAARC and non-alignment policy of Nepal.

2. General Objectives

The general objectives of this course are as follows:

- To familiarize students with the historic international relation of Nepal and other five countries UN and SAARC up to 1990.
- To enable students to make the analytical perspective on diplomatic relation; political relation; people to people relation in different period/Era and economic relation.
- To provide the students with better understanding of foreign relation of Nepal (pre-historic to 1990 A.D.)

3. Specific Objectives and Contents

Specific Objectives	**Contents**
• State the concept, meaning scope of international relation history. • Describe the development of international relation of Nepal • Explain the determinants of international relation of Nepal • Analyze political relation with India and China. • Assess the economic (trade and commerce) relation with India and China. • Explain religious relation with India and China.	**Unit - I : Background (8)** 1.1 Concept, meaning and scope of history in international relations of Nepal 1.2 Growth and development of international relation of Nepal 1.3 Determinants of international relation of Nepal 1.4 Political relation with India and China. 1.5 Economic (trade & commerce) relation with India and China. 1.6 Religions relation with India and China.
• Analyze the relation with British India 1868-1947 from political prospective • Describe the treaty of 1923 A.D.	**Unit-II : Nepal's relation with British India (6)** 2.1 Relation with British India from 1868-1947 from political perspective. 2.2 Treaty of 1923 A.D.
• Assess the commercial relation with	**Unit- III : Relation with China and Tibet from 1868-1950 v (6)** 3.1 Commercial relation with Tibet

Tibet • Analyze Nepal Tibet war 1854-56 and Treaty • State the young husband mission	3.3 Nepal Tibet war 1854-56 and Treaty 3.4 Young Husband Mission
• Elaborate the Nepal and India treaty of 1950 • Analyze the treaty of extradition of 1953 • Describe the trade and transit treaty of 1960 • Identify the renewal problem of the treaty and trade and transit 1960 in 1989-90	**Unit- IV : Nepal India Relation 1950-1990 (8)** 4.1 Nepal and India treaty 1950 4.2 Treaty of extradition 1953 4.3 Trade and transit treaty 1950 4.4 Renewal problem of the treaty of trade and transit 1960 in 1989-90
• State the historical relation of Nepal and Japan • Explain the relation of Nepal and Japan • Discuss the economic relation of Nepal and Japan	**Unit-V: Historical Relation of Nepal and Japan (6)** 5.1 Historical relation of Nepal and Japan in different dimension 5.2 Cultural relation of Nepal and Japan 5.3 Economic relation of Japan and Nepal
• Analyse the relation with U.K. • Evaluate the relation with U.S.A.	**Unit- VI: Historical Relation of Nepal's with UK, USA. (6)** 6.1 Relation with U.K. 6.2 Relation with U.S.A.
• Describe the importance of the relation of Nepal and UNO • Evaluate the relationship of UNO and Nepal • Analyze the importance of non-alignment policy of SAARC • Assess non-alignment policy of Nepal	**Unit: VII Importance UNO, SAARC and of nonalignment policy (8)** 7.1 Nepal and UNO 7.2 Nepal and SAARC 7.3 Non-alignment policy of Nepal

4. Instructional Techniques

Two types of instructional techniques have been recommended. The first type comprises common techniques applicable to most of the units. The second type includes such instructional techniques which should be applied to teach specific unit.

4.1 General Instructional Techniques

Due to the theoretical nature of the course, teacher directed, guided and instructed techniques will be mostly adopted. To impart the required knowledge of the concerned units the teacher will adopt the following methods and techniques.

1 Lecture
2 Discussion

3 Paper presentation of the project
4 Brain storming and buzz session
5 Report writing assignment

4.2 Specific Instructional Techniques

Units	**Activities and Instructional Techniques**
Unit I : Background of international relation	Group discussion and presentation
Unit II: Closed neighbour (India) relations	Home assignment and presentation
Unit III : Closed neighbour (China) relations	Case study presentation
Unit IV: Nepal and Japan relations in different sectors	Individual Report writing,
Unit V: Nepal and United Kingdom relations	Term paper and presentation
Unit VI: Nepal and USA relations	Seminar paper present
Unit VII: Nepal and SAARC relations, UNO and Nepal	Book review (physical and academic)

5. Evaluation

5.1 Internal Evaluation 40%

Internal evaluation will be conducted by course teacher based on following activities

1) Attendance 5 Marks
2) Participation in Learning activities 5 Marks
3) First assignment 10 Marks
4) Second assignment (Midterm exam) assessment 10 Marks
5) Third assignment/ assessment 10 Marks

Total **40 Marks**

Unit wise Activities and work for internal evaluation

Units	Activities and work for internal evaluation
Unit I: Background of international relation	Group discussion and presentation (Participation in Learningactivities,5)
Unit II: Closed neighbour (India) relations	Comparative table of India and Nepal in relations (social/Economics/cultural) (1st assignment 5)
Unit III: Closed neighbour (China) relations	List out different sector of relation of China and Nepal (1st assignment)
Unit IV: Nepal and Japan relations in different sectors	Report writing, and presentation based on secondary data in Japanese Aid (2nd assignment,5)
Unit V: Nepal and United Kingdom relations	Resource person class from UK-Nepal(2nd assignment,5)

Unit VI: Nepal and USA relations	Seminar paper presentation (3rd assignment,4)
Unit VII: Nepal and SAARC relations, UNO and Nepal	SAARC related book review(3rd assignment,6)

5.2 External Evaluation (final examination) 60%

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester. The types and number of questions to be included in the final paper are as follows.

Objective type question (multiple choice 10x1 point)	10 Marks
Short answer question (6 questions with 2 or x5 points)	30 Marks
Long answer questions (2 questions with 1 or question x 10 points)	20 Marks
Total	**60 Marks**

5.3 Recommended Books

Carlsnaes (2005).*Handbook of International Relations*.SAGE Publication.

Cassels (1996).*Ideology and International relations in the Modern World***.**Routledge. Christian, R. S. and Duncan S. (eds.) (2008).*The Oxford Handbook of International*

*Relation.*Oxford University Press.

Martin G. & Terry O. C. (2004). *Key Concepts in International Relations***.**Routledge.

Paul R. V. & Mark V. K. (2008).*International Relations and World Politics***.**Prentice Hall.

Upadhyaya, S. P. (1992). *Indo Nepal Trade Relation: A Historical Analysis of Nepal's Trade with the British India***.**Jaipur: Nirala Publication, Jaipur.

6. References

Poudel, G. (2070). *Nepal ko Kutnitik Itihas***.** Sunlight Publication, Kirtipur.

Upadhyaya, S. P. (1992). *Nepal koSamajikAarthiktathaPrasasanikItihas***.**Katmandu: Ratna Pustak Bhandar.

Hist. Ed. 528: History of Modern China (1911-1960)
Course No: Hist. Ed. 528 Nature of course: Theoretical
Level: M. Ed. Credit hours: 3
Semester: Second Teaching hours: 48

1. Course Description

This course is designed to specialize in history education. This course aims to give vivid picture of modern Chinese history after 1911, i.e. from the end of the monarchy and establishment of republic in China. This course includes the problems faced by republic China internally and externally. It also comprises Japanese ambition in China and the world war first and the China policy to enter the war, rise of communism, Mao Tse Tung and the establishment of People's Republic China

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2. General Objectives

The general objectives of this course are as follows.

- To provide the student with the background knowledge of China before the revolution of 1911.
- To enhance students' knowledge and understanding of the rise, growth and struggle between the major political parties like Kuomintang party, Chinese Communist party and Anfuparty.
- To enable the students to critically analyze the political conditions of China after 1911 to 1926 i.e. the period of warlordism.
- To make the students familiar with the causes of China to join world war I and Japanese encroachment in China.
- To acquaint the students with the contribution of Mao-Tse-Tung and Chinese Communist Party to establish communism in China
- To make the students familiar with the success of Chinese Communist Party to establish People's Republic in China.

3. Specific Objectives and Contents

Specific Objectives	Contents
• Explain the causes of the Revolution of 1911 • Critically examine the development of Revolution of 1911	**Unit I: Background of the Republic of Chinese History (5)** 1.1. Causes of the revolution of 1911 1.2.Development of revolution of 1911

• State the situation for the formation of Kuomintang party • Elaborate the causes of the reorganization KMT • Analyze the causes of the origin of CCP • Explain the causes how Anfu Party came into northern • Explain the northern expedition and evaluate KMT-CCP	**Unit II: Rise and Growth of Major Political parties in republic China (10)** 2.1. Formation of Kuomintang Party (KMT) 2.2. Reorganization of KMT 2.3. Origin of Chinese Communist Party (CCP) 2.4. Formation of Anfu Party 2.5. Northern expedition of KMT-CCP
• Discuss the dissolution of National Assembly • State the ambition of Yuan-Shih-Kai • Explain Li-Yuan-Hung as President • Critically examine the influence of warlordism in China	**Unit III:Era of Militarism in China (warlordism) (5)** 3.1. Dissolution of national Assembly 3.2. Ambition of Yuan-Shih-Kai 3.3. Li-Yuan-Hung as a president Influence of warlordism in China
• State the causes of China to join the world war I • List out the steps taken by Japan to fulfill her ambition in China • Critically analyze the negative and positive aspects of twenty-one demands • Evaluate the May 4th Movement • Explain the works of Paris Peace Conference • Describe the Five Power Treaty	**Unit IV: China and World War I (10)** 4.1 Causes of China to join the world war I 4.2. Japanese ambition in China 4.3. Twenty-one demands 4.4. May 4th Movement 4.5. Paris peace conference The Five Power Treaty
• Discuss the early years of Mao-Tse-Tung. • Explain the importance of May 30th movement. • State the causes of foundation of Red Army. • Explain how long March strengthened the communists' popularity. • Synthesize the causes and effects of Peasants Movement.	**Unit V: Mao-Tse-Tung and the Growth of Communism in China (10)** 5.1. Early years of Mao-Tse-Tung 5.2. May 30th Movement 5.3. Foundation of the Red Army 5.4. The Long March 5.5. The Peasant Movement

• Explain the civil war in China • Identify the role of U.S.A. in China • State the causes of KMT failure and CCP success in China • Evaluate the Cultural Revolution	**Unit VI: Establishment of People's Republic of China (8)** 6.1. Civil war in China 6.2. Role of U.S.A. 6.3. Causes of KMT failure and CCP success in China 6.4. The Cultural Revolution

Not: The figures within parenthesis indicate the approximate teaching hour affected respective unit.

4. Instructional Techniques

Two types of instructional techniques have been recommended. The first type comprises common techniques applicable to most of the units. The second variety includes such instructional techniques which should be applied to teach specific unit.

4.1 General Instructional Techniques

Due to the theoretical nature of the course, teacher directed, guided and instructed techniques will be mostly adopted. To impart the required knowledge of the concerned units the teacher will adopt the following methods and techniques.

- Lecture
- Discussion
- Paper presentation of the project
- Brain storming and buzz session
- Report writing assignment

4.2 Specific Instructional Techniques

Units	Activities and Instructional Techniques
Unit I : Background of the Republic of Chinese History	Group discussion
Unit II: Rise and Growth of Major Political	Individual report writing, Group discussion
Unit III: Era of Military in China (Warlordism)	Book review
Unit IV: China and World war I	Case study
Unit V: Mao-Tse-Tung and the Growth of Communism in China	Project Work and Term paper
Unit VI: Establishment of people's Republic of China	Home assignment

5. Evaluation

5.1 Internal Evaluation 40%

Internal evaluation will be conducted by course teacher based on following activities

6) Attendance 5 Marks
7) Participation in Learning activities 5 Marks
8) First assignment 10 Marks
9) Second assignment (Midterm exam) assessment 10 Marks
10) Third assignment/ assessment 10 Marks Total 40 Marks

Unit wise activities and work for internal evaluation

Units	Activities and work for internal evaluation
Unit I: Background of the Republic of Chinese History	Group discussion and presentation. (Participation in Learning activities,5)
Unit II: Rise and Growth of Major Political	List the major political parties and their rise in tabular form(1st assignment,5)
Unit III: Era of Military in China (Warlordism)	Collect Military leaders' photos and write their activities held in China. 1st assignment,5)
Unit IV: China and World war I	Present/ display Video of 1st World War and make conclusions in relation to China (2nd assignment, 4)
Unit V: Mao-Tse-Tung and the Growth of Communism in China	Case study writing on Mao-Tung(2nd assignment, 6)
Unit VI: Establishment of people's Republic of China	Book review in relation to China (One book for 3rd assignment,10)

5.2 External Evaluation (final examination) 60%

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester. The types and number of questions to be included in the final paper are as follows.

10) Objective type question (multiple choice 10x1 point) 10 Marks
11) Short answer question (6 questions with 2 or x5 points) 30 Marks
12) Long answer questions (2 questions with 1 or x 10 points) 20 Marks
Total **60 Marks**

6. Recommended Books and References

6.1 Recommended Books

Chen. J (1967*). Mao and the Chinese Revolution.* New York: University Press. **Unit VI**

Clyde, H.P. and Beer F.B.(1971). *The Far East: A History of Western Impact and Eastern Response 1830-1970*(Fifth ed.). New Jersey:Printice Hall Inc-Englewood Cliff. **Unit I- VI**

Fair Bank, J.K. Reischaure, E.O. and Craig, A.M. (1972).*East Asia Tradition and Transformatio.* Modern Asia Edition. **Unit I-VI**

Kaiming S. (1995). *Modern China A Tropical History 1840-1983*. Beijing: New World Press.

Unit I-VI

S.Kumar and Jain S. (1976).*Far East in Modern Times*. Delhi: S Chand and Company. **Unit I-VI**

Shouyi. B (ed) (1982). *An outline History of China.* Beijing: Foreign Language Press. **Unit II-V**

Vinaeke, H.M. (1978*). A History of Far East in Modern Times.* New Delhi: Kalyani Publisher. **Unit I-VI**

Upadhyaya, Shreeram (2021) History of China And Japan. Ratna Pustak Bhandar,Bagabazzar. .

Unit I-VI

6.2 References

Jean, M. and Bergene, M. (1986).*China from the Upium War to 1911 revolution. Translated from the French by Anne,Desteeray.* Delhi: Khosla Publishin House.

Robinson, T.W. (ed.) (1971). *The Curtural Revolution in China.* California: Berkely University of California Press.

Wilson, D. (1971). *The Long March***.**New York: New York Aaron.

Political Science

Pol. Sc. Ed. 525: Political Analysis II
Nature of Course: Theoretical

Course No: Pol. Sc. Ed. 525 Credit hours: 3

Level: M. Ed. Teaching hours: 48
Semester: II

1. **Course Description:**
   This course is designed to provide students with in-depth knowledge of the selected dimensions and components of modern political analysis. It intends to help students internalize and apply those components as major variables to analyze contemporary political systems.
2. **General Objectives:**
   The general objectives of this course are as follows:
   - To acquaint the students with the major components of the political system,
   - To enable the students to analyze those components as criteria for the political system,
   - To make the students able to analyze the role and interrelationship of those components in the political system and approaches to political analysis,
   - To enable the students to analyze various theories of the political system.

3. **Specific objectives and contents**

Specific objectives	Contents
• Explain the concept of apolitical stratum • Describe the political stratum along with power-seekers and powerful • Analyze the varieties of political man – democratic and despotic; agitator and negotiator	**Unit I: Political Man** **(Class hour = 8)** 1.1 Apolitical Stratum 1.2 Political Stratum 1.2.1 Power seeker 1.2.2 Powerful 1.3 Varieties of Political Man 1.3.1 Democratic Man and Despotic Man 1.3.2 Agitator and Negotiator

• Explain the concept of political culture • Describe the level of orientation of political culture • Classify the political culture • Discuss the formation of political culture • Elaborate the concept of political socialization • Analyze the methods of political socialization • Identify the agents of political socialization • State the concept of political participation • Examine the responsible factors for political participation • Evaluate the kinds and levels of political participation	**Unit II: Political Culture, Socialization, and Participation (Class hour = 11)** 2.1 Political Culture 2.1.1 Concept 2.1.2 Orientation 2.1.3 Types 2.1.4 Formation of political culture 2.2 Political Socialization 2.2.1 Concept 2.2.2 Methods 2.2.3 Agents 2.3 Political participation 2.3.1 Concept 2.3.2 Factors 2.3.3 Kinds and levels
• Describe the concept and characteristics of political development • Examine the problems and crises of political development	**Unit III: Political Development (Class hour = 3)** 3.1 Concept and characteristics Problems and crises
• Discuss the basic concepts of inherent in Elite theory • Examine the role of the elite in the democratic and totalitarian political system	**Unit IV: Political Elite (Class hour = 4)** 4.1 Basic concepts Role of the political elite in democratic and totalitarian systems
• Describe the concept and determinants of the political party • Discuss a single party, bi-party, and multiparty systems • Examine the functions and role of the political party • Explain the concept, characteristics, and types of pressure group • Assess the function, role, and techniques of the pressure group focusing on interest articulation and • interest aggregation.	**Unit V: Political Party and Pressure Group (Class hour = 12)** 5.1 Political Party 5.1.1 Concept and determinants 5.1.2 Types of the party system 5.1.3 Functions and role 5.2 Pressure Group 5.2.1 Concept, Characteristics, and types Function,role, and techniques
• State the concept and importance of national integration • Analyze the causes of national disintegration • Explore the factors promoting national integration	**Unit VI: National Integration (Class hour = 4)** 6.1 Concept and importance 6.2 Causes of national disintegration Factors promoting national integration

• Describe the importance of military organization in a country • Analyze the nature of military intervention in politics; direct and indirect intervention • Discuss the levels of military intervention in politics such as influence, pressure or blackmail, displacement, and supplement • Examine the strengths and weaknesses of military rule • Explore the desirable role of the military in politics • Compare civilian and military rule	**Unit VII: Military in politics (Class hour = 6)** 7.1 Importance of military organization 7.2 Nature of military intervention in politics 7.2.1 Direct 7.2.1 Indirect 7.3 Levels of military intervention 7.3.1 Influence 7.3.2 Pressure or blackmail 7.3.3 Displacement 7.3.4 Supplement 7.4 Strength and weakness of military rule 7.5 Desirable role of the military in politics Difference between civilian and military rule

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. The first groups consist of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to specific units.

4.1 General Instructional Techniques

- Mini picture
- Lecture
- Discussion
- Question-answer
- Critical thinking strategies
- Interaction
- Self-study

4.2 Besides the aforementioned techniques, assignment, report writing, and presentation are also suggested especially for units 1 and 2.

5. Evaluation

5.1 Internal Evaluation 40%

Internal evaluation will be conducted by the course teacher based on the following activities:

S.N.	Nature of Questions	Points
1.	Attendance	5
2.	Participation in learning activities	5
3.	First assessment	10
4.	Second assessment	10
5.	Final assessment	10
	Total	**40**

5.2 External Evaluation (Final Examination) 60 %

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester.

S.N.	Nature of Questions	Number of Questions	Points
1.	Objective type question (Multiple choice)	10×1	10
2.	Short answer questions (6 with 2 or questions × 5 points)	6×5	30
3.	Long answer questions (2 with one or questions × 10 points)	2×10	20
	Total	18	60

6. Recommended Books:

Almond, G. A. & Powell, G. B. (Latest edition). *Comparative politics- a developmental approach*. Little Brown (For Units II, III, IV, VI, and VII).

Dahl, R. A. (1976). *Modern political analysis* (3rd ed.). Prentice-Hall International.

Gandhi, M. G. (Latest edition). *Modern political analysis*. Vikas Publishing House (For Unit I-VI).

Johari, J. C. (Latest edition). *Comparative politics*. Vikas Publishing (For Unit II-Xi).

Reference Books:

Dautch, K. W. (1963). *The nerves of government*. Free Press. Young, O. R. L. (1968). *System of political science*. Prentice Hall.

Pol. Sc. Ed. 526: Political Thought II
Nature of Course: Theoretical
Course No: Pol. Sc. Ed. 526 Credit hours: 3
Level: M. Ed. Teaching hours: 48
Semester: II

1. Course Description:

This course is designed to expose the students with selected political thinkers and their contributions to political sciences. It also intends to help students acquaint themselves with the concepts of different thinkers on different topics.

2. General Objectives:

The general objectives of this course are as follows:

- To provide in-depth knowledge of the nature of political thought of different thinkers.
- To enable the students to explain the meaning and features of different political thinkers' thought as Machiavelli, Hobbes, Locke, Rousseau, Bentham, Mill, Hegel, Green, Marx, Lenin, Mao, and Gandhi.
- To make the students able to evaluate the contributions of different political thinkers' ideas to the development of political thought.

3. Specific objectives and contents

Specific objectives	**Content**
• Narrate Machiavelli's life and works briefly. • Explain Machiavelli's methods • State Machiavelli's fundamental assumption about the nature of human • Discuss Machiavelli's views on political idea • Assess Machiavelli's views on statecraft • Evaluate the contributions of Machiavelli as a founder of modern political thought as well as a realistic thinker	**Unit I: Realistic School of Thoughts - Machiavelli** **(Class hour = 5)** 1.1 Machiavelli 1.1.1 Machiavelli's methods 1.1.2 View on human nature 1.1.3 Political idea Statecraft1.1.5Contributions of Machiavelli
• Narrate Hobbes' life and works briefly • State the nature of humans according to Hobbes. • Describe Hobbes's view on the state of nature • Assess Hobbes's view on the law of nature • Evaluate the natural right principle of Hobbes • Explain the social contract theory according to Hobbes • Analyze Hobbes's concept of sovereignty, liberty, and property Examine the contributions of Hobbes to the development of political thought focusing on his theory of scientific	**Unit II: Social Contract School of Thoughts** **(Class hour = 12)** 2.1 Hobbes 2.1.1Human nature 2.1.2State of nature 2.1.3Law of nature 2.1.4Natural right 2.1.5 Social contract 2.1.6 Sovereignty, liberty, and property 2.1.7 Contributions of Hobbes to political thought 2.2 John Locke

materialism • Narrate Locke's life sketch • Explain Locke's view on human nature • Discuss Locke's view on the state of nature • State the law of nature according to Locke • Analyze the natural right theory of Locke • Examine Locke's social contract theory • Evaluate Locke's view on sovereignty, liberty, and property • Assess the contributions of Locke in the field of political thought along with his special contribution to limited government • Narrate Rousseau's life sketch • Explain Rousseau's idea of human nature • Describe Rousseau's view on the state of nature • Examine Rousseau's theory of law of nature • State natural rights propounded by Rousseau • Discuss Rousseau's social contract theory • Asses Rousseau's theory of sovereignty, liberty, and property • Evaluate the contributions of Rousseau to modern political thoughts focusing on his • theory of general will	2.2.1Human nature 2.2.2 State of nature 2.2.3 Law of nature 2.2.4 Natural right 2.2.5 Social contract 2.2.6 Sovereignty, liberty, and property 2.2.7 Contributions of Locke to political thought 2.3 Jean Jacques Rousseau 2.3.1 Human nature 2.3.2 State of nature 2.3.3 Law of nature 2.3.4 Natural right 2.3.5 Social contract 2.3.6 Sovereignty, liberty, and property 2.3.7 Contribution of Rousseau to political thought
• Sketch the life and works of Jeremy Bentham • State the principle of utility according to Bentham • Evaluate the contributions of Bentham • Narrate John Stuart Mill's life and works briefly • Explain Mill's modification of Bentham's utilitarianism • Describe Mill's view on individual liberty, freedom of thought and expression, and freedom of action • Evaluate Mill's contributions to political thoughts	**Unit III: Liberalist School of Thoughts** **(Class hour = 5)** 3.1 Jeremy Bentham 3.1.1 Principle of utility 3.1.2 Contributions of Bentham 3.2 John Stuart Mill 3.2.1 Modification of Bentham's utilitarianism 3.2.2 Liberty Contributions of Mill

• Narrate Hegel's life • Explain the political thoughts of Hegel • Analyze Hegel's theory of state, freedom, constitution, and sovereignty • Narrate the life and works of T. H. Green briefly • Explain Green's political thoughts • Elaborate Green's concept of state, freedom, rights, sovereignty, and property • State Green's concept of universal brotherhood and war • Compare between Hegel and Green	**Unit IV: Idealist School of Thoughts** **(Class hour = 6)** 4.1 Hegel 4.1.1 Political thoughts 4.1.2 State, freedom, constitution, and sovereignty 4.2 T. H. Green 4.2.1 Political thoughts 4.2.2 State, freedom, rights, sovereignty, and property 4.2.3 Idea of universal brotherhood and war 4.3 Comparison between Hegel and Green
• Narrate Marx's life and works • Analyze the dialectical materialism of Marx • Explain Marx's theory of surplus-value • Explain Marx's theory of class struggle • Analyze economic interpretation of history • Narrate Lenin's life and works briefly. • Elaborate Lenin's theory of revolutionary Marxism • State Lenin's concept of the communist party • Describe Lenin's concept of the dictatorship of the proletariat • Narrate Mao Tse-Tung's life • Explain Mao Tse-Tung's political thought • Critically examine the principle of the new democracy of Mao • State the theory of permanent revolution contributed by Mao • Compare among Marx, Lenin, and Mao	**Unit V: Socialist School of Thoughts** **(Class hour = 16)** 5.1 Karl Marx 5.1.1 Dialectical materialism 5.1.2 The theory of surplus-value 5.1.3 The theory of class struggle 5.1.4 Economic interpretation of history 5.2 Lenin 5.2.1 Revolutionary Marxism 5.2.2 Idea of the communist party 5.2.3 Dictatorship of the proletariat 5.3 Mao Tse-Tung (Mao Zedong) 5.3.1 Mao Tse–Tung's political thoughts 5.3.2 New democracy 5.3.3 Theory of permanent revolution 5.4 Comparison among Marx, Lenin, and Mao
• Narrate Gandhi's life • State Gandhi's view on morality and spiritualization of politics • Explain Gandhi's theory of non-violence, truth, and Satyagraha • Describe Gandhi's view on Ram Rajya • Evaluate the contributions of Gandhi	**Unit VI: Oriental Political Thought- Gandhi** **(Class hour = 4)** 6.1 Morality and spirituality 6.2 Theory of non-violence, truth, and Satyagraha 6.3 Ram Rajya 6.4 Contributions of Gandhi

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. The first group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to specific units.

4.1 General Instructional Techniques

- Mini picture
- Lecture
- Discussion
- Question-answer
- Critical thinking strategies
- Interaction
- Self-study

4.2 Besides the above-mentioned techniques, assignment, report writing, and presentation are also suggested especially for units 1 and 2.

5. Evaluation

5.1 Internal Evaluation 40%

Internal evaluation will be conducted by the course teacher based on the following activities:

S.N.	Nature of Questions	Points
1.	Attendance	5
2.	Participation in learning activities	5
3.	First assessment	10
4.	Second assessment	10
5.	Final assessment	10
		Total: 40

5.2 External Evaluation (Final Examination) 60 %

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester.

S.N.	Nature of Questions	Number of Questions	Points
1.	Objective type question (Multiple choice)	10× 1	10
2.	Short answer questions (6 with 2 or questions × 5 points)	6× 5	30
3.	Long answer questions (2 with one or questions × 10 points)	2×10	20
	Total	18	60

6. Resources Recommended Books

Barker, S. R. (2006). *Greek political theory, Plato and his predecessors*. Delhi: Surjeet. Publications.

Haker, A. (2006). *Political theory, philosophy, ideology science*. Delhi: Surjet. Publications. Mukherjee, S. & Ramaswamy, S. (2012). *History of political thought Plato to Marx*. New Delhi PHL Learning Pvt. Ltd.

Sabine, J. H. (2009). *A history of political theory*. Delhi: Oxford and IBH Publishing Co. Pvt. Ltd.

Reference Books:

Das, P. L. (2013). *History of political thought*, Delhi: New Central Book Agency. Gokhale, B. K. (2012). *Political science (Theory and governmental machinery*).

Pol. Sc. Ed. 527: Public Value and Political Management

Course No.: Pol. Sc. Ed. 527	Nature of the course: Theory
Level: M. Ed.	Credit Hour: 3
Semester: II	Teaching Hour: 48 hours

1. Course Description

This course is designed for those students who study an M. Ed. in Political Science Education. The course is divided into five units. Unit I deals with the concept of politics and public management, and Unit II with the approval of public value in politics. Unit III includes the roles and functions of public value in politics. Unit IV incorporates the measurement of public value in politics, and Unit V contains the implementation of public policy.

2. General Objectives

The general objectives of this course are to:

- familiarize the students with politics and political management;
- make the students understand the approval of public value in politics;
- enable the students to critically analyze the roles and functions of public value in politics;
- provide the students with the knowledge of measurement of public value in politics;
- enable the students to analyze the implementation of public policy.

3. Specific Objectives and Contents

Specific Objective	Contents
• Explain the concept of politics and public management • Evaluate the theories of public management - principal-agent theory, public choice theory, and new public service theory • Describe the conflict between politicians and public managers • Elaborate the process of shifting from bureaucratic to political management • State the processes of accountability	**Unit I: Concept of politics and public management** **(Class hour = 10)** 1.1 Concept 1.2 Theories 1.2.1 Principal-agent theory 1.2.2 Public choice theory 1.2.3 New public service theory 1.3 Paradigm shift of management 1.3.1 Conflict between politicians and public managers 1.3.2 The shift to political management 1.3.3 Process of accountability
• Discuss the conceptions of public value in politics with reference to citizen/state relationships, public preferences, the private sector's concept of value, and outcomes and trust • Describe the role of different types of creators in value politics such as the will of people, social capital, democratic culture, civil society, political party and candidates of elections, senior citizens, media,	**Unit II: Approval of public value in politics** **(Class hour = 12)** 2.1 Concepts of public value in politics 2.1.1 Citizen/state relationships 2.1.2 Public preferences 2.1.3 Private sector's concept of value 2.1.4 Outcomes and trust 2.2 Creators of pubic value 2.2.1 Will of the people 2.2.2 Social capital 2.2.3 Democratic culture 2.2.4 Civil society

social scientists, and public intellectuals • Analyze the processes of democratic legitimation of public value • Explain the processes of democratic accountability- internal and external, formal and informal, dialogue with people, and staff and stakeholders • Examine the importance of political involvement in best value	2.2.5 Political party and candidates 2.2.6 Senior citizens 2.2.7 Media 2.2.8 Social scientists 2.2.9 Public intellectuals 2.3 Democratic legitimation of public value 2.4 Processes of democratic accountability 2.4.1 Internal and external 2.4.2 Formal and informal 2.4.3 Dialogue with people 2.4.4 Staff and stakeholders 2.5 Political involvement in best value
• Describe the role of public value in justifying resource allocation • Discuss the importance of public value in formulating strategic goals in politics • Assess the performance of public value as a management tool in politics • Explain the ways of managing citizen's expectations by public value in politics	**Unit III: Role and functions of public value in politics** **(Class hour = 8)** 3.1 Justifying resource allocation 3.2 Public value as a strategic goal in politics 3.3 Public value as a management tool in politics 3.4 Managing citizen expectations in politics
• Describe the different ways of measurement of public value in politics; such as effectiveness, efficiency, output, outcome, quality, access, appropriateness, and equity	**Unit IV: Measurement of public value in politics** **(Class hour = 10)** 4.1 the process of measurement 4.1.1 Effectiveness 4.1.2 Efficiency 4.1.3 Output 4.1.4 Outcome 4.1.5 Quality 4.1.6 Access 4.1.7 Appropriateness 4.1.8 Equity
• Explain the concept, scope, and nature of public policy • Describe policy life cycle - contribution of policy science, agencies of public policy, and implementation techniques of public policy • Analyze the implementation of public policy in Nepal; its opportunities, problems, and challenges	**Unit V: Implementation of public policy** **(Class hour = 8)** 5.1 Concept, scope, and nature of public policy 5.2 Policy life cycle 5.2.1 Contribution 5.2.2 Agencies 5.2.3 Implementation techniques 5.3 Implementation of public policy in Nepal 5.3.1 Opportunities 5.3.2 Problems and challenges

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. The first group consists of general instructional techniques commonly applied to most of the units and the second group consists of the specific techniques applicable to the specific unit.

4.1 General Instructional Techniques

- Lecture
- Question-answer
- Discussion
- Inquiry
- Critical thinking
- Strategies

4.2 Specific Instructional Techniques

Specific instructional techniques to be used while teaching the course will be as follows:

Unit III: Prepare a seminar paper on the role and function of public value in politics.

Unit IV: Project work in performing the process of public value in politics.

5. Evaluation

5.1 Internal Evaluation 40%

Internal evaluation will be conducted by the course teacher based on the following activities:

S.N.	Nature of Questions	Points
1.	Attendance	5
2.	Participation in learning activities	5
3.	First assessment	10
4.	Second assessment	10
5.	Final assessment	10
Total		**40**

5.2 External Evaluation (Final Examination) 60 %

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester.

S.N.	Nature of Questions	Number of Questions	Points
1.	Objective type question (Multiple choice)	10× 1	10
2.	Short answer questions (6 with 2 or questions × 5 points)	6× 5	30
3.	Long answer questions (2 with one or questions × 10 points)	2×10	20
	Total	18	60

6) Recommended Booksand References

Barnes, M.(1999). *Building a deliberative democracy: an evaluation of two citizens' jurie.* London: Institute for Public Policy Research.

Barrett, S. & Fudge, C. (eds) (2004). *Policy and Action.* London, Methuen.

BBC. (1981). *Building Public Value: Renewing the BBC for a digital world*. London: British Broadcasting Corporation.

Behn, R. (1991). *Leadership Counts: Lessons for public managers.* Cambridge: MA, Harward University Press.

Bentley, T.(2005). *Everyday democracy: why we get the politicians we deserve.* London: DEMOS.

Bentley, T., Kaye, A., MacLeod, P. O., Leary, D., & Parker, S. (2004). A fair go*: public value and diversity in education*. London: DEMOS and Education Foundation.

Blaug, R., Horner, L. & Lekhi, R. (2006). Public value, citizen expectations and user commitment.

London: The Work Foundation.

Boyne, G., Gould-Williams, J. Law, J., & Walker, R. (2002). *Plans, performance information and accountability: The case of best value*. Public Administration, Vol 80 No 4.

Cameron, W. (2004). Public Accountability: Effectiveness, equity, ethics. Australian Journal of Public Administration, Vol 63 No 4, pp59–67.

Curtain, R. (2003). How citizens can take part in developing and implementing public policy.

Australian Public Policy Research Network.

Dahl, R. A, (1989). *Democracy and its critics.* New Haven: Yale University Press.

Dunn, J. (1979).Western *political tin the face of the future*. Cambridge: Cambridge University Press. Kettl, D. F.(2000). *The global management revolution: a report on the transformation of governance*.

Washington DC: Brookings Institution.

Knott, J. & Miller, G. (1987). *Reforming bureaucracy: the politics of institutional choice.* New York: Prentice Hall.

Lynn, L. E. & Heinrich, C. (Eds.) (2000). *Governance and performance: new perspectives.*

Washington DC: Georgetown University Press.

Martin, S. (1997). *Leadership, learning and local democracy: political dimensions of the strategic management of change*. International Journal of Public Sector Management, Vol 10 No 7, pp534-546.

May, P. G. (2003*). The politics of bureaucracy.* White Plains: NY, Longman Publishers.

Moore, M. (1995).*Creating public value: strategic management in government*. Cambridge: MA, Harvard University Press.

Moore, M. H. (1995). *The public value scorecard': a rejoinder and an alternative to 'strategic performance measurement and management in non-profi t organizations.* by Robert Kaplan, HCNO Working Paper Series.

Steele, J. (2003). *Involving People in Public Disclosure of Clinical Data: Report on research with user organizations and patients.* London: The Nuffi eld Trust.

Stoker, G. (2003). *Public value management (PVM): A new resolution of the democracy/efficiency tradeoff.* unpublished paper. Institute for Political and Economic Governance (IPEG), University of Manchester.

Svara, J. H. (1999). *Complementarity of politics and administration as a legitimate alternative to the dichotomy model.* Administration and Society, Vol 30 No 6.

Wakeford, T. (2002). *Citizens juries: a radical alternative for social research.* Social Research Update, No 37, Department of Sociology, University of Surrey.

Wirtz, V., Cribb, A.,& Barber, B. (2003). *Understanding the role of "the hidden curriculum" in resource allocation: the case of the UK NHS.* Health Care Analysis, Vol 11 No 4.

Pol. Sc. Ed. 528: Nepalese Politics

Nature of the course: Theory

Course No.: Pol.Sc.Ed. 528 Level: M. Ed.

Credit Hour: 3 Teaching Hour: 48 hours Semester: II

1. Course Description

This course is designed for students who specialize in Political Science Education. It intends to provide knowledge of Nepalese politics. The contents of this course have been divided into six units. Unit I deals with the introduction of Nepalese politics and unit II deals with the political movements of 2007 BS. Unit III comprises the era of the different political systems. Unit IV includes the restoration of democracy. Unit V includes the Constituent Assembly Election and afterward. Similarly, unit VI gives an outline survey of Nepalese foreign policy respectively.

2. General Objectives

The general objectives of this course are as follows:

- To acquaint the students with the political movement of 2007 BS;
- To make the students able to describe the era of the different political systems which were introduced in Nepal;
- To enhance students understanding of the Constituent Assembly Elections and the politics afterwards;
- To provide the students with the knowledge of Nepalese foreign policy.

3. Specific Objectives and Contents

Specific Objectives	Contents
• Describe the characteristics and trends of Nepalese politics.	**Unit I: Introduction to Nepalese Politics (Class hour = 2)** 1.1 Characteristics 1.2 Trends
• Discuss the social, economic, and political causes of the democratic movement, 2007 BS • Describe the external causes of the democratic movement, 2007 BS influenced by the international Environment	**Unit II: Democratic Movement, 2007 BS (Class hour = 3)** 2.1 Internal causes (Social, Economic, and Political) 2.2 External causes

• Describe the features of the interim constitution, 2007 BS. • Evaluate different types of political experiments under the interim constitution of 2007 BS • Analyze the features of the Constitution of the Kingdom of Nepal, 2015 BS • Evaluate the work of the first elected government and the deepening crisis at home • Describe the working of the Panchayat system and the features of the Constitution of Nepal, 2019 BS	**Unit III: Era of Different Political Systems (Class hour = 7)** 3.1 Interim Constitution of 2007 BS 3.2 Era of party politics 2007-2015 BS 3.3 Constitution of the Kingdom of Nepal 2015 BS 3.4 Dismantle the first elected government 3.5 Era of Panchayat politics and the Constitution of Nepal, 2019 BS
• Examine the causes and consequences of joint popular anti-Panchayat Movement, 2046 BS • Describe the features of the Constitution of the Kingdom of Nepal, 2047 BS • Discuss political development after 2047 BS • Evaluate the king's step in politics • Explain the causes of the second joint popular movement, 2062 BS • Synthesize and interpret the features of the Interim Constitution of 2063 BS	**Unit IV: Restoration of Democracy (Class hour = 7)** 4.1 Joint Popular anti-Panchayat Movement 4.2 Constitution of the Kingdom of Nepal, 2047 BS 4.3 Political development after 2047 BS 4.4 King's step-in politics 4.5 Second joint popular Movement 2062 BS 4.5 Interim Constitution of 2063 BS
• Describe the purposes and process of the first and second CA election • Analyze the features, prospects, and challenges of the political system of Nepal after the CA election • Explain the role of major political parties.	**Unit V: The Constituent Assembly (CA) Election and Afterwards (Class hour = 7)** 5.1 Elections of first and second CA 5.2 Features, prospects, and challenges of the political system after the CA election 5.3 Role of major political parties
• State the characteristics of the constitution of Nepal • Describe the provisions of fundamental rights and duties • Sketch the position and power of the President of Nepal • Explain the composition and functions of the federal executive • Evaluate the composition and functions of the federal parliament • Assess the composition and functions of the supreme court	**Unit VI: The Constitution of Nepal (Class hour = 12)** 6.1 Salient features 6.2 Fundamental rights and duties 6.3 The president 6.4 Composition and functions of federal executive 6.5 Composition and functions of federal parliament 6.6 Composition and functions of the supreme court

• Describe the objectives, principles, and determinants of Nepalese foreign policy • Analyze the role played by Nepal in the SAARC and the UNO • Analyze the relation of Nepal with independent India and the People's Republic of China	**Unit VII: Nepalese foreign policy (Class hour = 10)** 7.1 Objectives, principles, and determinants of Nepalese foreign policy 7.2 Role of Nepal in the SAARC and the UNO 7.3 Nepal's relation with India and China

4. Instructional Techniques

Two categories of instructional techniques – general and specific instructional techniques are suggested

4.1 General Instructional Techniques

Lecture, inquiry, interaction, and discussion

4.2 Specific Instructional Techniques

Specific instructional techniques to be used while teaching the course will be as follows:

Unit 3 and 4: Prepare seminar paper on the evaluation of work of the first elected government and classroom practice to identify the causes of the king's step in Nepalese politics, 2017 and 2058 BS.

Unit 7: Project work in preparing a research report about the open border problem or probability between Nepal and India.

5. Evaluation

5.1 Internal Evaluation 40%

Internal evaluation will be conducted by the course teacher based on the following activities:

S.N.	Nature of Questions	Points
1.	Attendance	5
2.	Participation in learning activities	5
3.	First assessment	10
4.	Second assessment	10
5.	Final assessment	10

5.2 External Evaluation (Final Examination) 60 %

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester.

S.N.	Nature of Questions	Number of Questions	Points
1.	Objective type question (Multiple choice)	10× 1	10
2.	Short answer questions (6 with 2 or questions × 5 points)	6× 5	30
3.	Long answer questions (2 with one or questions × 10 points)	2×10	20
	Total	18	60

6. Recommended Books and References Recommended Books:

Adhikari, S.M. (1995). *Nepalma prajatantrik andolan ko ithas.* New Delhi: Nirala Publications.

Baral L. K. (2006). *Nepal: facets of Maoist insurgency*. New Delhi: Adroit publications.

Baral, L.K. (2012). *Nepal nation-state in the wilderness (managing state democracy and geopolitics).* New Delhi: sage publications.

Bhasin, A. K. (Ed.). (1966). *Documents on Nepal's relation with India and China 1946-1966 (part II).* Bombay: Academic books.

Dahal, R. K. (2001). *Constitutional and political development in Nepal*. Kathmandu: Ratna Pustak Bhandar.

Gupta, A. (1993*). Politics in Nepal 1950-1960*. New Delhi: Kalinga Publications Joshi, B. & Rose, L. E. (2004). *Democratic innovation in Nepal: A case study of*

acculturation. Kathmandu: Mandala Publication.

Whelpton, J. (2008). *History of Nepal*. Cambridge University Press

References

Adhikari, S. M. (2002). *Nepali congressko itihas*. Kathmandu: Bhudipuran Prakasan. Agrawal, H.N. (1976). *Administrative system of Nepal*. New Delhi, Vikas Publicasing. Bhandari, D. R. (1958). *Nepalko itihasik vibechana*. Banaras: Krishna Kumari Devi.

Chatarji, B. (1967). *A study of recent Nepalese politics*. Culcutta: The World Press Pvt. Ltd.

Chauhan, R. S. (1971). *The political development in Nepal1957-70: Conflict between tradition and modernity.* New Associate Publishers.

Devkota, G. B. (vol. 1st 1979,vol. 2nd. 1. 980, vol. 3rd 1983, vol. 4th 1983). *Nepalko rajnitik Darpan*. Kathmandu: Arjun Bahadur Devkota.

Ghimire, T. N. (2078). *Nepalma Sanghatmak Byabastha: Abadharana ra Auchitya* (2nd ed.). Kathmandu: Pinakal Publication.

Jha, S. K. (1975*). Uneasy partners: India and China in the post colonial era*. New Delhi: Manas Publications.

Joshi, B. and Rose, L. E. (2004). *Democratic innovation in Nepal: A case study of acculturation*. Kathmandu: Mandala Publications.

Khanal, Y. N. (1972). *Nepal transition from isolation* . Kathmandu: Shaja Prakasan. Lawati, M. (Ed.) (2008). *Contentious politics and democratization in Nepal*. New Delhi: Sage Publications Pvt. Ltd.

Muni, S. D. (1992*). India and Nepal: Changing relationship*. New Delhi: Konark Publishers. Muni, S. D. (1992). *The foreign Policy of Nepal*. New Delhi: Konark Publishers.

Phuyel, S. P. (2075). *Nepalko Rajaniti.* Kathamandu: Sunrise Publication.

Ramakant, (1976). *Nepal China and India: Nepal China relations*. New Delhi: Abhinav Publications.

Rose, L. E. (1971). *Strategy for survival*. Bombay: Oxford University.

Shah, R. (2006). *Nepal politics: retrospect and prospect (Second edition*). New York: Oxford University Press.

Sharma, B. C. (1976). *Nepalko aitihasik ruprekha*, Banaras: Krishna Kumari Devi. Siddique, M. (2006). *India and SAARC nations*. New Delhi: Max Ford Books.

Singh, S. B. (2007). *Nepal struggle for democracy*. New Delhi: Adhyayan Publishers and Distributors.

Tuladhar, T. R. (1960). *Nepal China: a story of friendship*. Kathmandu: HMG.

Upreti, B. C. (2008). *Regional cooperation in south Asia: emerging dimensions and issues*. New Delhi: Summit Enterprises.

Note: The numbers in the parentheses indicate approximate teaching hours to respective units.

EPM

Ed. PM. 525: Recent Trends in Educational Planning and Management

Course No: Ed. PM. 525	Nature of course: Theoretical
Level: M.Ed.	Credit hours: 3 Credit Hours
Semester: Second	Teaching hours: 48 hours

1. Course Description

This course acquaints the students with recent trends and developments that have shaped educational planning and management at the dawn of the third millennium. The aim of the course is to familiarize the students with the changes that have occurred over the years and relate them to the present-day planning and management practices. It further intends to place the students on a new footing of trends that give meaning to this discipline in the changed educational context of the world.

2. General Objectives

The general objectives of the course are as follows:

- To be familiar with the dynamics of educational planning and management as it is used in everyday life.
- To update the students with the recent management-planning perspectives and practices in education.
- To enable the students with the skills of implementing effective planning and management indicators.
- To help students identify the agents of planning for change management.
- To acquaint the students with the trends of educational planning and management.

3. Specific Objectives and Contents

Specific Objectives	Contents
• State the concept, knowledge, and use of the management dimension. • Explain the physical, virtual and social learning environment • Illustrate the school and community management relationship.	**Unit I: Educational Planning and Management Dynamics (8)** 1.1 Planning for the learning environment 1.1.1 Physical learning environment 1.1.2 Virtual learning environment 1.1.3 Social learning environment (inclusion) 1.1.4 School and community management relationship 1.2 Management dimension
• State the perspective of the planning, programming and budgeting system. • Explain knowledge management and zero-based budgeting system • Identify the features of strategic and total quality management • Explore the need for re-engineering management.	**Unit II: Management and Planning Perspectives (10)** 2.1 Planning, Programming, Budgeting System (PPBS) 2.2 Knowledge management (KM) 2.3 Zero-Based Budgeting (ZBB) 2.4 Strategic Management (SM) 2.5 Total Quality Management (TQM) 2.6 Re-Engineering Management (REM)

• Identify effective planning-management indicators Explain the use of these indicators for effective planning and management • Identify strategies to increase co-operation with industry and business in educational planning and management. • Identify strategies to restructure departments into cost-effective centers and provide suggestions to merge institutions for the economy of scale and to avoid duplication. • Explore the networking system of institutions.	**Unit III: Effective Planning-Management Indicators** **(10)** 3.1 Intensive staff development programs 3.2 Increased cooperation with industry and business 3.3 Restructuring of departments into cost-effective centers 3.4 Merging institutions for the economy of scale and reducing duplication. 3.5 Networking of institutions.
• Explain the concept of changing institutions into learning organizations • Assess the need for training for individuals and organizations • Identify the relation between change institutions and ministries • Identify effective change strategies • Explore the need for objective assessment and accountability for change management	**Unit IV: Planning for Change Management (10)** 4.1 Changing institutions into learning organizations 4.2 Training individuals vs. training organizations 4.3 Change institutions: Ministries' relationship with change-organizations 4.4 Effective change strategies: 4.4.1 Environment/culture of change 4.4.2 Cultural transformation 4.4.3 Change period: initiation, implementation, and institutionalization Objective assessment and accountability
• To elucidate the concept and trends of planning for educational development. • To identify a reference to the increasing globalization of education. • To describe educational planning practice as pluralism, delinking, and globalization. • To elucidate cultural turn in educational planning including development paradigm. • To explore the issues and challenges for educational development in a global context	**Unit V: Trends in Planning for Educational Development** **(10)** 5.1 Concept and trends of planning for educational development 5.2 Pluralism in educational planning 5.2.1 Delinking and globalization in educational planning 5.3 Cultural turn and development paradigm in educational planning 5.3.1 National - local cultural bondage 5.3.2 Culture and power 5.3.3 Cultural aid and stir 5.3.4 Paradigm of alternative development 5.3.5 Mainstream development Issues and challenges for educational development

Note: The figures in the parenthesis indicate approximate hours allotted to each unit.

4. **Instructional Techniques**: General as well specific instructional techniques have been suggested to deliver the contents in the classroom and to carry out experiential exercises. Here is a brief account of these techniques:

4.1 General Instructional Techniques

- Lecture
- Discussion
- Question-answer
- Project work

4.2 Specific Instructional Techniques

To promote experiential learning in this course, following specific instructional techniques are recommended for the selected units to ensure students' active participation in the teaching-learning process and make the teaching-learning research-oriented.

Unit	**Activity and Instructional Techniques**
Unit I: Educational Planning and Management Dynamics	Require each student to prepare and submit the review reports before the class on: Planning for learning environment: Physical learning environment Virtual learning environment Social learning environment Initiate discussion on the presentation followed by conclusion from the teacher.
Unit II: Management and Planning Perspectives	The sub-topic of this unit is divided into different groups. Students will prepare presentation and prepare notes on the given topic. The notes will be presented in the class followed by discussion and feedback.
Unit III: Effective Planning-Management Indicators	Students in groups will visit the community school for observing the existing facilities and identifying their needs for a separate topic. They will be identifying the gaps that exist between the facilities and the needs. They will prepare a brief report for presentation. The presentation will be followed by discussions and supplemented by the teacher's comments.

Unit IV: Planning for Change Management	For overall subunit: Changing institutions into learning organizations, Training individual vs. training organizations, Change institutions: Ministries' relationship with change-organizations, and Effective change strategies: Environment/Culture of change, Cultural transformation, Change period: initiation, implementation and institutionalization Objective assessment and accountability Arrange a visit of the class to an educational institution/organization to observe and study it from the perspective of change it has brought over the decade in its planning approach. Require the students under the guidance of the teacher to see into the organization its shift in terms of effective change strategies.
Unit V: Trends in Planning for Educational Development	The students should be asked to identify the GNH indicators of their classmates. Ask the students to review the following issues on basis of: 5.2Pluralism in educational planning Delinking and globalization in educational planning 5.3 Cultural turn and development paradigm in educational planning National - local cultural bondage Culture and power Cultural aid and stir The paradigm of alternative development Mainstream of development 5.4 Issues and challenges for educational development. The students are required to compare the issues related to the Nepali context. Based on this work, they have to prepare and present the report for discussion in the class followed by critical observation from the teacher.

5. Evaluation

5.1 Internal Evaluation 40%

The concerned teacher will carry out the internal evaluation of the students based on the following criteria.

1. Attendance	05 Marks
2. Participation in learning	05 Marks
3. First assignment/assessment	10 Marks
4. Second assignment/assessment	10 Marks
5. Third assessment	10 Marks
Total	**40 Marks**

5.2 External Evaluation (Final Examination) 60%

Examination section, Dean's Office, Faculty of Education, will conduct the final examination at the end of the semester. The number of items in each category of question and the distribution of points to be included in the final examination paper is as follows:

1. Objective type questions (10 Multiple choice questions x 1) 10

	Marks	
2.	Short answer questions (6 questions with 2 choice x 5) Marks	30
3.	Long answer questions (2 questions with 1 choice x 10) Marks	20
	Total	**60 Marks**

5. References

Arain, F. M., & Tipu, S. A. A. (2007). Emerging trends in management education in international business schools. *Educational Research and Reviews*, *2*(12), 325-331.

Goyal, D. P. (2014). *Management Information Systems: Managerial Perspectives*. Vikas Publishing House.

Harris, R., Simons, M., & Maher, K. (2009). *New directions in European vocational education and training policy and practice: Lessons for Australia*. National Centre for Vocational Education Research.

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Marmolejo, F., Gonzalez, R., Gersberg, N., Nenonen, S., & Calvo-Sotelo, P. C. (2007). Higher education facilities: Issues and trends. Pablo Campos Calvo-Sotelo, University Campus Planning and Design, Spain.

Stevenson, K. R. (2006). *Educational trends shaping school planning and design: 2007*. National Clearinghouse for Educational Facilities.

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University Grants Commission Nepal (2008). Quality assurance and accreditation guidelines, quality assurance and accreditation unit, Sanothimi, Bhaktapur.

Ed. PM. 527: Educational Management Information System (EMIS)

Corse No.: Ed. PM. 527 Nature of the course: Theoretical

Level: M.Ed. Credit hours: 3

Semester: Second Teaching hours: 48

1.Course Description

This course is designed to provide students an opportunity to be program personnel or practitioners of education management information systems (EMIS). It aims to help the students develop the knowledge and skills which are necessary to formulate and implement EMIS trends. Students are encouraged, throughout the course, to consult libraries, education- related institutes, and relevant websites and participate in classroom discussions. This course covers the concept of management information system (MIS), theoretical and practical aspects of educational management information system, various aspects of MIS and EMIS, EMIS indicators of the education system, EMIS in the Nepalese education system, and network for EMIS.

2. General Objectives

The general objectives of this course are as follows:

- To enable the students to explore the philosophical premises that shaped and reshaped EMIS.
- To provide the students with the concept of management information systems.
- To make the students familiar with the linkage between EMIS and educational development.
- To acquaint the students with different forms and trends of EMIS.
- To enhance the capacity of the students in exploring different indicators of the education system.
- To enhance students' knowledgeable about EMI and the S in the Nepalese education system.
- To make the students familiar with different networks of EMIS.

3. Specific Objectives and Contents

Specific Objective	Contents
Unit: I	**Concepts of Management Information System (MIS) (12)**
• Define and describe the concept of a management information system along with its attributes of an information system • Define, analyze and design an information system • Explain the process analysis of MIS • Describe the contemporary approaches to the information system • Describe the future of MIS • Explain the challenges of information system • Describe improving educational quality through better use of information List out the impact of information systems on human resource management • State the use and importance of ICT in education	1.1 Concept of management information system (MIS) 1.2 Attributes of information system 1.3 Analysis and design of an information system 1.4 Process analysis of MIS 1.5 Contemporary approaches to information system 1.6 Future of MIS 1.7 The challenges of information systems. 1.8 Improving educational quality through better use of information 1.9 Impact of information on human resource management (HRM) 1.10 Use of information and communication technology (ICT) in education
Unit: II	**Educational Management Information System (EMIS) (12)**
• Define and describe the concept of EMIS • Describe components, structure & objectives of EMIS • Explain the steps of EMIS • State the relation between school education and EMIS • Explain the use of EMIS in educational management with example and practice • Describe school management information systems as types, quality, dimensions, use, and importance Illustrate the issues of educational management information system	2.1 Concept of educational management information system (EMIS) 2.2 Component of EMIS 2.3 Structure of EMIS 2.4 Objectives of EMIS 2.5 Steps of EMIS 2.6 Relation between school education and EMIS 2.7 Use of EMIS in educational management 2.8 School management information system 2.8.1Types of information 2.8.2 Information quality 2.8.3 Dimensions of information 2.8.4 Identification and use of information 2.8.5 Importance of Information for school improvement 2.8.6 Issues of educational management information system
Unit: III	**Indicators of Education System (10)**

• Define and explain the concept of indicator • Analyze the objectives, characteristics, and limitations of a good indicator • Explain the difference between quantitative Vs qualitative indicators • Explain input, process, output, and outcome indicators with example • Explain efficiency based indicator • Explain the difference between internal and external efficiency of the education system • Explain the indicators of the educational system of SSRP, SSDP, OECD Describe the concept of global citizenship education	3.1 Concept of indicator 3.2 Objectives, characteristics, and limitations of a good indicator 3.3 Quantitative vs. qualitative indicators 3.3.1 Input 3.3.2 Process 3.3.3 Output 3.3.4 Outcome indicator 3.4 Efficiency based indicator 3.5 Internal and external efficiency of the education system 3.6 Indicators of the education system 3.6.1 School sector reform plan (SSRP) 3.6.2 School sector development program (SSDP) 3.6.3 Organization for economic cooperation development (OECD) 3.6.4 Global citizenship education (GCE)
Unit: IV	**EMIS in the Context of Nepalese Education System (6)**
• Explain the system, process, and use of EMIS in TU • Explain the system, process & use of EMIS in DoE • Explain the system, process, and use of SMIS, CMIS, SMIS, CMIS, SKK Describe critical analysis of EMIS.	4.1 Process and use of EMIS in Tribhuvan University (TU) 4.2 Process and use of EMIS in the department of education (DoE) 4.3 Process and use of EMIS in school management information system (SMIS) 4.4 Community management information system (CMIS) 4.5 EMIS of Shichhak Kitab Khana (SKK) Critical analysis of EMIS
Unit: V	**Network for EMIS (8)**
• Explore the social network of Nepal • Analyze the use of the organizational network in Nepalese educational institution Explain the implication of electronic networks in schools	5.1 Social network 5.1.1 National daily newspaper 5.1.2 Education journals 5.1.3 Research paper 5.2 Organizational network 5.2.1 University Grants Commission (UCG) 5.2.2 Ministry Of Education, Science, and Technology (MoEST) 5.2.3 Council for Technical Education and Vocational Training (CTEVT) 5.2.4 National Center for Educational Development (NCED) 5.2.5 Research Centre for Educational Innovation and Development (CERID)

	5.2.6 Curriculum Development Centre (CDC) 5.2.7 Education Review Office (ERO) 5.3 Electronic network 5.3.1 Twitter, Facebook, YouTube 5.3.2 Internet

Note: The figures in the parenthesis indicate approximate hours allotted to each unit.

4. Instructional Techniques

A combination of general and specific techniques of instruction will be used to deliver the course. The general instructional techniques are applicable to all units, whereas specific instructional techniques are applicable to the particular unit.

4.1 General Instructional Techniques

- Multimedia projector
- Lecture
- Discussion
- Question-answer
- Seminar
- Issue-based discussion
- Project work
- Group study
- Critical review and observations
- Reviewing books, journals, and papers

4.2 Specific Instructional Techniques

To promote experiential learning in this course, following specific instructional techniques are recommended for selected units to ensure students' active participation in the teaching-learning process and make the teaching-learning research-oriented.

Units	**Instructional Techniques**
Unit I: Concepts of Management Information System (MIS)	The teacher can use lectures, initiating independent study, review books, journals, and papers
Unit II: Educational Management Information System (EMIS)	Form pairs of students to get the idea of EMIS by visiting school/collage
Unit III: Indicators of Education System	Find out the indicators of the education system being used by SSRP, SSDP, GCE,OECD
Unit IV: EMIS in the Context of the Nepalese Education System	Analyze EMIS in the context of the Nepalese Education System specially TU
Unit V: Network for EMIS	Visit the school and make a report on the use of the social and electronic networks for school effectiveness

5. Evaluation

5.1.Internal Evaluation - 40%

Internal evaluation will be based on the following criteria:

1. Class attendance	5 marks
2. Participation in learning activities	5 marks
3. First assignment (Paper writing and presentation)	10 marks
4. Second assignment/assessment (Mid- term test)	10 marks
5. Third assignment/assessment (Class test)	10 marks
Total	**40 Marks**

5.2.External Evaluation (Final Examination) - 60%

Examination Division, Office of the Dean, Faculty of Education, will conduct final examination at the end of the semester with a focus on the following types of questions:

Objective type questions (10 Multiple Choice Questions 10 x 1mark) 10 marks Short answer questions (6 questions with 2 Choice 6 x 5 marks) 30 marks

Long answer questions (2 questions with 1 Choice 2 x 10 marks) 20 marks

Total	**60 Marks**

6. Recommended Books and References

6.1 Recommended Books

Chapman, D. W. & Lars O. M. (1993). *From data to action: Information systems in educational planning.* Paris: Pergamon Press.

Chapman, D. W. Lars, O. M. (2010). *Improving educational quality through better use of information*. France: UNESCO/IIEP.

Goyal, D.P. (2007). *Management information system.* New Delhi: Macmillan India Ltd. Jawadekar (2008). *Management information system*. New Delhi: Tata MC Graw-Hill

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Joseph, K. B. (2013). *Beyond mapping III.* BASIS Press.

Laudon K .C., Laudon J. P. & Dass, R. (2010). *Management information system*. Delhi: PEARSON.

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Laudon, K.C. & Laudon, J.P. (nd). *Management information systems new approaches to organization and technology.* New Delhi: Prentice-Hall of India Pvt.

NCED (2063). *Teacher management information system TMIS*. Sanothimi: Author. OECD (2014). Education at a glance 2014: OECD indicators, publishing.

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Thapa, B. K. & others (2058). *Management information system and human resource management*. Kathmandu: Vidyarthi Pustak Bhandar.

The National Academies (2006). *Learning to think spatially.* USA:National Research Council.

UNESCO (2000). *Using indicators in planning basic education: Methodological aspects & technical tools modules* I-IV. Paris: Author.

UNESCO (2003). *Education management information system and the formulation of education for all. Plan for action, 2003-2015. Tajikistan: UNESCO Almaty Cluster Office and MoE.*

UNESCO (2006). *Data collection and education management information system.* Paris: Author.

Wako, T. N. (2003). *Educational management information system NESIS*. Paris: UNESCO. Windhan, D.M. (1998). *Indicators of educational effectiveness & efficiency*. New York: IIEP.

6.2 References

Baskerville, R. L. & Michale, D.M. (2000). Information system as a reference discipline. *MIS Quarterly*,26 (1) 20-32.

Kafle, B.D., Adhikari, N.P. &Thapa, T. B. (2069). *Human resource management in education*. Kirtipur: Sunlight Publication.

Orlikowski, W. J. & Jack, J.B. (1991). Studying information technology in organizations:

Ed. PM. 528: Educational Resource Management

Course No.: Ed.PM 528	Nature of course: Theoretical
Level: M. Ed	Credit hours: 3
Semester: Second	Teaching hours: 48

1.Course Description

Educational Resource Management course aims at providing students the general knowledge about the educational resource management. It intends to orient the students on the theoretical bases of human resources in particular and other educational resources in general, and their management by relating them to some established practices. Contents of the course primarily deal with the resources related to school education. Educational resource management, as an applied discipline, supports the effective and efficient implementation of the plans and programs. Therefore, this course encourages students to have a broader conceptual clarity about the importance of effective resource management to make education system efficient and thereby ensure equitable quality education.

2. General Objectives

The general objectives of this course are as follows:

- To make students familiar with the concepts, principles, philosophies, and different theories of the management and utilization of different resources in education.
- To help students understand the concept and principles of human resource management in general and in the context of education in particular.
- To enable students to explain the concept and principles of human resource recruitment.
- To acquaint the students with the teacher professional development practices.
- To familiarize the students with the educational resources and their utilization of these resources for teaching-learning purposes.

3. Specific objectives and contents

Specific Objective	Contents
• Identify the concept and objectives of education resource management • Analyze education as a supplier of human resources and field of education resource management in the education sector. • Explain how equity can be ensured in education resource management with reference to Nepal • Explain education resource management in Nepali schools and its implications for the school outcomes. • Explore and explain the concept of human resource development and its processes with reference to education in Nepal. • Explain the philosophy of education resource management • Outline of different education resource management theories • Explore the implication of different theories of education resource management	**Unit I: Education Resource Management, Philosophy, and Theories (14)** 1.1 Concept and objectives of education resource management 1.2 Education as a supplier of human resource 1.3 Education resource management in education 1.4 Education resource management in institutional schools and its implication in school outcomes in Nepal 1.5 Education resource management in community schools and its implications in the school outcomes in Nepal 1.6 Ensuring equity in education resource management (Concept/principle and Nepali practice) 1.7 The philosophy of education resource management 1.8 Social exchange theory 1.8.1 Building theory 1.8.2 Human capital theory: Organizational level and measuring human capital 1.9 Implication of theories in Education resource management

• Explain the relevance of Information Communication Technology (ICT) planning • State the education resource planning process • Explain education resource planning for education service delivery • Elaborate the educational Resource Development in Nepal • Explain the Job design and analysis • Explore the impact of job design on motivation, productivity, and quality of work-life • Explore the rights and discipline of education resource	**Unit II: Education Resource Planning and Development (5)** 2.1 Relevance of Information Communication Technology (ICT) planning 2.2 Education resource planning process 2.3 Education Resource Planning for education service delivery 2.4 Educational Resource Development in Nepal 2.5 Job design and analysis 2.6 Impact of job design on motivation, productivity, and quality of work-life 2. 7 Rights and discipline of education resource
• Explain the definitions, purposes, and importance of recruitment. • Analyze the recruitment policy and functions. • Outline the different steps of recruitment. • Identify the sources of human resource recruitment. • Define the concept of selection. • Describe the different selection processes and methods. • State the factors affecting the selection of human resources • Analyze the system of selection and appointment in Nepal. • Describe the placement and induction of human resources. • Analyze the socialization process in relation to human resources. • Explore the job analysis Describe the right and discipline of ER	**Unit III: Recruitment, Selection, and Appointment of Education Resources(10)** 3.1 Recruitment 3.1.1 Purpose and importance of recruitment 3.1.2 Recruitment policy 3.1.3 The recruitment function 3.1.4 Steps for recruitment 3.1.5 Sources of recruiting human resources 3.2 Selection 3.2.1 Selection process and method 3.2.3 Selection system in Nepal 3.3 Appointment system 3.3.1 Socialization process

• Define training and development. • Describe the critical functions, importance, types, and methods of training. • Analyze the systematic view of training. • Describe the ways of conducting a needs assessment. • Identify the critical elements related to the transfer of training. • Outline definitions and reasons for understanding career development. • Describe the importance of career development programs for special targets and pre-condition for career development. • State the need for continuing • Education and research for development.	**Unit IV: Training and Development (10)** 4.1 Training and development. 4.2 Importance, functions, types, and methods of training 4.3 A systemic view of training 4.4 Career programs for special target groups 4.5 Continuing education: research for development.
• Assess school's physical resources in general. • Explore linkage across physical resource management, learning environment, and curriculum. • Explain the contributions of physical facility management to quality learning environment. • Explore and explain how physical resources are managed and utilized in Nepali schools. • Identify different types of learning resources and their management for the purpose of teaching-learning • Explain how learning resource management can contribute to quality learning environment • Explain conceptual underpinnings of open learning resources and their contribution to teaching-learning • Explore and explain how learning resources are managed and utilized in schools in other countries and in Nepali schools. • Identify the resources available in the community and their capabilities to contribute to teaching-learning. • Explore and explain how different types of resources available in the community can be effectively	**Unit V: Management of Resources for Teaching Learning Purposes (9)** 5.1 School physical resources: 5.1.1 Identification and management of physical resources 5.1.2 Connection across physical resource management, learning environment, and local and national curriculum. 5.1.3 Physical resources management and their utilization in the Nepali school system 5.2 Learning resource management (LRM) for teaching-learning: 5.2.1 Identification and management of LRM 5.2.2 Open learning resources 5.2.3 Availability and utilization of LRM in the Nepali school system 5.3 Identification and management of community resources: 5.3.1 Economic, political, cultural (tangible and intangible indigenous knowledge and practices), and human resources available in the community and their use for teaching-learning purposes 5.3.2 Connecting the curriculum to the real world

utilized to enhance teaching-learning practices. • Explore and explain how community resources are utilized in Nepali schools for teaching-learning purposes.	5.3.3 Availability and utilization of community resources in the Nepali school system 5.4 The rise of intellectual capital and structural capital. 5.5 Contemporary human capital management: micro-foundations of human capital

4. Instructional Techniques: General as well specific instructional techniques have been suggested to deliver the contents in the classroom and to carry out experiential exercises. Here is a brief account of these techniques:

4.1 General Instructional Techniques

- Lecture
- Discussion
- Question-answer
- Project work
- Classroom discussion
- Group work

4.2 Specific Instructional Techniques

To promote experiential learning in this course, following specific instructional techniques are recommended for selected units to ensure students' active participation in the teaching-learning process and make the teaching-learning research-oriented.

Unit	Specific Instructional Technique
Unit-I: Education resource management, philosophy, and theories	• Lecture • Classroom discussion Pair group or individual assignment: ERM in either institutional or community schools of Nepal and its implication in school outcomes. Students will be divided into pairs. Those who want to undertake the assignment independently will be allowed to do so. Each pair or individual will investigate, prepare and present briefs in class followed by discussion and feedback from the teacher and peers. The teacher can use this as one of the assignments of internal assessment in order to grade students' performance. Students will search the resource materials in addition to what the teacher provides so that they can read them before preparing the paper for presentation in the class.

Unit-II: Education resource planning and development	• Lecture • Classroom discussion Groups of students will prepare a brief paper on the Education resource planning or right and discipline of human resources in Nepal. A Group of students will investigate, prepare and present their paper in the class followed by discussion and feedback from the teacher and peers. Students will search the resource materials from the library and the internet. A teacher needs to provide feedback before the paper presentation in the class.
Unit-III: Recruitment, selection, and appointment of education resources	• Lecture • Group work • Classroom discussion Individual assignment: Each student will prepare a brief paper on the ER recruitment and selection processes in Public Service Commission and Tribhuvan University Service Commission in general and Teacher Service Commission in particular. Each student will investigate, prepare and present her/his paper in the class followed by discussion and feedback input from the teacher and peers. The teacher can use this as one of the forms of internal assessment in order to grade Students' performance. Students will search the resource materials in addition to what the teacher provides so that they can read them before preparing the paper for Presentation in the class.
Unit-IV: Training and development	• Lecture • Discussion Pair group or individual assignment: Each pair or individual student will prepare a brief paper on the TPD system in Nepal. Each student will investigate, prepare and present her/his paper in the class followed by discussion and feedback from the teacher and peers. The teacher can use this as one of the assignments of internal assessment in order to grade students' performance. Students will search the resource materials in addition to what the teacher provides so that they can read them before preparing the paper for • Presentation in the class.

Unit-V: Management of resources for teaching-learning purposes	• Lecture • Discussion • Library study The individual student will prepare a brief paper on the resources for teaching in Nepal. Each student will investigate, prepare and present her/his paper in the class followed by discussion and feedback input from the teacher and peers. Students will search the resource materials in addition to what the teacher provides so that they can read them before preparing the paper for • Presentation in the class.

5.Evaluation

5.1 Internal Evaluation 40%

The concerned teacher will carry out the internal evaluation of the students based on the following criteria.

1.	Attendance	05 Marks
2.	Participation in learning	05 Marks
3.	First assignment/assessment	10 Marks
4.	Second assignment/assessment	10 Marks
5.	Third assessment	10 Marks
	Total	**40 Marks**

5.2 External Evaluation (Final Examination) 60%

Examination section, Dean's Office, Faculty of Educational will conduct final examination at the end of the semester. The number of items in each category of question and distribution of points to be included in the final examination paper are as follows:

1.	Objective type questions (10 Multiple choice questions x 1) Marks	10
2.	Short answer questions (5 questions with 2 choice x 6) Marks	30
3.	Long answer questions (2 questions with 1 choice x 10) Marks	20
	Total	**60Marks**

6. Recommended Books and References

6.1 Recommended Books

Agabi, C. (2010). Prudential approach to resource management in Nigerian education: A theoretical perspective. *International Journal of Scientific Research in Education*, 3(2), 94-106. Retrieved from: http://ijsre.com/Vol.,%203_2_-Agabi.pdf (Unit 5)

Bernardian, H. J. (2008).*Human Resource Management*. McGraw-Hill: New Delhi. (Unit 1,2,3 and 4)

Bevans, K. B., Fitzpatrick, LA., Sanchez, B. M., Rilley, A. W. & Forrest, C. (2010).Physical education resources, class management, and student physical activity levels: A structure-process-outcome approach to evaluating physical education effectiveness. *Journal of School Health*, 80(12), 553-580. (Unit 5)

Decenzo, D. A. and Robbins, S. P. (2012).*Human Resource Management*. Wiley: India. (Unit 1,2,3 and 4)

Department of Education and Children'sServices.(2004).*Choosing and using teaching and learning materials.Guidelines for preschools and schools*. The State of South Australia: Author. http://www.decd.sa.gov.au/policy/files/links/Choose_use_booklet_FA. pdf (Unit 5)

Department of Education South Africa (2000).*Lead & manage organizational systems, physical & financial resources*. http://www.education.gov.za/LinkClick.aspx?fileticket=SmwSxXIjQ5eg= (Unit 5)

Dessler, G. and Varkkey, B. (2009). *Human Resource Management*. Pearson: New Delhi. (Unit 1,2,3 and 4)

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Eisenhower Southwest Consortium for the Improvement of Mathematics and Science Teaching (1996).*Using community resources to enhance Mathematics and Science education*. http://www.sedl.org/pubs/classroom-compass/cc_v3n1.pdf

Northwest Regional Educational Laboratory (2005).*Classroom to Community and community partnerships and increase student achievement.* http://oregonpirc.org/webfm_send/19

Kowalski, T. J., Lasley II, T. J. & Mahoney, J. W. (2007). *Data driven decisions and school leadership*. Pearson.

Odden, A. R. (2011). *Strategic Management of Human Capital in Education: Improving Instructional Practice and Student Learning in Schools*. Routledge.

Rebore, R. W. (2014).*Human Resources Administration in Education* (10th Edition).Pearson. Tuomi, I. (2006). *Open Educational Resources: What they are and why do they matter*.

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Humanities and Social Sciences. *Literary and Linguistic Computing*, *2*(2), 108

Ed. PM. 529: Theory and Practices of Non Formal Education

Course No.: Ed. PM 529 Nature of course: Theoretical
Level: M.Ed. Credit hours: 3
Semester: Second Teaching hours: 48

1. Course Description

Theory and practices of Non-Formal Education (NFE) aim at orienting students with the conceptual basis and modes of education that do not necessarily subscribe to the traditional mainstream education. It intends to provide knowledge about the way NFE is approached in different settings. While doing so, students will be guided to the theoretical bases of different learning approaches. The course will also introduce the concept of lifelong learning and encourages students to gain a broader knowledge of the NFE to ensure equitable quality education for all, particularly for adults.

2.General Objectives

The general objectives of this course are as follows:

- To enable the students to explore indigenous practices of education
- To enable the students to explain different learning contexts and their significance in people's life.
- To make the students knowledgeable about the concepts and practices of NFE
- To help the students understand and explain the link between different modes of education
- To familiarize the students with NFE as practiced in Nepal and other countries.
- To enable the students to gain knowledge about NFE and lifelong learning and their contributions to the country's education development.

3. Specific Objectives and contents

Specific Objective	Contents
• Explore the indigenous education practices • Explain how education is fragmented into different streams and how they converse with and complement each other. • Explore and understand different streams of learning as embedded in indigenous education practices. • Explain the significance of different streams of learning.	**Unit I: Human Learning Contexts (8)** 1.1 Genealogy of NFE education 1.1.1 Madarasa 1.1.2 Gurukul 1.1.3 Gumba/ Monastery 1.2 Streaming of learning situations (Formal education 1.3 NFE, informal/ incidental education). 1.3.1 Significance of different learning situations in life. 1.3.2 Interaction among different streams of Education
• Explain the application of different perspectives in NFE	**Unit II: Conceptual Premises of NFE (5)**

	2.1 NFE informed by different perspectives 2.1 Critical 2.2 Structural functional 2.3 Modernism 2.4 2.4Post- modernism
• Explain different modalities of NFE linking them with the corresponding conceptual premises and the philosophers who advocated those modalities. • Explain the ways that different modalities of NFE contribute to social change keeping in view the relevant conceptual foundations.	**Unit III: NFE Modalities, and Social Change (8)** 3.1 NFE modalities 3.1.1 Conscientization 3.1.2 Sarvodaya 3.1.3 Rural and human resource development 3.1.4 Folk Schools 3.1.5 Community development 3.2.Expectations and changes brought by different modalities 3.3. Linking Nepali genealogical practices of NFE with conceptual premises and NFE modalities.
• Explain how the boundary of NFE has expanded over the years. • Explain the development of the concept and practice of NFE in Nepal. • Map out the link between formal, NFE, and informal education through equivalency certificates; standardized tests; flexible formal educational institutes, and bridge courses • Compare the NFE program of Nepal with that of the selected Asian countries. • Explain the issues and challenges often faced by NFE programs.	**Unit IV: NFE Approaches and Experiences (12)** 4.1 Expansion of NFE 4.1.1 Adult literacy 4.1.2 Alternative education programs 4.1.3 Open and distance learning 4.1.4 Community education 4.1.5 Open education resource with special reference to Nepal. 4.2 Historical Development of the practices of NFE in Nepal 4.2.1 Content, pedagogy, management/organization, delivery mode, etc. 4.2.2 Oral learning and its institutionalization process .2.3 Skill training and its cultural institutionalization 4.3 Bridges and ladders: Equivalency program 4.4NFE in some Asian countries: Afghanistan, Bangladesh, China, India, Sri Lanka, Pakistan. 4.5 Issues and challenges in NFE

• Explain different conceptual modalities of literacy • Identify benefits of literacy Explain the concept, practices, and importance of life-long learning (LLL) • Explain the role of literacy in LLL • Explain the role of LLL in a country's comprehensive education system • Explore the potential of literacy and LLL through ICT.	**Unit V: Literacy and Lifelong Learning (LLL) (15)** 5.1 Evolution of LLL, Concept, and practices 5.2 Understanding literacy 5.2.1 Integrated 5.2.2 Isolated 5.2.3 Autonomous 5.2.4 Ideological 5.3 Benefits of literacy 5.3.1Human 5.3.2 Political 5.3.3 Cultural 5.3.4 Social 5.3.5 Economic 5.4 Family literacy: What and why 5.5 Literacy as a foundation for LLL 5.6 LLL practices around the world- developing countries and developed countries. 5.7 Potential of literacy and life-long learning through ICT 5.8 Ways to create lifelong learning for Nepal

Note: The figures in the parenthesis indicate approximate hours allotted to each unit.

4. **Instructional Techniques**: General as well specific instructional techniques have been suggested to deliver the contents in the classroom and to carry out experiential exercises. Here is a brief account of these techniques:

4.1 General Instructional Techniques

- Lecture
- Discussion
- Question-answer
- Project work

4.2 Specific Instructional Techniques

To promote experiential learning in this course, following specific instructional techniques are recommended for selected units to ensure students' active participation in the teaching-learning process and make the teaching-learning research-oriented.

Units	Specific Instructional Techniques
Unit I: Human learning context	Students will be divided into groups and certain sub-topic will be assigned to them. Each group will prepare and present in the class. The presentation will be supported by the teacher's comments.

Unit II: Conceptual premises of NFE	Students will be divided into groups and certain sub-topic will be assigned to them. Each group will present in the class. The presentation will be supported by the teacher's comments.
Unit III: NFE Modalities and social change	Divide the students into different groups, ask them to review the related literature and present it in class. The class presentation will be followed by the teacher's feedback and comments.
Unit IV: NFE approaches and experiences	Divide the students into different groups and send them to visit different communities to observe the NFE approaches and perceived experience of the participant. They prepare a brief report and present it in class. The presentation will be supplemented by the teacher's comment.
Unit V: Literacy and lifelong learning	The sub-topic of the unit is divided into different groups. Students will prepare the presentation notes on the given topics. The notes will be presented in the class followed by discussion and feedback.

5. Evaluation

5.1 Internal Evaluation 40%

The concerned teacher will carry out the internal evaluation of the students based on the following criteria.

1. Attendance	05 Marks
2. Participation in learning	05 Marks
3. First assignment/assessment	10 Marks
4. Second assignment/assessment	10 Marks
5. Third assessment	10 Marks
Total	**40 Marks**

5.2 External Evaluation (Final Examination) 60%

Examination section, Dean's Office, Faculty of Educational will conduct the final examination at the end of the semester. The number of items in each category of question and the distribution of points to be included in the final examination paper is as follows:

1. Objective type questions (10 Multiple choice questions x 1) Marks	10
2. Short answer questions (6 questions with 2 choice x 5) Marks	30
3 Long answer questions (2 questions with 1 choice x 10) Marks	20
Total	**60 Marks**

6. Recommended Books and References

6.1 Recommended Books

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आचार्य, सुशन, ढकाल, हेमराज,निरौला, बोधराज,दाहाल, दत्तात्रय र कोइराला, चपला (२०६९) । *अनौपचारिक शिक्षा सिद्धान्त र अभ्यास* । काठमा डां सनलाइट् पब्लिसर्स

ICT

ICT. Ed. 525: Advanced Database Management System

Course No. : ICT. Ed 525 | Nature of course: Theoretical + Practical
Level: M.Ed. | Credit Hour: 3(2T+1P)
Semester: Second | Teaching Hour: 64(32+32)

1. Course Description

This course includes advanced concept of database system. The main topics covered are advanced concept of relational data model, extended E-R model, new database management technologies, query optimization, NoSQL database and big data processing techniques.

2.General Objective of the Course:

The overall objectives of this course are to:

- Develop the knowledge and understanding of advanced concepts in Relational Database Management System.
- Enable students to apply query processing and optimization strategy with reference to relational database systems.
- Develop the understanding of distributed and object-oriented systems.
- Enable students to apply concepts of advanced database systems and applications in multimedia database and web search.

3. Course Outlines:

Specific Objectives	Contents	Teaching Hours
• Describe ER model. • Discuss EER model • Review Relation model • Demonstrate ER to relational mapping • Apply ER and relational model in creating ER diagram and DB schema	**Unit 1: Enhanced ER and Relational Model** 1.1 Entity Relationship Model Revised; Subclasses, Superclasses and Inheritance; Specialization and Generalization; Constraints and characteristics of Specialization and Generalization; Union Types; Aggregation; 1.2 Relational Model Revised; Converting ER and EER Model to Relational Model **Practical Work** • Creating ER diagrams. • Converting ER model into Relational Model • Creating DB schema.	**7T + 3P**

• Discuss basic SQL • Demonstrate natural join • Demonstrate nested queries. • Describe integrity constraints and stored procedure. • Discuss indices. • Demonstrate skills for Cartesian product, Natural Join, Nested Queries, Integrity Constraints, Stored Procedures, and Indices.	**Unit 2: Advanced SQL** 2.1 SQL Revised: DDL, and DML Statements**,** Basic structure of SQL, Pattern Matching, Aggregate Functions, Order by, group by, Cartesian Product. 2.2 Advanced SQL:Natural Join, Outer Join, Inner Queries: Set Comparison, Set Membership, Except. Integrity Constraints: Domain Constraints, Referential integrity, Assertion, Triggers, Stored Procedures, 2.4 Indexes: Categories Indices, Performance Measures, Dense and Sparse. **Practical Works:** 2.3 Demonstrate Cartesian Product, Natural Join, Nested Queries, Integrity Constraints, Stored Procedures, and Indices.	**4T+ 10P**
• Discuss query processing concepts and steps. • Exemplify heuristic and cost-based query optimization.	**Unit 3: Query Processing and Optimization** 3.1 Query Processing: Introduction, steps of query processing, parse tree. 3.2 Query Optimization: Query Trees, Heuristics for Query Optimization, Heuristic Rules, heuristic optimization algorithm, Examples of heuristic query optimization, Cost-Based Optimization, Cost Components, Examples of cost based query optimization.	**4T+6P**
• Describe concept of DDB. • Demonstrate data fragmentation. • Discuss OODB systems. • Demonstrate type constructors. • Demonstrate ODL and OQL	**Unit 4: Distributed and Object-Oriented Database Systems** 4.1 Distributed Database Concepts and Advantages; Data Fragmentation, Replication and Allocation Techniques for Distributed Database Design; Types of Distributed Database Systems; Distributed Database Architectures. 4.2 Concept of OODB, Object Identity, Objects and Literal, Complex type structures, Concept of object definition language (ODL) and object query language (OQL). **Practical Works:** • Storing objects using DB4. • Retrieving objects Updating and deleting objects.	**7T + 3P**

• Discuss concept of NO SQL and big data • Demonstrate and exemplify XML and XSLT.	**Unit 5: NO SQL, Big Data and XML** 5.1 Introduction to NOSQL Systems; The CAP Theorem; Document-based, Key-value Stores, Column-based, and Graph-based Systems. 5.2 Big Data: Concept of Bigdata, Concept of MapReduce, HDFS, Concept of Hadoop. 5.3 XML: Introduction, Syntax rules, Elements and Attributes, Concept of DTD, XML Schema, and XSLT. **Practical Works:** • Demonstrate NO SQL using MongoDB • Demonstrate XML, and XSLT	**6T + 6P**
• Discuss concept of advanced database models • Introduce IR and web search systems.	**Unit 6: Advanced Database Models and Systems** 5.4 Active Database Concepts; Temporal Database Concepts; Spatial Database Concepts. 5.5 Multimedia Database Concepts; Deductive Database Concepts; Introduction to Information Retrieval and Web Search. **Practical Works:** • Demonstrate Active and Multimedia database	**6T + 2P**

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. First group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to specific units.

4.1. General Techniques

- Providing the reading materials to the students to familiarize the units.
- Lecture, question-answer, discussion, brainstorming, practical, and buzz session.

4.2. Specific Instructional Techniques

Unit	Activity and instructional techniques	Teaching Hours (64)
1 to 6	Lecture, Discussion, Practical	

Note: ***Specific Instructional Techniques may or may not require for each of the units mentioned in course outline.***

5. Evaluation

5.1 Evaluation (Internal Assessment and External Assessment):

Nature of course	Internal Assessment	External Practical Exam/Viva	Semester Examination	Total Marks
Theory	40%	20%	40%	100%

***Note**: Students must pass separately in internal assessment, external practical exam / viva and or semester examination.*

5.2 Evaluation for Part I (Theory)

A. Internal Evaluation 40%

Internal evaluation will be conducted by course teacher based on following activities:

1) Attendance	5 points
2) Participation in learning activities	5 points
3) First assessment (written assignment)	10 points
4) Second assessment (Term examination)	10 points
5) Third assessment (Internal Practical Exam/Case Study)	10 points
Total	**40 points**

B. External Evaluation (Final Examination) 40%

Examination Division, office of the Dean, Faculty of Education will conduct final examination at the end of the semester as follows.

1) Objective type question (Multiple choice 10questions x1mark)	10 marks
2) Short answer questions (6 questions with 2 OR x 5 marks)	30 marks
Total	**40 marks**

5.3 External Evaluation for practical portion (20%)

Practical portion of the course will be examined by the external examiner

Practical Examination Evaluation Scheme

i)	Record book	6
ii)	Laboratory work exam/Case	9
iii)	VIVA.....	5
	Total	**20**

6. Recommended books and reading materials (including relevant published articles in national and international journals)

Elmasri and Navathe, Fundamentals of Database Systems, Pearson Education.

Raghu Ramakrishnan, Johannes Gehrke, Database Management Systems,

McGraw-Hill Korth, Silberchatz, Sudarshan, Database System Concepts, McGraw-Hill.

Reference materials

Peter Rob and Coronel, Database Systems, Design, Implementation and Management, Thomson Learning.

C. J. Date & Longman, Introduction to Database Systems, Pearson Education Tiwari, Shashank and Safari, professional Nosql, O'Reilly Media Company.

Gunarathne, Thilina Hadoop MapReduce v2 Cookbook: Explore the Hadoop MapReduce v2. Ecosystem to Gain Insights from very Large Datasets, 2nd Edition, PACKT Publishing.

ICT. Ed. 526: Network Security
Course No. : ICT. Ed 526 Nature of course: Theoretical +Practical
Level: M.Ed. Credit Hour: 3 (2+1)
Semester: Second Teaching Hour: 64 (32+32)

1. Course Description

This course covers the fundamental concepts of information security, network security protocols, wireless security concepts, basics of security in cloud and IoT. This course informs the students with the fundamental understanding of every facet of information security, from the basics to advanced cryptography, authentication, secure web, email services and emerging best practices with security standards.

2. General Objectives

The general objectives of this course are as follows:

- Develop an understanding of information and network security and representative applications.
- Enable students to apply the user authentication in system through password, token, remote and two factor authentication techniques.
- Enable students to apply the user authentication through password, token, remote and two factor authentication techniques.
- Demonstrate skills for application of the access control using MAC, DAC, role based and identity-based methods.
- Enhance capacity of the students to analyze the security risk and security audit methods in information system.
- Demonstrate the network security protocols in different access level.
- Enhance students' understandings on the wireless, cloud and IoT based security threat and counter measures.

3. Course Outlines:

Specific Objectives	Contents	Teaching Hours
• Discuss the role and functionality of security and attacks • Discuss different types of security services and standards. • Explain the security policy and strategy	**Unit I: Overview of Information Security** 1.1 Computer Security, Information Security, Network Security 1.2 Threats, Attacks and Assets 1.3 Security Requirements 1.4 Security Design Principles 1.5 Attack Surfaces and Attack Trees 1.6 Computer and Information Security Strategy 1.7 Security Policy and Mechanisms	**5T+2P**
• Clarify the concept of user authentication principles And practices.	**Unit II: User Authentication** 2.1 User Authentication Principles 2.2 Password-Based Authentication	**4T+5P**

• Apply the password based, token based, biometric authentication • Demonstrate the asymmetric and Symmetric encryption based remote authentication.	2.3 Token-Based Authentication 2.4 Biometric Authentication 2.5 Remote User Authentication 2.6 Remote User-Authentication Principles 2.7 Remote User-Authentication Using Symmetric Encryption 2.8 Remote User-Authentication Using Asymmetric Encryption 2.9 Two Factor Authentication 2.10Kerberos	
• Analyse the Access control principles • Demonstrate the MAC, DAC and role based access control. • Explore the access management practices	**Unit III: Access Control** 3.1.Access Control Principles 3.2.Subjects, Objects and Access Rights 3.3.Access Control Matrix and Capability Lists 3.4.Discretionary Access Control 3.5.Role Based Access Control 3.6.Attribute Based Access Control 3.7.Identity, Credential and Access Management	**4T+5P**
• Discuss the risk assessment and incident • Discuss the security audit and architecture • Demonstrate the information security audit.	**Unit IV: Security Risk Analysis and Auditing** 4.1 Risk Assessment and Analysis 4.2 Incident Response Plan 4.3 Security Audit 4.4 Security Auditing Architecture 4.5 Security Audit Trail 4.6 Implementing Logging Function 4.7 Audit Trail Analysis	**5T+4P**
• Discuss the different • network securities and their • Implications. • Demonstrate Secuiry • Standards • Apply the web security • Protocols. • Apply the email security • Protocols. • Apply the IP security • protocols.	**Unit V: Network Security Protocols** 5.1 Securing the Computer Network 5.2 Forms of Protection Computer Network 5.3 Security Standards 5.4 Web Security 5.5 Secured Electronic Transactions (SET) 5.6 Transport Layer Security (TLS) 5.7 Email Security: Pretty Good Privacy (PGP), DNSSEC, DNS-Based Authentication of Named Entities, Sender Policy Framework, Domain Keys Identified Mail, Domain-Based Message Authentication, Reporting, and Conformance 5.8 IP Security: IP Security Policy, Authentication Header, Encapsulating Security Payload, Security Associations, Internet Key Exchange	**7T+8P**
• Explore the wireless security protocols.	**Unit VI: Wireless, Cloud and IoT Security**	**7T+8P**

• Explore the cloud security protocols and practices. • Discuss the IoT security practices and standards.	6.1 Wireless Security 6.2 Mobile Device Security 6.3 IEEE 802.11 Wireless LAN Overview 6.4 IEEE 802.11i Wireless LAN Security 6.5 Cloud Computing 6.7 Cloud Security Concepts 6.8 Cloud Security Approaches 6.9 Cloud Security as a Service 6.10 Internet of Things (IoT) 6.11 IoT Security Concepts	

The practical aspect will focus on the uses and applications of information and networksecurity software.

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. First group consists ofgeneral instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to specific units.

4.1 General Techniques

- Providing the reading materials to the students to familiarize the units.
- Lecture, question-answer, discussion, brainstorming, practical, and buzz session.

4.2 Specific Instructional Techniques

1. Evaluation (Internal Assessment and External Assessment):

Nature of course	Internal Assessment	External Practical Exam/Viva	Semester Examination	Total Marks
Theory	40%	20%	40%	100%

***Note**: Students must pass separately in internal assessment, external practical exam / viva and orsemester examination.*

2. External Evaluation (Final Examination) 40%

Examination Division, office of the Dean, Faculty of Education will conduct final examination at the end of the semester as follows.

3) Objective type question (Multiple choice 10questions x1mark) 10 marks
4) Short answer questions (6 questions with 2 OR x 5 marks) 30 marks

Total 40 marks

3. External Evaluation for practical portion (20%)

Practical portion of the course will be examined by the external examiner

Practical Examination Evaluation Scheme

iv)	Record book	6
v)	Laboratory work exam/Case	9
vi)	VIVA	5
	Total	**20**

Recommended books and reading materials (including relevant published articles in national and international journals)

Recommended Books:

1. William Stallings, Cryptography and Network Security: Principles and Practice, 8th Edition, Pearson, 2020
2. William Stallings and Lawrie Brown, Computer Security: Principles and Practice, Pearson
3. Joseph Migga Kizza, Computer Network Security Fundamentals, 5thEdition, Springer, 2020
4. William Stallings, Network Security Essentials: Applications and Standards, 6th Edition, Pearson, 2017
5. Matt Bishop, Introduction to Computer Security, Addison Wesley
6. Matt Bishop, Computer Security, Art and Science, Addison Wesley
7. Sarhan M. Musa, Network Security and Cryptography: A Self-Teaching Introduction, Mercury Learning and Information LLC, 2018
8. Mark Stamp, Information Security: Principles and Practices, Wiley
9. Charles P. Pfleeger and Shari Lawrence Pfleeger, Security in Computing, Pearson

ICT. Ed. 528: Software Engineering

Course No. : ICT Ed 528 Nature of course: Theoretical + Practical

Level: M.Ed. Credit Hour: 3 (2+1)

Semester: Second Teaching Hour: 64 (32+32)

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1. Course Description

In this course, the students will gain a broad understanding of software engineering as a discipline and become familiar with the software quality assurance and its application to the development and management of software systems. The course will introduce the students to the different software process models, software requirements engineering process, systems analysis and design as a problem-solving activity, key elements of analysis and design, testing and support within the system development life cycle.

2. General Objective of the Course:

The general objectives of this course are as follows:

- Explore the importance of the software development process and software engineering;
- Define the software requirement and formulation in a structure
- Design and develop correct and robust software products.
- Determine the software quality facture and work on to ensure the software quality assurance
- Apply the different level of software testing and test case;

3. Course Outlines:

Specific Objectives	Contents	Hours
• Discuss software development model and development life cycle • Explore best software development model to development process • Compare different	**Unit 1 : Software Engineering and Software Process Model** 1.1 Software Engineering and Software Process 1.2 Software Engineering Practices and Principle	**6T+4P**

process model in software development	1.3 Interactive Waterfall Development Model 1.4 Rapid Application Development Model 1.5 Unified Process Model 1.6 Agile Process 1.7 Scrum, XP, Kanban Framework **Practical Work/Case study** • Demonstrate the plan to software development model in RUP, RAD, 1.5 Scrum, XP and Kanban	
• Discuss user needs for the system requirement • Define and specify the business requirements pertaining to software development • Prepare the documentation of system requirement SRS format	**Unit 2: Requirement Engineering Process** 2.1 Requirement Engineering 2.2 System Requirements Specification (SRS): functional and non-functional requirement 2.3 Requirement modeling: scenario based, class based, function based and behavior-based modeling 2.4 Requirements validation and auditing **Practical Work/Case study** • Develop the SRS report for real-life Software using IEEE standards.	**8T+4P**
• Discuss the basic concept of object-oriented software design Demonstrate object oriented diagram use of UML • Handling the CASE for software design and implementation	**Unit 3: UML diagram** **3.1** Unified Model Language **3.2** Use Case Diagram **3.3** Use Case Diagram 3.4 Activity and State Machine Diagram 3.5 Class and Object Diagram 3.6 Sequence and Collaboration Diagram 3.7 Component Diagram 3.8 Deployment Diagram **Practical Work/Case study** • Design and Draw UML diagram for a real-life software including use case, activity diagram, state diagram, class	**10P**

	diagram, sequence diagram, • Collaboration diagram, component diagram, deployment diagram.	
• Understand software design principle • Develop the design structure of architecture, data structure, interface and procedures • Develop the MSA and SOA architecture patterns	**Unit 4 : Software Design** 4.1 Software Design Concept 4.2 Design Model 4.3 Software Architecture style and Design 4.4 Component Level Design 4.5 Database Design 4.6 User Experience Design 4.7 Pattern Based Design 4.8 Web Apps Design 4.9 Micro services Architecture 4.10 Service Oriented Architecture 4.11 Cloud services base design **Practical Work/Case study** • Prepare the design diagram for architecture design, database design, interface design for one specific software using CASE tools • Demonstrate a Micro Services software architecture using CASE tools.	**8T+8P**
• Define the factors of quality and software • Explore the SQA practices in software development • Explain the concept of six sigma • Explain the concept of ISO 900 and quality standards	**Unit 5: Software Quality Assurance** 5.1 Software quality and factors 5.2 Software quality assurance 5.3 SQA tasks, goals, and metrics 5.4 Statistical software quality assurance and Six Sigma 5.5 The ISO 9000 quality standards **Practical Work/Case study** • Prepare SQA plan using ISO and Six Sigma standards.	**6T+2P**
• Define software testing strategies	**Unit 6: Software Testing and Quality Assurance**	**6T+4P**

• Implement the different software testing methods • Use different tools and techniques for software testing	.1 Software testing strategies .2 Verification and validation .3 White box and Black box testing approach and types .4 Unit Testing, integration, regression and system testing .5 Alpha, Beta, Stress, Smoke testing .6 Review techniques .7 Testing tools **Practical Work/Case study** • Prepare test case for unit testing and system testing. • Execute the unit testing, system testing, performance testing, load balanced testing using testing tools.	

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. First group consists of general instructional techniques that are applicable to all the units. The second group consists of specific instructional techniques applicable to specific units.

4.1 General Techniques

- Providing the reading materials to the students to familiarize the units.
- Lecture, question-answer, discussion, brainstorming, practical, and buzz session.

4.2 Specific Instructional Techniques

Unit	Activity and instructional techniques	Teaching Hours (32)

V	Use MS Visio or any other UML CASE Tools and design software using diagram, use testing software.	

Note: *Specific Instructional Techniques may or may not require for each of the units mentioned in course outline.*

5. Evaluation

5.1. Evaluation (Internal Assessment and External Assessment):

Nature of course	Internal Assessment	External Practical Exam/Viva	Semester Examination	Total Marks
Theory	40%	20%	40%	100%

***Note**: Students must pass separately in internal assessment, external practical exam / viva and or semester examination.*

5.2 Evaluation for Theory Part

5.1.1. Internal Evaluation 40%

Internal evaluation will be conducted by course teacher based on following activities:

6) Attendance 5 points
7) Participation in learning activities 5 points
8) First assessment (written assignment) 10 points
9) Second assessment (Term examination) 10 points
10) Third assessment (Internal Practical Exam/Case Study) 10 points

Total **40 points**

5.2 External Evaluation (Final Examination) 40%

Examination Division, office of the Dean, Faculty of Education will conduct final examination at the end of semester.

5) Objective type question (Multiple choice 10questionsx1mark) 10 marks
6) Short answer questions (6 questions with 2 OR x 5 marks) 30 marks

Total **40 marks**

5.1 External Practical Exam/Viva (20 Points):

Practical portion of the course will be examined by the external examiner

Practical Examination Evaluation Scheme

i)	Record book	6
ii)	Laboratory work exam/Case	9
iii)	VIVA	5
	Total	**20**

6. Recommended books and reading materials (including relevant published articles in national and international journals)

Pressman, R. S., & Maxim, B. R. (2020). Software engineering: A practitioner's approach (Ninth edition). McGraw-Hill Education.

Sommerville, I. (2016). *Software engineering* (10. ed., global ed). Pear

7. Reference materials

Sommerville, I. (2021). *Engineering software products: An introduction to modern software engineering* (Global edition). Pearson.

Galin, D. (2017). *Software quality: Concepts and practice*. John Wiley & Sons, IEEE Press.

Mahfuz, A. S. (2016). *Software quality assurance: Integrating testing, security, and audit*. CRC Press, Taylor & Francis Group.

Bruegge, B. (2010). *Object-oriented software engineering: using UML, patterns, and Java* (3rd ed.). Boston: Prentice Hall.

Jalote, P. (2005). *An integrated approach to software engineering* (3rd ed.). New York: Springer.

ICT. Ed. 524: Advanced Web Technology
Course No. : ICT. Ed 524 Nature of course: Theoretical + Practical
Level: M.Ed. Credit Hour: 3
hours (2T+1P) Semester: Second Teaching Hour: 64 hours
(32+32)

1. Introduction:

This course aims at enhancing students' knowledge and skills on how to use web technologies (PHP, MySQL, JavaScript, CSS, HTML5, jQuery, AJAX, React) together with practical skills to build a fully functional dynamic website suitable for both desktop and mobile browsers.

2. Course Objectives:

After the completion of this course, the students should be able to:

- Enable students to make use of PHP, MySQL, JavaScript, HTML and CSS together or in isolation
- Enhance students' capacity to manage session and cookies
- Make students able to demonstrate skills required to create dynamic PHP web pages that fit themselves to the audience

3. Course Outlines:

Specific Objectives	Contents	Teaching Hours
• Introduce different web technologies including HTTP/HTML PHP, MySQL, Java Script, CSS, web server, open sources etc.	Unit 1: Introduction to Dynamic Web Content 1.1. HTTP and HTML: Berners-Lee's Basics 1.2. The Request/Response Procedure 1.3. The Benefits of PHP, MySQL, JavaScript, CSS, and HTML5 1.4. MariaDB: The MySQL Clone 1.5. Using PHP 1.6. Using MySQL 1.7. Using JavaScript 1.8. Using CSS 1.9. HTML5 1.10. The Apache Web Server 1.11. Handling Mobile Devices 1.12. Open Source	**2T +2P**

• Describe PHP language. • Write PHP within HTML. • Demonstrate sills to make use of PHP Functions. • Demonstrate File Handling in PHP • Demonstrate a GUIS components	Unit 2: Introduction to PHP 2.1. Incorporating PHP Within HTML 2.2. Expressions and Control Flow in PHP 2.3. PHP Functions and Objects 2.4. PHP Arrays 2.5. File Handling : Read and Write CSV File 2.6. Date and Time Functions	**4T+ 4P**
• Design and develop Database in MySQL. • Demonstrate CRUD Operation.	Unit 3: Accessing MySQL Using PHP 3.1. Querying a MySQL Database with PHP 7.1 Perform CRUD operations Preventing Hacking Attempts	**3T+3P**
• Build Web Forms with HTML5 Enhancements. • Demonstrate submission and retrieval of data using PHP.	Unit 4: Form Handling 4.1. Building Forms 4.2. Retrieving Submitted Data 4.3.HTML5 Enhancements: The autocomplete Attribute, The autofocus 4.4.Attribute, The placeholder Attribute, The required Attribute, Override 4.5.Attributes, The width and height Attributes, The min and max 4.6. Attributes, The step Attribute, The form Attribute, The list Attribute, The color Input Type, The number and range, Input Types, Date and Time Pickers	**3T+3P**
• Apply cookies and session variables. • Demonstrate user Authentication in web.	Unit 5: Cookies, Sessions, and Authentication 5.1. Using Cookies in PHP: Setting a Cookie, Accessing a Cookie, Destroying a Cookie 5.2. HTTP Authentication: Storing Usernames and Passwords Using Sessions: Starting a Session, Ending a Session, Setting a Timeout, Session Security	**3T+3P**
• Explain the DOM and make use of it. Demonstrate different write methods. • Validate Form Input using Javascript and PHP.	Unit 6: Exploring JavaScript 6.1. The Document Object Model 6.2. Using the DOM 6.3. Using console.log 6.4. Using alert 6.5. Writing into Elements	**5T+5P**

	6.6. Using document.write 6.7. Expressions and Control Flow in JavaScript 6.8. JavaScript Functions, Objects, and Arrays 6.9. Validating User Input with JavaScript 6.10. Validating User Input with PHP 6.11. Redisplaying a Form After PHP Validation	
• Explain Asynchronous Communication • Demonstrate a XML Http Request • Demonstrate a XML Requests	Unit 7: Using Asynchronous Communication 7.1. Asynchronous Communication 7.2. Using XML Http Request 7.3. Writing Asynchronous Program 7.4. Using GET Instead of POST Sending XML Requests	**3T+3P**
• Apply the CSS Selectors to design web pages • Describe the CSS Box Model and use it. • Demonstrate the different CSS Properties.	Unit 8: Introduction to CSS 8.1. CSS Selectors 8.2. CSS Properties: Fonts and Typography, Managing Text Styles, CSS Colors and opacity, Positioning Elements, Pseudo classes, The Box Model, Box-sizing property, Box Shadows, Transformations, Web Fonts, Transitions 8.3. Accessing CSS from JavaScript	**4T+4P**
• Describe the use of JQuery & React • Write basic syntax of JQuery & React. • Demonstrate the JQuery usage. • Demonstrate the use of React	Unit 9: Introduction to JQuery and React 9.1. JQuery Syntax 9.2. Handling Events: Event Functions and Properties 9.3. Special Effects 9.4. Manipulating the DOM: DOM Traversal 9.5. Introduction to JQuery Mobile: Including JQuery Mobile, Linking Pages 9.6. Introduction to React 9.7. Accessing the React Files 9.8. React State and Life Cycle 9.9. Events in React 9.10. Handling Forms	**5T+5P**

	9.11. Creating React Native Apps	

- **Instructional Techniques**

The instructional techniques for this course are divided into two groups. First group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to particular units.

4.1 General Techniques

Reading materials will be provided to students in each unit. Lecture, discussion, use of multi-media projector, brain storming are used in all units.

4.2 Specific Instructional Techniques

Demonstration is an essential instructional technique for all units in this course during teaching learning process. Specifically, demonstration with practical works will be specific instructional technique in this course. The details of the suggested instructional techniques are presented below:

Laboratory Work: Students need to create a fully functional dynamic website which reflect all the core technologies studied in this course.

5. Evaluation :

Internal Assessment	**External Practical Exam/Viva**	**Semester Examination**	**Total Marks**
40 Points	20 Points	40 Points	100 Points

***Note**: Students must pass separately in internal assessment, external practical exam and semester examination.*

5.2 Internal Evaluation (40 Points):

Internal evaluation will be conducted by subject teacher based on following criteria:

11)	Class Attendance	5 points
12)	Learning activities and class performance	5 points
13)	First assignment (written assignment)	10 points
14)	Second assignment (Case Study/project work with presentation)	10 points
15)	Terminal Examination	10 Points
	Total	**40 points**

5.3 Semester Examination (40 Points)

Examination Division, Dean office will conduct final examination at the end of semester.

7)	Objective question (Multiple choice 10 questions x 1mark)	10 Points
8)	Subjective answer questions (6 questions with 2 OR x 5 marks)	30 Points
	Total	**40 points**

5.4 External Practical Exam/Viva (20 Points):

Practical portion of the course will be examined by the external examiner

Practical Examination Evaluation Scheme

i)	Record book	6
ii)	Laboratory work exam/Case…	9
iii)	VIVA	5
	Total	**20**

7. Recommended books and References

Recommended books:

Nixon R., Learning PHP, MySQL & JavaScript_ A Step-by-Step Guide to Creating Dynamic Websites, O'Reilly Media (2021)

Scott A.D., MacDonald M. & Powers S., JavaScript Cookbook - Programming the Web, O'Reilly Media (2021)

Minnick J. & Friedrichsen L., Web Design with HTML & CSS3 Comprehensive-Course Technology (2016)

Tatroe K. & Macintyre P., Programming PHP: Creating Dynamic Web Pages, O′Reilly (2020)

SNE

SN. Ed. 525: Education for Children with Visual Impairment

Course No:	SN. Ed. 525	Nature of course: Theoretical
Level:	M.Ed.	Credit Hours: 3
Semester:	Second	Teaching Hours: 48

1. Course Description

This course deals with the conceptual and practical aspects concerning with vision, visual impairment and education of children with visual impairment. The course delves into the anatomy and physiology of human eye, process of vision, and the historical review of education of children with visual impairment. Furthermore, it comprises concepts, characteristics, prevalence, types and causes of visual impairment. It also deals with the adaptation of curriculum and environment for children with visual impairment, association of visual impairment with other impairments and educational placement of children with visual impairment.

2. General Objectives

The general objectives of the course are as below:

- To acquaint the students with the anatomical and physiological aspects of human eye, process of vision and the educational history of children with visual impairment
- To develop students' knowledge and perspectives regarding concepts, characteristics, prevalence, types and causes of visual impairment
- To provide students with the ways of adapting aids, devices and curriculum for children with visual impairment
- To develop the students' knowledge about the association of visual impairment with other impairments.
- To familiarize the students with educational placement of children with visual impairment along with its effects on the child

3. Specific objectives and contents

Specific Objectives	Contents
• Identify the anatomical and physiological aspects of human eye • Explain the visioning process Review the history of education of children with visual impairment	**Unit 1: Human Eye and Vision (8)** 1.1 Anatomical and Physiological Aspects of Human Eye 1.2 Process of Vision 1.2.1 Accommodation 1.2.2 Visual Acuity and Its Maturation 1.2.3 Refraction and Refractive Error 1.2.4 Visual Screening 1.3 Historical Aspects of Visual Impairment 1.4 The Stages of Rejection, Liability,

	Protection, Integration and Inclusion
• Clarify the concept and definition of visual impairment State the prevalence of people with visual impairment • Explain the characteristics of visual impairment • Describe the types and causes of visual impairment	**Unit 2: Concepts, Characteristics and Types of Visual Impairment (10)** 2.1 Concept and Definition of Visual Impairment 2.2 Prevalence 2.3 Characteristics 2.3.1 Cognition and Language 2.3.2 Motor Development and Mobility 2.3.3 Social Adjustment and Interaction 2.3.4 Types and Causes of Visual Impairments
• Elucidate adaptations of curriculum, aids and devices for students with visual impairment • Explore ways to adapt aids and devices for students with visual impairment and low vision • Explain the concept of expanded core curriculum for students with visual impairment and low vision Identify ways to expand core curriculum for students with visual impairment and low vision	**Unit 3: Aids, Devices, and Curriculum Adaptation (12)** 3.1 Aids and Devices for Visual Impairment 3.1.1 Use of Braille and Technical Aids 3.1.2 Tactile Aids and Manipulations 3.1.3 Technological Aids for Reading Print 3.1.4 Computer Assisted Learning 3.2 Aids and Devices for Students with Low Vision 3.2.1 Optical Devices 3.2.2 Reading Print 3.2.3 Classroom Adaptations 3.2.4 Computer Assisted Learning 3.3 Expanded Core Curriculum 3.3.1 Orientation and Mobility 3.3.2 Listening Skills 3.3.3 Functional Life Skills
• Discuss the meaning of deaf-blindness • State definition, historical aspects, cause and impacts of visual impairment • Explain multisensory impairment and multiple disabilities in connection with visual impairment Explain visual impairment with other impairments: cerebral palsy, intellectual disability and learning disability	**Unit 4: Visual Impairment with Other Impairments (9)** 4.1 Understanding Deaf-blindness 4.1.1Definition, History, Causes, and Impact 4.2. Multisensory Impairment and Multiple Disabilities 4.3 Visual Impairment and Cerebral Palsy 4.4 Visual Impairment and Intellectual Disability 4.5 Visual Impairment and Learning Difficulties
• Describe the ways of enhancing education of children with visual impairment	**Unit V: Educational Placement and Effects of Visual Impairment (9)** 5.1. Education of Children with Visual

• List out the placement options for children with visual impairment • Explain the effects of visual impairment on children	Impairment 5.1.1. Development of School 5.1.2. Development of Services 5.2 Educational Placement 5.2.1 Inclusive Classroom 5.2.2 Residential Schools 5.2.3 Itinerant Teacher Service 5.2.4 Effects of Visual Impairment on the Child

Note: *The figures in the parentheses indicate the approximate teaching hours for the respective units.*

4. **Instructional Techniques**: Two types of instructional techniques are suggested: general and specific to deliver the contents in the classroom. A brief account of these techniques are suggested as follows:

4.1 General Instructional Techniques

Depending on the nature of the class, subject to be taught, individual differences of the students, and type of evaluation to be used to assess the achievements of the students, the following instructional techniques will be applied solely or combined.

- Lecture,
- Discussion,
- Question-answer,
- Brain storming
- Group work and group presentation

4.2 Specific Instructional Techniques

The following specific instructional techniques are suggested for selected units to ensure students' active participation in teaching-learning process and make the teaching-learning research-oriented.

Units	Specific Instructional Techniques
Unit 1	**Community-Based Activity** Students will visit an Eye Hospital for observing eye-check-up activities. The prepare and present observational report in the classroom followed by the teacher's feedback.
Unit II	**Classroom Presentation** The sub-topics of this unit are divided in different groups. Students will prepare the presentation notes on the given topics. The notes will be presented in the class followed by discussion and feedback.

Unit III	**Case Study** Students will visit integrated schools and they will be asked to develop cases of children with visual impairment. The cases should include how the students are accommodated in the integrated setting. Presentation of the cases will be made in the classroom followed by discussion and feedback.
Unit IV	**Individual Study** Students will explore ways to relate visual impairment with other impairment. Students will visit library and consult materials both electronic and printed. Based on the consultation they will prepare a brief report and present in the classroom.
Unit V	**Group Activity** Students in groups will visit residential school for observing the existing facilities and identifying their needs. They will identify the gaps that exist between the facilities and the needs. They will prepare a brief report for presentation. The presentation will be followed by discussion and supplemented by teacher's comments.

- **Evaluation**

Two types of assessment techniques, namely internal and external, will be carried out to appraise the academic achievement of students under this course. Internal and external assessment procedures will carry 40 and 60 percent weight correspondingly. Detail description of assessment procedures will be as follows:

5.1 Internal Assessment 40%

The concerned teacher will carry out the internal assessment of the students based on the distribution of marks as stated below:

- Attendance 05 marks
- Participation in learning 05 marks
- First assessment (Literature review and presentation) 10 marks
- Second assessment (School visit and report submission) 10 marks
- Third assessment (Written examination) 10 marks

Total **40 marks**

5.2 Semester/Final Examination 60**%**

Examination Division, Dean's Office, Faculty of Education will conduct semester/final examination at the end of each semester. The distribution of marks for the types of questions to be asked in final examination is as follows:

Objective type questions (10 Multiple choice items x 1 mark)	10 Marks
Short answer questions (6 questions with 2 "or" questions x 5 marks)	30 Marks
Long answer questions (2 questions with 1 or question x 10 marks)	20 Marks
Total	**60 Marks**

- **Recommended Books Reference Materials**

6.1 Recommended Books.

Jan. James E.,Freeman, R. D., & Scott. E. P. (1977). *Visual impairment in children and adolescents.* New York: San Francisco: Grune & Stratton, Inc.

6.2 Reference Materials

Heward, W. L. (2013). *Exceptional Children: An introduction to special education* (10th eds.). Boston:Pearson

Sense International (2017). *Handbook on curriculum adaptation for inclusive education of students with deaf blindness*. New Delhi: Author.

SN. Ed. 526: Education for the Deaf and Hard of Hearing

Course No:	SN. Ed. 526	Nature of course: Theoretical
Level:	M.Ed.	Credit Hours: 3
Semester:	Second	Teaching Hours: 48

1.Course Description

The main intention of this course is to provide in-depth understanding of theories and practices of educating the deaf and hard of hearing students. This course provides an opportunity to develop basic research skills in the field of deaf education. The course also provides an evidence-based approach to find ways and measures to help address the diverse needs of deaf children. It engages students to conduct brief case studies and field studies regarding the education of the deaf and hard of hearing children.

2. General Objectives

The general objectives of this course are as follows:

- To make the students knowledgeable about the basic concepts of education for the deaf and hard of hearing
- To enable the students to be conversant with social and emotional adjustment in deaf and hard of hearing children
- To analyze the students with interpersonal relations of deaf and hard of hearing children with their families
- To apply knowledge of students on manual communication and technological supports to deaf and hard of hearing children
- To implement intervention strategies and educational considerations of deaf and hard of hearing students in schools

3. Specific Objectives and Contents

Specific Objectives	Contents
• Define deafness and hard of hearing • Identify the characteristics and prevalence of deafness • Identify the causes and prevention of deafness • Identify and assess deafness and hard of hearing • Explain the anatomy and physiology of human ear and hearing	**Unit 1: Deafness and Hard of Hearing (8)** 1.1 Introduction to Deafness and Hard of Hearing 1.1.1 Definitions, Characteristics 1.1.2 Prevalence and Causes 1.1.3 Assessment and Prevention 1.2 Anatomy and Physiology of Human Ear and Hearing
• Explain cognitive functioning in a deaf child focusing on metacognitive theory • Elucidate social-emotional adjustment in deafness.	**Unit 2: Cognitive Functioning and Adjustment (8)** 3.1 Deafness and Cognitive Functioning 3.1.1 Attention and perception 3.1.2. Visual imagery and visual cognition 3.1.3. Memory: working memory, semantic memory and mental lexicon 3.1.4. Strategic utilization of knowledge 3.1.5. Metacognitive ability and deafness 3.2 Deafness and social-emotional adjustment

• Discuss the relation of a deaf child with family • Analyze the impact of having a deaf child in a family • Suggest parents for their deaf child's entry into the formal school setting • Explain the ways of satisfactory growth and development of a deaf child.	**Unit 3: Families with Deaf Children: Inter-personal Relations (8)** 2.1 Family and deaf child interactions 2.2 Relation of deaf child with family 2.3 Impact of a deaf child in a family 2.4 Entrance into the formal educational settings 2.5 Facilitation for satisfactory growth and development
• Identify the communication options for children with deaf and hard of hearing, deaf blindness • State the types of manual communication • Describe the concept of sign language with reference to NSL and ESL • Illustrate the use of AAC and total communication • Discuss the issues and challenges in teaching and using sign language in Nepal • Explain technological supports in teaching children with deaf and hard of hearing.	**Unit 4: Sign Language, Manual Communication and Technological Support(12)** 4.1 Communication Options for children with deaf and hard of hearing, deaf-blindness 4.1.1 Models and types of communication for persons with deaf-blindness 4.1.2 Fostering communication of students with deaf-blindness 4.2 Manual communications 4.2.1 Sign languages: Nepali Sign Language (NSL) and English Sign Language (ESL) 4.2.2Augmentative and Alternative Communication (AAC) 4.3 Total communication 4.4 Issues and challenges in teaching and using sign language in Nepal 4.5 Technological support 4.3.1 Amplification: loop, infrared, and FM system 4.3.2 Supplementation: cochlear implants
• Explain appropriate early intervention strategies in terms with audiology, career and transition education, communication and functional skills development for children with deaf and hard of hearing. • Explicate educational approaches to deafness	**Unit 5: Interventions Strategies and Educational Considerations (12)** 5.1 Intervention strategies 5.1.1 Early Intervention Strategies 5.1.2 Audiological services • Understanding hearing loss • Environmental management • Amplification management 5.1.3 Career and transition education • Career exploration and planning • Work skills/ job seeking skills • Money management skills 5.1.4 Communication • Auditory skills development • Nepali sign language development • Speech development • Receptive and expressive

	Communication 5.1.5 Functional skills for educational success • Concept development • Comprehension • Organizational skills

Note: The figures in the parentheses indicate approximate hours allotted to each unit.

4. **Instructional techniques**: Two types of instructional techniques are suggested: general and specific to deliver the contents in the classroom. A brief account of these techniques is stated below:

4.1 General instructional techniques

The following general instructional techniques will be used.

- Presentation using multimedia
- Group work
- Peer work
- Group discussion
- Brain storming

4.2 Specific instructional techniques

Specific instructional techniques are suggested for selected units to ensure students' active participation in teaching-learning process and to involve research-oriented activities in the teaching-learning.

Units	Specific Instructional Techniques
Unit I	**Presentation by Resource Persons** Invite professionals or para-professionals as resource person: doctor, sign language interpreter, parents of the child with deaf and hard of hearing, deaf students having higher education
Unit II	**Home Visit** Organize a short visit to a deaf child's parents and let students interact on the given topic according to the course. Prepare and present the report after visit.
Unit III	**Round Table Discussion** Organize a round table discussion in class and let every student participate in the discussion on cognitive functioning and social-emotional adjustment of children with deaf and hard of hearing. Help students draw conclusions from the discussion.
Unit IV	**School Visit** Organize a visit to a deaf school and let students observe the communication in the classroom. Prepare the report after class observation.
Unit V	**School Visit** Arrange a visit to deaf special school and an integrated school with resource class for deaf and hard of hearing. Divide students in different groups as per the situation of the classroom. Let them observe classroom activities in the reference of active learning in different subjects.

Note: Specific instructional techniques mentioned above are suggestive activities.

Teachers can use appropriate instructional of their own.

5.Evaluation

Two types of assessment techniques, namely internal and external, will be carried out to appraise the academic achievement of students under this course. Internal and external assessment procedures will carry 40 and 60 percent weight correspondingly. Detail description of assessment procedures will be as follows:

5.1 Internal Assessment 40%

The concerned teacher will carry out the internal assessment of the students based on the distribution of marks as stated below:

- Attendance 05 marks
- Participation in learning 05 marks
- First assessment (Literature review and presentation) 10 marks
- Second assessment (School visit and report submission) 10 marks
- Third assessment (Written examination) 10 marks

Total **40 marks**

5.2 Semester/Final Examination 60%

Examination Division, Dean's Office, Faculty of Education will conduct semester/final examination at the end of each semester. The distribution of marks for the types of questions to be asked in final examination is as follows:

- Objective type questions (10 Multiple choice items x 1 mark) 10 marks
- Short answer questions (6 questions with 2 "or" questions x 5 marks) 30 marks
- Long answer questions (2 questions with 1 "o"r question x 10 marks) 20 marks

Total **60 marks**

6. Recommended Books and Reference Materials

Knight, P.A. &Swanwick, R.A. (1999). The care and education of a deaf: A book for the parents (Parents' and Teachers Guides). USA: Multilingual Matters Ltd.

Iowa Department of Education Bureau (2013). The Expanded Core Curriculum For Students Who Are Deaf or Hard of Hearing. Revised January 2013

Macschark M., Harry, G.L. & John, A.A. (2002). Educating Deaf Students: From research to practice. Oxford: Oxford University Press.

Marschark, M. (1997). Raising and educating a deaf child.Oxford:Oxford University Press.

Moores, D.F. (2001). Educating the Deaf: Psychology, principles and practices. New York: Gallaudet University

Swanwick, R. (1998). Issues in deaf education. USA: The University of Michigan.

SN. Ed. 527: Assessment of Students with Special Needs

Course No: SN. Ed. 527 | Nature of course: Theoretical

Level: M. Ed. | Credit Hours: 3

Semester: Second | Teaching Hours: 48

1. Course Description

This is an introductory course on assessment principles and practices related to students with special needs (SN) and special needs education (SNE). The main purpose of the course is to develop students' general conceptual knowledge, skills, and practices of assessment for children with special needs, including those with different types of disabilities. Assessment is essential to effective teaching and instructional planning. Therefore, emphasis is given on administration and interpretation of assessment test results from appropriate instruments applied in assessing children with and without disabilities. Further, it deals with the content areas as assessment of intelligence and IQ, language and speech, behavioral, perceptual, cognitive and sensory processing disorders.

2. General Objectives

The general objectives of the course are stated below:

- To develop deeper understanding about the concepts, principles and practices of assessment process in special needs education
- To assess the intellectual abilities of children in relation to verbal and non-verbal tests
- To enable students with the skills of administering, analyzing and interpreting assessment results regarding speech-language impairment,
- Assessment of processing disorders and different disorders relate to learning

3. Specific Objectives and Contents

Specific Objectives	**Contents**
● Describe concepts, purpose and types of assessment ● List out key principles and practices of assessment in relation to children with SNE ● Discuss different models of assessment ● Illustrate measures for assessing children's academic achievement ● Explain Wechsler Individual Achievement Test-3rd Edi.(WIAT-III) to measure academic performance of children with SNE ● Identify the issues on assessment of children with SNE	**Unit I: Assessment of Children with SNE (12)** 1.1 Concepts, purpose and types 1.2 Principles and practices of assessment 1.3 Models of assessment 1.3.1 Traditional model 1..3.2 Contemporary model 1.4 Assessing children's academic achievement 1.4.1 Assessments of reading, written language, mathematics 1.5 Wechsler Individual Achievement Test (WIAT-III) 1.6 Issues on assessment of children with SNE in Nepal

• Outline the features of IQ tests • Explain verbal and nonverbal tests of intelligence • Explore key ideas in interpreting intelligence test results • Describe the implication of IQ results regarding Children with SNE • Clarify the concept of Wechsler Intelligence Scale for Children	**Unit II: Intellectual Evaluations of Children (8)** 2.1 Measuring Intelligence 2.2 Verbal and Nonverbal Tests of Intelligence 2.3 Tests of intelligence quotient (IQ) and interpreting results 2.4 Implication of IQ results for SNE Children 2.5 Wechsler Intelligence Scale for Children (WISC-R-IV)
• Assess speech disorders of children with SNE including articulation/phonology, stuttering and voice disorders • Explain receptive and expressive language impairments • Prepare and use vocabulary tests • Identify pragmatic and social language impairments • Use *the Test of Language Development-Primary* to measure language development in speech and language impaired children	**Unit III: Assessment of Speech and Language Impairments (10)** 3.1 Assessing speech disorders 3.1.1 Articulation/phonology 3.1.2 Stuttering 3.1.3 Voice quality 3.2 Assessment of language impairments 3.2.1 Receptive language 3.2.2 Expressive language 3.2.3 Vocabulary Test 3.2.4 Pragmatics and social language 3.2.5 Test of Language Development-Primary (TOLD-P. 2)
• Explain procedures for assessing auditory and visual processing disorders. • Use *the Test of Visual Perceptual Skills (TVPS)* for children with SNE • Use of Test for auditory perceptual skills	**Unit IV: Assessment of Processing Disorders (10)** 4.1 Assessment of auditory processing disorders 4.2 Assessment of visual processing disorders 4.3 Assessment of sensory processing disorders 4.4 Test of Visual Perceptual Skills (TVPS) 4.5 Test of Auditory Perceptual Skills
• Identify major characteristics and measures of LD, EBD, ADHD and FBA • Explain procedures of assessing LD, EBD, ADHD • Differentiate adaptive and functional behavior for assessments • Use Kaufman Assessment Battery to measure cognitive performance of children with LD, EBD and ADHD	**Unit V: Assessment of Different Disorders Related to Learning (8)** 5.1 Characteristics, measures and assessment of Learning Disabilities (LD) 5.2 Characteristics, measures and assessment of Emotional and Behavior Disorders (EBD) 5.3 Characteristics, measures and assessment of Attention-Deficit Hyperactivity Disorders (ADHD) 5.4 Adaptive and Functional Behavior Assessments (FBA) 5.5 Kaufman Assessment Battery for Children- Revised 4th Edi.(K-ABC-R-IV)

Note: *The figures in the parenthesis indicate the approximate teaching hours for the respective units.*

4. Instructional techniques

Two types of instructional techniques are suggested: general and specific to deliver the contents in the classroom. A brief account of these techniques is presented below:

4.1 General instructional techniques

Depending on the nature of the class, subject to be taught, individual differences of the students, and type of evaluation to be used to assess the achievements of the students, the following instructional techniques will be applied solely or combined.

- lecture,
- discussion,
- question-answer,
- brain storming
- Group work and group presentation

4.2 Specific instructional techniques

For this course, following specific instructional techniques are suggested for selected units to ensure students' active participation in teaching-learning process and make the teaching-learning research-oriented.

Units	**Specific Instructional Techniques**
Unit I: Assessment of students with special needs	**Field work** Students work in groups and arrange a visit to District Assessment Center. Students will collect information on the existing assessment systems in relation to the student's academic performance and achievement. Prepare and present a report followed by discussion and feedback.
Unit II**:** Intellectual Evaluations and IQ Testing	**Presentation by Resource Person** Invite a resource person/professional/paraprofessional to present basic procedures applied in measuring and assessing IQ of children with special needs. Make students work in group or individually to calculate mental age (MA) and chronological age (CA) in relation to testing intelligence (IQ) by following the procedures presented by the resource person.

Unit III	Students will visit special school / resource room class / inclusive classroom setting to explore student's assessment practice specially in language and speech impairment area.They will prepare a brief case study report and present in the class followed by discussion and teacher's feedback
Unit IV	Students will visit the assessment centers of the some rewoned government or private hospitals and collect the basic information regarding the existing practice of assessment of sensory disorder.
Unit V: Assessment of Different Disorders	**Case Study** Divide the class into groups of students to observe and assess students with challenging behavior. Arrange a visit to school for this purpose. The groups of students will prepare and present their case reports followed by discussion and feedback.

5. Evaluation

Two types of assessment techniques, namely internal and external, will be carried out to appraise the academic achievement of students under this course. Internal and external assessment procedures will carry 40 and 60 percent weight correspondingly. Detail description of assessment procedures will be as follows:

5.1 Internal Assessment 40%

The concerned teacher will carry out the internal assessment of the students based on the distribution of marks as stated below:

- Attendance 05 marks
- Participation in learning 05 marks
- First assessment (Literature review and presentation) 10 marks
- Second assessment (School visit and report submission) 10 marks
- Third assessment (Written examination) 10 marks

Total **40 marks**

5.2 Semester/Final Examination 60%

Examination Division, Dean's Office, Faculty of Education will conduct semester/final examination at the end of each semester. The distribution of marks for the types of questions to be asked in final examination is as follows:

- Objective type questions (10 Multiple choice items x 1 mark) 10 marks
- Short answer questions (6 questions with 2 "or" questions x 5 marks) 30 marks
- Long answer questions (2 questions with 1 "or" question x 10 marks) 20 marks

Total **60 marks**

6. Recommended Books and Reference Materials

Melissa L. F., Pamela D. W., & Peter W. D. (2014). Wrightslaw: All about tests and assessments(For all units)

Overton, T. (2012). *Assessing Learners with Special Needs: An Applied Approach (7th ed.)* Boston Columbus, OH: Pearson (For all units)

Pierangelo, R. & Giuliani, G. (2008). *Understanding assessment in the special education process:*

SN. Ed. 528: Theories and Practices of Behavior Modification
Course No.: SN.Ed.528 Nature of course: Theoretical
Level: M. Ed. Credit Hours: 3
Semester: Second Teaching Hours: 48

1. Course Description

The course is about theoretical concepts and practical measures that are applicable to children with emotional and behavioral difficulties which are often termed as emotional and behavioral disorder. Behavior modification is necessary to manage the challenging behavior and increase the prevalence of desired behavior that may often take a course of time. The course, therefore, revolves around the conceptual frame of behavior management in order to modify it toward the accepted one with some practices that have worked well over the years.

2. General Objectives

The general objectives of the course are as follows below:

- To provide the students with a deeper understanding of the conceptual frame that addresses the issue of behavior management toward the modification of the expected behavior.
- To prepare the students to make an investigation into characteristic behaviors of persons with emotional and behavioral difficulties.
- To enable the students to manage the disruptive behavior of persons with behavioral difficulties.
- To develop skills to apply reinforcement techniques to augment the desired behavior.
- To prepare the students to make an enquiry into the theories and practical measures of behavior management for modification of behavior.

3. Specific Objectives and Contents

Specific Objectives	Contents
• Explain the concept of general and legal behavior and behavior modification • Clarify the concept of emotional, behavioral and conduct disorders • Identify the characteristics of EBD Assess the prevalence and causes of EBD	**Unit I: Introduction to Behavior Management (8)** 1.1 Key concept of behavior modification 1.2 Concept of emotional, behavioral and conduct disorders 1.3 Characteristics of emotional and behavioral disorder (EBD) 1.3.1 Externalizing and internalizing behavior 1.3.2 Academic achievement 1.3.3 Intelligence

	1.3.4 Social skills and interpersonal relationships 1.3.5 Juvenile delinquency 1.4 Causes of EBD: 1.4.1 Biological and environmental factors **1.4.2** A complex pathway of risk
• Explain psychodynamic and social learning theories • Describe behavioral approaches and biophysical explanations • Illustrate the ecological and sociological model as applied to • behavior modification	**Unit II: Theories of Behavior (10)** 2.1 Psychodynamic theory 2.2 Social learning theory 2.3 Behavioral approaches 2.4 Biophysical explanations The ecological and sociological model
• Elaborate principles of behavior management • Explain principles of cognitive behavior and its assessment methods • Apply Cognitive-behavior modification techniques	**Unit III: Principle of Behavior Management and Modification (10)** 3.1 Principles of behavior management 3.1.1 Principles of decreasing disruptive behavior and increasing desired behavior 3.1.2 Schedules of reinforcement 3.1.3 Stimulus control and response 3.2 Principles of cognitive behavior modification 3.2.1 Cognitive behavior and its assessment methods 3.2.2 Cognitive-behavior modification techniques
• Explain curricular considerations • State direct instruction • Illustrate environmental accommodations • State token economies • List out behavioral contracts • Explore group-contingencies • Apply positive reinforcement technique to behavior modification	**Unit IV: Behavior Management and Modification Techniques (10)** 4.1 Curricular considerations 4.2 Direct instruction 4.3 Environmental accommodations 4.4 Token cconomies 4.5 Behavioral contracts 4.6 Group-oriented contingencies 4.7 Application of positive reinforcement
• Identify the types and limitations of punishment • Assess the undesirable effects of punishment • Explain Self-management perspectives to modify behavior	**Unit V: Punishment and Self-Management (10)** 5.1 Types and limitations of punishment • Undesirable side-effects of punishment 5.2 Self-Management perspectives: • Self-monitoring • Self-evaluation • Self-reinforcement

Note: The figures in parentheses indicate approximate teaching hours allotted to respective units.

Note: The figures in parentheses indicate approximate teaching hours allotted to respective units.

4. Instructional Techniques:

General and specific instructional are suggested to transact the course in the classroom. What follows is a brief account of these techniques:

4.1 General instructional techniques

Depending on the nature of the class, subject to be taught, individual differences of the students, and type of evaluation to be used to assess the achievements of the students, the following instructional techniques will be applied solely or combined.

- Lecture,
- Discussion,
- Question-answer,
- Brain storming
- Group work and group presentation

4.2 Specific instructional techniques

Specific instructional techniques intend to ensure students' active participation in teaching-learning process by making it research-oriented. Following specific instructional techniques are suggested to use for selected units of the course.

Units	**Specific Instructional Techniques**
Unit I	Students will work in groups for literature review and case study is given to the students in group. They will prepare the power point presentation material and share it with each other to make the content more meaningful.
Unit II	Teacher will present the lesson using power point presentation method. Students are supplied with simple examples to ensure their active participation and greater understanding. Question answer method will be used in appropriate contents areas of the teacher's presentation.
Unit III	Students will perform literature review from the relevant books or through internet. They will summarize it and do presentation in the class.

Unit IV	**Brainstorming and Group-work** A brief brain storming session on positive reinforcement techniques will be carried out in the class before asking the students to work in groups about the application of these techniques. Group work on how to apply positive reinforcement techniques to behavior modification will be presented in the class supplemented by comments and suggestions from the teacher.
Unit V	**Case Study** Cases of selected students from integrated schools will be presented with reference to Punishment and Self-Management**.** Students in groups will be asked to develop cases of children who have suffered from punishment by making a quick visit to integrated schools. Their presentation will be supplied with feedback on how to avoid punishment to move toward self-management of the disruptive behavior.

5. Evaluation

Two types of assessment techniques, namely internal and external, will be carried out to appraise the academic achievement of students under this course. Internal and external assessment procedures will carry 40 and 60 percent weight correspondingly. Detail description of assessment procedures will be as follows:

5.1 Internal Assessment 40%

The concerned teacher will carry out the internal assessment of the students based on the distribution of marks as stated below:

- Attendance 5 marks
- Participation in learning 5 marks
- First assessment (Literature review and presentation) 10 marks
- Second assessment (School visit and report submission) 10 marks
- Third assessment (Written examination) 10 marks

Total **40 marks**

5.2 Semester/Final Examination 60%

Examination Division, Dean's Office, Faculty of Education will conduct semester/final examination at the end of each semester. The distribution of marks for the types of questions to be asked in final examination is as follows:

- Objective type questions (10 Multiple choice items x 1 mark) 10 marks
- Short answer questions (6 questions with 2 "or" questions x 5 marks) 30 marks
- Long answer questions (2 questions with 1 "or" question x 10 marks) 20 marks

Total **60 marks**

6. Recommended Books and Reference Materials

Maag, J. W. (2004). Behavior management: From Theoretical implications to practical applications (2nd Ed.). Australia. Canada. Mexico. Singapore. Spain. United Kingdom. United States: Thomson Wadworth.

William, L.H. (2012). Exceptional Children: An Introduction to Special Education (10th ed.). New Delhi: Pearson.

Biology Education

Bio. Ed. 525 T : Functional Plant Biology

Course No.	**: Bio. Ed. 525 T**	**Nature of course: Theoretical**
Level	: M. Ed. in Biology	**Credit hours: 2**
Semester	**: Second**	**Teaching hours: 32** **Period per week: 2**

1. Course Description

This course aims to give advanced knowledge on **Plant Pathology**, **Physiology** and **Molecular Biology.** It deals with the detailed knowledge on the effects and physiology of microorganisms on plants and some important plant diseases. It also deals with the nutrition and growth-related physiological responses in plants. The next important feature of the course is to impart the students with the concepts on biochemical nature of next nucleic acids.

2. General Objectives

The general objectives of this course are as follows:

- To acquaint the students with the effects and physiology of microorganisms in plants.
- To provide advanced knowledge in some important plant diseases with respect to their causal organisms, harmful effects and modes of transmission.
- To familiarize them with some important life processes of plants.
- To provide them with detailed knowledge of the growth related physiological responses in plants.
- To enhance knowledge on the biochemical nature and structure of DNA and RNA molecules along with protein synthesis.

3. Specific Objectives and Contents

Specific objectives	**Contents**
Unit I. Plant Pathology (10)	

● Classify plant diseases on the basis of causal organisms. ● Describe the mechanism of pathogen action. ● Discuss the important modes of entry of the parasites into the host. ● Explain the structural defence mechanism in plants. ● Explain physiological or biochemical defence mechanism of plants against diseases.	1.2. Plant diseases classification 1.3. Symptoms (viral, bacterial and fungal diseases) 1.4. Mechanisms of pathogen action 1.5. Mechanism of infection 1.6. Path of infection 1.7. Defence mechanismsin Plants 1.8. Structural defence (Pre-infection and post infection stages) 1.9. Physiological or biochemical 1.10. Defence (Pre-infection and post infection stages)
● Explain the meaning and importance of plant disease management. ● Explain different methods developed for plant disease control (Exclusion of parasites, Eradication of parasites, Improvedcultural practices, biological control, Direct protection, Specific control measures).	1.11.Principles of plant disease control 1.12.Introduction 1.13.Different methods for plant disease control 1.14.Exclusion of parasites 1.15.Eradication of parasites 1.16.Improved cultural practices 1.17.Biological control 1.18.Direct protection 1.19.Use of fungicides, fumigants, antibiotics growth regulators, systemic fungicides Breeding for disease resistance, breeding program 1.20.Specific control measures 1.21.Control of Nematodes 1.22.Control of Viruses
● Explain the causal organisms, symptoms and control measures of some important soil and seed borne fungal diseases.	1.23. Soil and seed borne fungal diseases (Downy mildew of crucifers, early blight of potato, brown spot disease of rice)
Unit. II. Plant Physiology (10)	
● Explain the meaning of autotrophic nutrition. ● Describe the structure and functions of chloroplast. ● Describe the structure and functions of photosynthetic pigments- chlorophyll, carotenoids and phycobilins. ● Explain the characteristics of radiant energy and its role in photosynthesis. ● Describe the importance of Photosynthesis ● Explain the meaning of growth in living organisms.	1.24.Nutrition (Autotrophic nutrition) 1.25.Photosynthesis 1.26.Photosynthetic apparatus 1.27.Chloroplast (structure and function) 1.28.Photosynthetic pigments (chlorophyll, carotenoids, phycobilin) 1.29.Radiant energy 1.30.Importance of photosynthesis (Reduction of global warming, carbon sequestration, carbon trading etc.)

● Explain the meaning, causes and methods of breaking the seed dormancy. ● Explain the physiology of seed germination. ● Explain the meaning and mechanism of photoperiodism. ● Explain the meaning and significance of vernalization. ● Describe plant stresses and adaptation in drought heat and cold stress	1.31. Growth in the flowering plants 1.32. Seed dormancy (introduction, causes and breaking of Seed dormancy) 1.33. Seed germination (Physiology) 1.34. Photoperiodism (Introduction and mechanism) 1.35. Vernalization (Introduction and significance) 1.36. Stress physiology 1.37. Drought stress 1.38. Temperature stress (Heat and cold stress) 1.39. Salt stress
Unit III. Molecular Biology (12)	
• Describe the structure and replication of DNA. • Explain the structure and functions of different types of RNA molecules (rRNA, mRNA and tRNA). • Describe the general features of genetic code. • Discuss protein synthesis machinery. • Describe the steps in protein synthesis • (Transcription and Translation).	2.1. DNA molecule 2.2. Structure 2.3. Replication 2.4. RNA and its types (rRNA, mRNA and tRNA) 2.5. Genetic Code 2.6. Properties 2.7. Deciphering of genetic code 2.8. Protein synthesis 2.9. Protein synthesis machinery (Amino acids, DNA, ribosome and enzymes) 2.10. Steps in protein synthesis 2.11. Transcription (Initiation, Elongation, Termination) 2.12. Translation (Activation of amino acid, Attachment of activated amino acid to tRNA, Initiation of protein synthesis, Elongation and Termination of polypeptide chain)

Note: *The figures in the parenthesis indicate the approximate teaching hours for the respective units.*

4.Instructional Techniques

The instructional techniques are divided into two groups. The first group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to the specific units.

Units	General instructional techniques	Specific instructional techniques
1. Plant Pathology	Lecture and discussion methods; Inquiry method, power point presentation, Internet search,	• Project work will be given to prepare the report on the general symptoms of fungal, bacterial and viral diseases in plants. • Preparation of report on defense mechanism of plants against fungal infection in plants. • Project work on control measures adopted to control plant diseases in • Agricultural crops of some locality.
2.Plant Physiology	Lecture and discussion methods; Inquiry method, power point presentation, Field visit.	• Project work will be given to prepare the charts of chloroplast. • Project work on seed germination tests of seeds of some recommended varieties of crops and submission of the report.
3.Molecular Biology	Lecture and discussion methods; Inquiry method, Collaborative method, Internet search, power point presentation	• Preparation charts for DNA, Genetic Code.

5.Evaluation

5.1 Evaluation (Internal Assessment and External Examination)

Nature of course	Internal Assessment	Semester Examination	Total Marks
Theory	25 Marks	40 Marks	65 Marks

***Note**: Students must pass separately in internal assessment and semester examination.*

5.2 Internal Evaluation **25 Marks**

Internal evaluation will be conducted by course teacher based on following activities:

1.	Attendance and participation in learning activities	5 Marks
2.	First assignment (written assignment)	5 Marks
3.	Second assignment (report writing and presentation)	5 Marks
4.	Third assignment/ Term exam	10 Marks
	Total	25 Marks

Note: *First assignment/assessment might be book review /article review, quiz, home assignment etc. according to nature of course. Second assignment/assessment might be project work, case study, seminar, survey/field study and individual/group report writing, term paper based on secondary data or review of literature and documents etc. and third assignment will be term exam.*

5.3 External Evaluation (Final Examination) **40 Marks**

Examination Division, office of the Dean, Faculty of Education will conduct final examination at the end of semester. The marks distribution will be

1.	Objective questions (Multiple Choice Questions 10 × 1mark)	10 Marks
2.	Subjective questions (6 questions with 2 'OR 'questions × 5 marks)	30 Marks
	Total	40 arks

6.Recommended Books and References Recommended Books

Bhattarai, T. (2007). *Plant Physiology.* Kathmandu: BhundipuranPrakashan. PP.219-235 for Stress Physiology (**For Unit I**).

Noggle, G. R. and G. J. Fritz (2006).*Introductory Plant Physiology*. New Delhi: Prentice Hall of India Pvt. Ltd. (**For Unit II**).

Pandey, B. P. (2003). *Plant Pathology*. New Delhi: S. Chand and Company Ltd., (**For Unit I**).

Pandey, S. N. and B. K. Sinha (2006).*Plant Physiology*. New Delhi: Bikash Publishing House Pvt. Ltd. (**For Unit II**). PP.506 to 510 for stress physiology.

Roberties, E. P. P. De and De Roberties, E. M. F. (2001). *Cell and Molecular Biology.* New Delhi: Waverly P., Ltd. (**For Unit III**).

Shukla, R. S. and P. S. Chandel (2007*). Cytogenetics, Evolution, Biostatistics and Plant Breeding.* New Delhi: S. Chand & Company Ltd., (For Unit III).

Singh, R. S. (2008). *Plant Diseases*. New Delhi: Oxford& IBH Publishing Company Ltd.

7. Reference Books

Avinash and K. Upadhyay (2005). *Basic Molecular Biology*. Mumbai: Himalaya Publishing House.

Freifelder, D. (1993). *Molecular Biology* .2ndedn, reprint, Narosa Publishing house

Jain, V. K. (2008). *Fundamentals of Plant Physiology*. New Delhi: S. Chand & Company Ltd.

Mehrotra, R. S. and A. Agrawal (2007). *Plant Pathology*. New Delhi: Tata Mc. Graw Hill Pub. Company Ltd.

Salisbury, B. and C. W. Ross (2007). *Plant Physiology*. New Delhi: Thomson Wadsworth (Akash Press).

Sambamurty, A. V. S. S. (2006). *A Textbook of Plant Pathology*. New Delhi: I. K. International Pvt. Ltd.

Sarin, C.(2003). *Genetics*. New Delhi: Tata Mcgraw-Hill Publishing Co. Ltd.

Sharma,A.K and Sharma. A. (1972). *Advances in Chromosome and Cell Genetics*. Oxford and IBH Publishing Co. Pvt.

Soper, R. (2005). *Biological Science*. UK : Cambridge University Press.

Bio. Ed. 525 P: Functional Plant Biology

Course No. : Bio. Ed. 525 P
Level : M. Ed. in Biology
Semester : Second

Nature of course: Practical
Credit hours: 1
Teaching hours: 48*
Period per week: 3 pds/day/week/gr (P)**

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1. Course Description

This course includes practical works from Plant Pathology, Plant Physiology and Molecular Biology. This course aims to provide the knowledge and skills required for conducting practical classes of higher level of Science education regarding some plant pathological experiments such as identification of some common plant pathogenic fungi, their isolation and culture in culture media, identification of some common plant diseases, some experiments on plant physiological processes such as seed germination and photosynthesis as well as to provide knowledge on some aspects of molecular biology.

2. General Objectives

The general objectives of this course are as follow.

- To develop skills in preparing different culture media and culture techniques of microorganisms (fungi).
- To provide knowledge and skills for identifying some common plant diseases and pathogenic fungi.
- To provide skills and knowledge in conducting experiments on physiological processes of plantsregarding seed germination and photosynthesis.

Specific objectives	**Contents**
Unit I. Plant Pathology (10)	

• Prepare the culture media (PDA medium) for the culture of fungi. • Isolate and culture some selected seed borne fungi in the culture media. • Describe some plant diseases like Downey mildew of crucifers, early blight of potato, Brown spot disease of rice. • Visit plant pathological laboratories and submit the report.	• Preparation of culture medium (PDA medium) • Isolation, culture and identification of some selected seed borne fungi (*Alternaria, Penicillium, Aspergillus, Fusarium* • Plant diseases: Downey mildew of crucifers, early blight of potato, brown spot disease of rice 1.4. **Field visit** to Plant Pathological laboratories and submission of report
Unit II. Plant Physiology (7 x 3 = 21)	
• • Test germination of seeds by rolled paper towel. • Determine the percentage of germination of seeds. • Compare the rates of photosynthesis by Wilmott's bubbler under different conditions • Demonstrate the separation of chloroplast pigments by paper chromatography or thin layer chromatography • Demonstrate the essentiality of light for photosynthesis using Ganong's light screen.	2.1. Demonstration of seed germination by rolled paper towel 2.2. Determination of percentage of seed germination 2.3. Determination of rate of photosynthesis by Wilmott's bubbler under different conditions (under different wavelengths of light, different intensities of light) 2.4. Separation of chloroplast pigments by paper chromatography or thin layer chromatography 2.5. (TLC) 2.6. monstration of essentiality of light for photosynthesis using Ganong's light screen
Unit III Molecular Biology (2 x 3 = 6)	
• Prepare a charts and models of DNA structure. • Prepare charts and models of geneticcode.	4.1.DNA structure Genetic code

- **Instructional Techniques**

Units	General Instructional Techniques	Specific Instructional Techniques
1. Plant Pathology	Lecture and discussion methods; Inquiry method, power point presentation, performing experiments, interview, record keeping, power point presentation	2.3. Performing experiments, group work, and Culture media preparation. 2.4. Preparation of charts of life cycles of some pathogenic fungi mentioned in the content. 2.5. Project works on identification, collection 2.6. and preservation of some common crop 2.7. Diseases caused by fungi of local area and submit the report. 2.8. Field visit to some plant pathological 2.9. Laboratory and submit the report.
2. Plant Physiology	Lecture and discussion methods; Inquiry method, power point presentation, performing experiments, record keeping	• Performing experiments in the laboratory, group work • Chart preparation of plant physiological experiments related to the content.
3. Molecular Biology	Lecture and discussion methods; Collaborative method, Internet search, power point presentation	• Project work will be given to prepare the charts on DNA model, Genetic Code.

Note: Besides, the activities/project works mentioned here, the teachers can make the students do other alternative activities/ project works related to the course content.

5. Evaluation **35 Marks**

Nature of course	Internal Evaluation	External Evaluation	Total Marks
Practical	15 Marks	20 Marks	35 Marks

5.1Internal Evaluation **15 Marks**

Marks distribution for practical internal evaluation will be as following.

1.	Attendance	5Marks
2.	Students' portfolios (Record book and Books and article review etc.)	5Marks
3.	Participation, collaborative work and construction of teaching learning resources and planning for teaching learning ***	5Marks
	Total	15Marks

5.2 External Evaluation 20 Marks

Marks distribution for practical external evaluation will be as following.

1.	Experiment / project work report and presentation / study reports	15Marks
2.	Viva-voce	5 Marks
	Total	20Marks

Note:

Students must pass both in internal as well as external assessment of practical examination

** Practical teaching hours is 3 times more than teaching hours of theory (3× 16 = 48 hours)*

***A group consists of 15 students and one teacher will be assigned for a group.*

****Construction of models, charts, teaching aids, develop concept map etc. Also, the collection of materials / designing science lab, preparation of lesson plan, unit plan, annual plan, preparation of rubrics, developing test items of various levels etc. for teaching learning.*

6.Recommended Books and References

Aneja, K.R. (2003). *Experiments in Microbiology, Plant Pathology and Biotechnology*. : Delhi New Age International (P) Ltd. Publishers.

Bajracharya, D. (1999). *Experiments in Plant Physiology*. New Delhi: Narosa Publishing House.

Pandey, B.P. (2009). *Modern Practical Botany.Vol. I and Vol. II.* New Delhi: S. Chand & Company Ltd.

Bio. Ed. 526 T: Functional Animal Biology

Course No.	: Bio. Ed. 526 T	Nature of course: Theoretical
Level	: M. Ed. in Biology	Credit hours: 2
Semester	: Second	Teaching hours: 32
		Period per week: 2

1. Course Description

This course aims to provide advanced knowledge on Animal Pathology, Physiology, and Biochemistry with detailed knowledge on animal diseases, nutrition, metabolic processes, coordination and control mechanisms, structure, and life-cycle. It further details out knowledge on the structure and functions of bio-chemicals.

2. General Objectives

General objectives of this course are as follows:

- To acquaint students with the role of microorganisms in animal diseases.
- To familiarize them with the life processes of animals along with the coordination and control mechanism in living organisms.
- To acquaint students with the effects and physiology of animals.
- To provide advanced knowledge on the structure, functions of bio-chemicals.

3. Specific Objectives and Contents

Specific Objectives	Contents
• Define diseases. • Explain the different types of pathogenic diseases with their characteristics. • Describe pathogenesis, mode of transmission, and control measures. • Describe different viral, bacterial, fungal and zoonotic diseases	**Unit I. Animal Pathology (8pds.)** 1.1. Pathogens of medical importance. 1.2. Concept of Diseases. 1.3. Different types of pathogenic diseases. 1.4. Introduction, characteristics, mode of transmission, pathogenesis, and their control measures. 1.5. Viral – Chicken pox, AIDS, Dengue 1.6. Bacterial – Typhoid, Pneumonia, Cholera, Pharyngitis 1.7. Fungal – Tinea 1.8. Zoonotic diseases – Rabies, Bird Flu

• Explain homeostasis. • Describe different body functions including nutrition, circulation, respiration, osmo-regulation and excretion. • Explain vertebrate kidney and its functions. • Explain the conduction of nerve impulse neuron. • Describe the nervous system of vertebrates. • Describe pituitary, thyroid and adrenal glands.	**Unit 2. Animal Physiology (15pds.)** 9.1. Homeostasis 9.2. Different body functions (systems) 9.3. Nutrition: 9.3.1. Heterotrophic nutrition in 9.3.2. animals 9.3.3. Metabolism 9.4. Structure and function of human heart 9.5. working of heart 9.6. Respiratory pigments and their functions 9.7. Physiology of respiration 9.8. Osmoregulation and excretion 9.9. Concept and controlling factors of osmoregulation 2.10. Osmoregulatory organs of invertebrates 2.11. Vertebrate kidney 2.12. Urine formation (Glomerular filtration, Tubular reabsorption, tubular secretion, Water regulation) 2.13. Structure and function of human brain 2.14. Neuron: nerve impulse, its conduction and synaptic transmission Hormonal coordination Pituitary, thyroid and adrenal gland
• Explain the meaning and importance of Biochemistry. • List down various types of bio-chemicals. • Define carbohydrate. • Differentiate the macro and micro-molecules. • Explain the biological function of carbohydrate. • Describe the classification of carbohydrate. • Explain the metabolism of carbohydrate. • Define protein. • Explain the biological function of protein. Explain the different types of amino acid.	**Unit 3. Biochemistry (9pds.)** 3.1. Introduction to Biochemistry 3.2. Types of biochemical 3.3. Carbohydrates 3.4. Introduction 3.5. Biological functions 3.6. Classifications (mono, di- and polysaccharides) 3.7. Glucose - linear, ring and chain form. 3.8. Metabolism of carbohydrate 3.9. Protein 3.10. Introduction 3.11. Biological function. 3.12. Amino acid. 3.13. Types of amino acid (essential and non-essential) 3.14. Classification of protein. 3.14.1 Classification based on Structure. 3.14.3. Classification based on composition. 3.14.4. Classification based on

• Describe the classification of protein based on structure, composition and also on biological function. • Explain the metabolism of protein. • Define lipid. • Explain the biological function of lipid. • Describe the different types of lipids. • Explain the metabolism of lipid.	biological function. 3.14.5. Metabolism of protein. 3.15. Lipid 3.15.1. Introduction. 3.15.2. Biological function. 3.15.3. Types of lipid. Simple Lipid. Compound Lipid. Derived lipid. Metabolism of lipid.

Note: *The figures in the parenthesis indicate the approximate teaching hours for the respective units.*

4. Instructional Techniques

The instructional techniques are divided into two groups. The first group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to the specific units.

4.1 General Instructional Techniques

- Lecture
- Demonstration
- Discussion
- Inquiry
- Project work
- Collaborative work
- Book review
- Web surfing,
- Power point presentation

4.2 Specific Instructional Techniques/Activities

Unit	Activities and Instructional Techniques
I	Field visit, identification of diseases, report writing
II	Preparing charts
III	Field visit, report writing, Preparing charts

5. Evaluation (Internal Evaluation and End Semester Examination)

Nature of course	Internal Evaluation	End Semester (External) Examination	Total Marks
Theory	25 Marks	40 Marks	65 Marks

***Note**: Students must pass separately in internal assessment and semester examination.*

5.1 Internal Evaluation 25 Marks

Internal evaluation will be conducted by the course teacher based on following activities.

1.	Attendance and participation in learning activities	5 Marks
2.	First assignment (written assignment)	5 Marks
3.	Second assignment (report writing and presentation)	5 Marks
4.	Third assignment/ Term Exam	10 Marks
	Total	25 Marks

Note: *First assignment/assessment might be book review /article review, quiz, home assignment etc. according to nature of course. Second assignment/assessment might be project work, case study, seminar, survey/field study and individual/group report writing, term paper based on secondary data or review of literature and documents etc. and third assignment will be term exam.*

5.2 External Evaluation (End Semester Examination) 40 Marks Examination Division, office of the Dean, Faculty of Education will conduct final examination at the end of semester. The marks distribution is as follow.

1.	Objective questions (Multiple Choice Questions 10 × 1mark)	10 Marks
2.	Subjective questions (6 questions with 2 ‘OR ‘questions × 5 marks)	30 Marks
	Total	40 Marks

6.Recommended books and References Recommended Books

Dubey, R. C. and D. K. Maheshwar (2003). *A Text Book of Microbiology*. S. Chand & Company. India

Sastry, K.S. (2004). *Animal Physiology*. Rastogi Publication

Verma, P.S., B.S.Tyagi and V.K. Agarwal(2007).*Animal Physiology.* S. Chand and Company

7. References

Atlas R.N.(1984). *Microbiology: Fundamental and Applications*, Macmillian Company. Jain, J.L.(2005). *Fundamentals of Biochemistry.* S. Chand & Company, India, New Delhi

Kondreddy, Rambabu (2007). A textbook of Biochemistry, AITBS publishers, India, New Delhi

Nelson , David L, and Michael M Cox , (2012). *Lehninger Principles of Biochemistry*6th Edn, W H Freeman publishers, San Francisco

Philip A. Thomas (2007).*Clinical Microbiology* ,Orient Longman Private limited, Rastogi, S.C.(1993). *Biochemistry*. Tata McGraw Hill, India.

Bio. Ed. 526 P: Functional Animal Biology

Course No. : Bio. Ed. 526 P
Level : M. Ed. in Biology
Semester : Second

Nature of course: Practical
Credit hours: 1
Teaching hours: 48*
Period per week: 3pds/day/week/gr(P)* *

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1. General Description

This course is designed to develop skills for conducting practical activities / experiments on the subject on Animal pathology, physiology, and biochemistry.

2. General Objectives

The general objectives of this course are as follows:

- To provide practical knowledge and skills on animal pathology, animal physiology and biochemistry
- To develop skills for dissection of some animals

3. Specific Objectives and Content

Specific Objectives	Contents	Teaching Hours = 48
• To study some important protozoan and helminth parasites.	**Unit I. Animal Pathology (3)** 1.1. Observation of permanent slides of human intestinal parasites (Entoameobahistolitica, E. gingivitis, Giardia lambia cyst, Trichuris trichurua ova, Ascaris lumbricoides ova, Hookworm ova)	1x3= 3
• To dissect the mammal to expose the circulatory system. • To study the permanent slides of artery and vein. • To determine the various blood groups of human being. • To measure the blood	**Unit II. Animal Physiology (30)** 2.1. Circulatory system of mammal. 2.1.1. Arterial system 2.1.2. Venous system 2.2. Permanent slides 2.2.1. T.S. of an artery 2.2.1 T.S. of a vein 2.3 Different blood groups of human being.	10x3 = 30

pressure of human being. • To dissect the mammal to expose respiratory organs. • To dissect the mammal to expose the brain. • To demonstrate the enzymatic action on starch. • To demonstrate the enzymatic action of protein. • To dissect the mammal to expose excretory organs. • To test for the detection of constituent of urine.	2.4. Measurement of blood pressure using Sphygmomanometer. 2.5. Respiratory organs of mammal. 2.6. Brain of mammal. 2.7. Action of salivary amylase on starch. 2.8. Action of pepsin on protein. 2.9. Excretory organs of mammal. 2.10. Detection of urea, uric acid. 2.10.1. Urea's test 2.10.2. Oxidation test	
• To test the presence of glucose and starch. • To test the presence of protein. • To test the presence of lipid.	**Unit III. Biochemistry (3x3)** 3.1. Carbohydrate test 3.2. Benedict's test 3.3. Fehling test 3.4. Lugol's test 3.5. Protein test 3.6. Biurette test 3.7. Milon's test 3.8. Xanthoproteic test 3.9. Lipid test 3.10. Solubility test 3.11. Saponification test **3.12.** Ninhydrin test	3x3= 9
To prepare reports on field survey (pathological centers, hospitals etc.)	**Field Trip (2x3) = 6** Visit the pathological centers, hospitals, clinic etc. and submit the report on different diseases (Typhoid, Cholera, Rabies, Bird flu).	

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. First group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to specific units.

4.1 General Techniques

- Demonstration
- Discussion
- Inquiry
- Project
- Collaborative work

4.2 Specific Instructional Techniques/Activities

Presentation

Handling of instrument, observation

Internet surfing, discussion

Presentation, participatory activities

Field visit, Preparation of charts, models, presentations slides, and reports.

The teachers may decide the project work related to the course work.

5.Evaluation (Internal and External Examination) 35 Marks

Nature of course	Internal Evaluation	External Evaluation	Total Marks
Practical	15 Marks	20 Marks	35 marks

5.1. Internal Evaluation

Marks distribution for practical internal evaluation is as follow.

1.	Attendance	5 Marks
2.	Students' portfolios (record book, review of book or articles etc.)	5 Marks
3.	Participation, collaborative work and Construction of teaching learning resources and planning for teaching learning ***	5 Marks
	Total	15 Marks

5.2 External Evaluation

Marks distribution for practical external evaluation is as follow.

1.	Experiment / Project work, report and Presentation / Study reports	15 Marks
2.	Viva	5 Marks
	Total	20 Marks

Note:

Students must pass both in Internal as well as External evaluation of Practical examination.

** Practical teaching hours is 3 times more than teaching hours of theory (3x 16 = 48 hours)*

***A group consists of 15 students and one teacher will be assigned for a group.*

****Construction of models, charts, teaching aids, develop concept map etc/ collection of material/ Designing science lab, Preparation of lesson plan, unit plan, annual plan, rubrics, developing test items etc. for teaching learning.*

6. Recommended Books for Practical

Shakya, S. R. (2010). B.Sc, Zoology Practical Chordates, Sukunda Pustak Bhawan, Kathmandu.

Swarup, N , Pathak, S.C and Arora, S (1981), *Laboratory Techniques in Modern Biology ,* Kalyani Publishers, New Delhi.

Bio. Ed. 528 T: Modern Biology Teaching

Course No.: Bio. Ed. 528 T
Level: M.Ed. in Biology
Semester: Second

Nature of course: Theoretical
Credit Hours: 2
Teaching hours: 32
Period per week: 2

1. Course Description

This course is designed to develop advanced knowledge and understanding of the realms of Biology education. The main aim of the course is to widen the horizon of knowledge and understanding of students with a view to make them able to identify significant problems in school and the university level Biology education. It deals with different aspects of Biology education with special emphasis on the philosophical, theoretical and methodological understanding of constructivism, misconception, e-learning, instructional module, research, concept mapping and post-modern approaches.

2. **General Objectives**

The general objectives of this course are as follows:

- To provide in-depth knowledge of modern pedagogical approaches in Biology education.
- To develop planning skills to prepare lesson modules and instructional activities.
- To identify different teaching-learning techniques to implement in classroom situations;
- To develop essential teaching-learning materials, activities and tools of assessments in Biology teaching and learning;
- To apply the knowledge of Biology education to address scientific inquiries in contemporary pedagogical approaches;
- To acquire the ability to think scientifically, and independently and to make rational discussions in relation to Biology education.

3. Specific Objectives, Contents and Activities

Specific Objectives	**Contents**
• Elaborate on the prevalent issues in school Biology education related to classroom dynamics, the role of Biology teachers and students, pedagogical orientation, knowledge generation, and evaluation. • Explain the meaning, importance and strategies of teaching Biology in the wider context. • Describe the techniques for the development of scientific and technological literacy.	**Unit 1. Issues and Trends in Biology Teaching (4pds.)** 1.1 Introduction 1.2 Issues in school Biology education 1.3 Teaching Biology in the wider context 1.4 Development of scientific and technological literacy 1.5 Scientific temper: A theoretical framework and dimensions

• Explain the techniques of promoting critical thinking. • Discuss the characteristics of critical thinking. • Elaborate teaching for the understanding of Biology education. • Describe the model of teaching for understanding and application of Biology education.	1.6 Teaching for the understanding of Biology education
• Explain the meaning of the philosophical and theoretical understanding of contemporary perspectives of Biology education. • Elaborate on the meaning of the constructivist paradigm of learning. • Explain the basic foundation of constructivism philosophy. • Describe the application of praxis and project work in Biology teaching and learning. • Explain the Kolb learning cycle and its application in Biology learning. • Describe the application of David Kolb's experiential learning cycle. • Write down the implications of Ausubel and Bruner's theory of cognitive development. • Describe the theoretical and philosophical background of the constructivist perspective of learning. • Explain the implications of socio-cultural and radical constructivism in Biology teaching and learning. • Explain the importance of constructivism epistemology in the development of Biology curricula and textbooks. • Construct a constructivist checklist of a Biology teacher. • Explain the 5E teaching model and its implications in Biology teaching/learning. • Discuss the techniques of promoting constructivist classroom culture.	**Unit 2. Contemporary Psychological Perspectives of Biology Learning** **(4pds.)** 2.1 Introduction of contemporary perspectives of learning Learning theories of John Dewey, David Kolb, Ausubel and Bruner Constructivism paradigm of learning Constructivism epistemology of Biology learning Theoretical and philosophical understanding of constructivism Types of constructivism (socio-cultural and radical) Constructivism in teaching Biology Constructivism in curriculum and textbooks development, teaching methods and evaluation techniques Constructivist checklist for the Biology teachers 1.105E teaching model
• Give the introduction of concept map and its origins. • Describe the various models of concept maps. • Discuss the psychological foundations of concept maps.	**Unit 3. Concept Mapping and Biology Education (4pds.)** Introduction Origin of concept maps Models of concept maps

• Explain the epistemological foundations of concept maps. • Describe meta-cognition and meaningful learning. • Explain the theoretical and philosophical meaning of concept mapping. • Explain the ways of developing concept maps to develop social qualities of students. • Explain steps of developing concept maps. • Develop concept maps on the basis of the word parking approach. • Describe the implications of concept mapping in Biology education. • Construct different models of concept maps.	Psychological foundations of concept map Epistemological foundations of concept map Meta-cognition and meaningful learning Theoretical framework of concept mapping Developing concept maps Steps of developing concept maps Developing concept maps by word parking method Implications of concept mapping in Biology education
• Explain the importance of e-learning in Biology education. • Describe the principles of e-learning. • Explain the goals and importance of e-learning. • Explain Web-based learning. • Elaborate on the meaning of WebQuest and its use in Biology education. • Explore virtual field trips in Biology teaching and learning. • Explain the steps of Moodle platform to deliver the content of Biology education in the virtual learning environment. • Explore the new source of information such as google scholar, education resource information center (ERIC) and Hinari.	**Unit 4: Weaving e-learning in Biology Education (4pds.)** Introduction to e-learning Principles of e-learning Approaching of e-learning Integrating ICT in Biology teaching and learning Web-based learning WebQuest Virtual field trips Moodle platform
• Define scientific literacy with examples. • Explore the ways of developing scientific literacy and critical thinking. • Explain the meaning, nature and characteristics of values. • Enlist the sources of establishing values among the students. • Explain the identification and categorization of values. • Describe the techniques for promoting scientific literacy among the students. • Illustrate the meaning of creativity.	**Unit 5. 21st Century Issues in Biology Education (4pds.)** 5.1 Scientific literacy 5.2 Critical thinking 5.3 Value education 5.4 Life skills development 5.5 Biology process skills 5.6 21st-century relevant Biology

• Discuss the characteristics of creative persons. • Discuss the ways of stimulating creativity in Biology classes. • Explain the ways of developing Biology process skills. • Predict the vision for Biology education for the future. • Explain Biology pedagogy for the 21st century.	pedagogy 5.7 Vision of Biology education
• Explain the meaning and importance of the Biology teachers' professional development programmes. • Elaborate on the meaning of Biology teachers' competencies. • Discuss the basic qualities of a Biology teacher. • Describe the importance of the professional development activities in recent instructional pedagogies. • Evaluate the need for Biology teachers' professional development programmes in Nepal. • Illustrate the Biology teachers' competencies (BTC). • Explain the approaches for teachers' professional development programs. • Explain the strategies for teachers' professional development in Nepal. • Explain the purposes of understanding Biology teachers' competencies. • Critique on the existing strategies of Biology teachers' professional development programs in Nepal.	**Unit 6. Biology Teachers Professional Development (4pds.)** 1.1 Introduction 1.2 History of teachers' professional development in Nepal 1.3 Importance of Biology teachers' professional development 1.4 Approaches to professional development 1.5 Strategies of professional development 1.6 Biology teachers competencies
• Describe the approaches to Biology teaching and learning. • Elaborate on cooperative and collaborative learning strategies. • Explain the implications of the heuristic method	**Unit 7. Biology Teaching Strategies(4pds.)** 1.1 Introduction

in teaching Biology. • Illustrate the importance of inquiry-based learning. • Explain the types of inquiry-based learning. • Explain the characteristics of project-based learning. • Design project-based Biology learning. • Explore the meaning and importance of context-based Biology learning. • Explain the importance of research-based Biology learning. • Define self-directed learning. • Explain the importance and procedural steps of self-directed learning. • Discuss the importance and strategies of flipped classrooms. • Critique on the models of flipped learning method. • Explain the importance of cafeteria learning in the changing context. • Explore the procedure of the cafeteria learning method.	1.2 Approaches to Biology teaching 1.3 Cooperative and collaborative learning strategies 1.4 Heuristic method 1.5 Inquiry-based learning 1.6 Project-based learning 1.7 Context-based Biology learning 1.8 Research-based learning 1.9 Self-directed learning 1.10 Flipped learning 1.11 Cafeteria learning method
• Review a research proposal in Biology education. • Explain the meaning and cycle of participatory action research (PAR). • Discuss the principles of participatory action research methodology. • Describe the sources of data generation and analysis techniques related to participatory action research. • Conduct a seminar/webinar on the issue of Biology education. • Review dissertations and articles related to Biology education (at least 2 articles within 1000 words of each).	**Unit VIII: Research Review in Biology Education(4 Pds.)** 8.1 Research proposal in Biology education 8.2 Participatory action research (PAR) methodology in Biology education 8.3 Webinar on contemporary issues in Biology education 8.3 Review of dissertations and articles related to Biology education

Note: *The figures in the parenthesis indicate the appropriate teaching hours for the respective units*.

4. **Instructional Techniques**

4.1 General Instructional Techniques

- Discussion
- Demonstration
- Presentation
- Inquiry
- Project work
- Cooperative and collaborative work
- Internet (web) surfing
- Group work

4.2. Specific Instructional Techniques

Units	Specific Instructional Techniques
I	Classroom presentation on issues and trends in Biology teaching.
II	Report writing and presentation followed by discussion.
III	Presentation by studying the handouts provided by the teacher followed by teachers' suggestions.
IV	Video display about e-learning and reflect on it with comments. Perform ICT activities in ICT lab.
V	Paper writing and presentation followed by discussion.
V I	Presentation by studying the handouts provided by the teacher followed by teachers' suggestions on. Construct module on the basis of Moodle.
V II	Classroom presentation and group discussion orientated to the presentation.
VIII	Lived discussions and engagement through group activities.

5. Evaluation

5.1 Evaluation (Internal Assessment and External Examination)

Nature of course	Internal Assessment	Semester Examination	Total Marks
Theory	25 Marks	40 Marks	65 Marks

Note: Students must pass separately in internal assessment and semester examination.

5.2 Internal Evaluation **25Marks**

Internal evaluation will be conducted by course teacher based on following activities:

1.	Attendance and participation in learning activities	5 Marks
2.	First assignment (written assignment)	5 Marks
3.	Second assignment (report writing and presentation)	5 Marks
4.	Third assignment/ Term exam	10 Marks
	Total	25 Marks

Note: *First assignment/assessment might be book review /article review, quiz, home assignment etc. according to nature of course. Second assignment/assessment might be project work, case study, seminar, survey/field study and individual/group report writing, term paper based on secondary data or review of literature and documents etc. and third assignment will be term exam.*

5.1.2 External Evaluation (Final Examination) **40 Marks**

Examination Division, office of the Dean, Faculty of Education will conduct final examination at the end of semester. The marks distribution will be

1. Objective questions (Multiple Choice Questions 10 questions x 1 mark)	10 Marks
2. Subjective short questions (6 questions with 2 'OR 'questions x 5 marks)	30 Marks
Total	40 Marks

6. Recommended Books and References Recommended Books

Allen, G. E., & Baker, J. J. (2017). *Scientific Process And Social Issues In Biology Education*. Springer International Publishing.

Davar, M. (2012). *Teaching of Science.* New Delhi: PHI Learning Private Limited.

Garber, S. D. (2020). *Biology: A Self-Teaching Guide*. John Wiley & Sons.

Mohan, R. (2007). *Innovative Science Teaching.* New Delhi: Prentice-Hall of India Pvt. Ltd.

Sood, J. (2009). *Teaching of science.* New Delhi: Prentice Hall of India.

Torres, P. L., & Veiga Marriott, R. D. (2010). *Handbook of Research On Collaborative Learning Using Concept Mapping.* Hershey, United States: IGI Global.

Wallace, C. S. (2003). Mapping biology knowledge.

Ydyrys, A. Y. (2017). Methods of Teaching Biology: Educational-Methodical Manual. *Almaty: Qazaq University*.

References

Bybee, R. W. (2010). *The teaching science: 21st century perspectives - PB283X.* UK: National Science Teachers Association - NSTA Press.

Heiland, T. L. (2019). Kolb Learning Styles of dancers who do and don‟t use dance notation compared to other fields. *Research in Dance Education*, *20*(2), 148-173.

Hiong, L. C., & Osman, K. (2013). A conceptual framework for the integration of 21st century skills in biology education. *Research Journal of Applied Sciences, Engineering and Technology*, *6*(16), 2976-2983.

Kinchin, I. M. (2000). Concept mapping in biology. *Journal of biological education*, *34*(2), 61-68.

Kinchin, I. M. (2001). If concept mapping is so helpful to learning biology, why aren't we all doing it?. *International Journal of Science Education*, *23*(12), 1257-1269.

Osman, K., Hiong, L. C., &Vebrianto, R. (2013). 21st Century biology: An interdisciplinary approach of biology, technology, engineering and mathematics education. *Procedia-Social and Behavioral Sciences*, *102*, 188-194.

Ramma, Y., Bholoa, A., Watts, M., & Nadal, P. S. (2017). Teaching and learning physics using technology: Making a case for the affective domain. *Education Inquiry*, *9:2*, 210-236.

Seng, L., & Mohamad, F. (2002). Online learning: Is it meant for science courses? . *The internet and higher education, 5(2)*, 109-118.

Şeyda, G. Ü. L., &Sözbilir, M. (2016). International trends in biology education research from 1997 to 2014: A content analysis of papers in selected journals. *Eurasia Journal of Mathematics, Science and Technology Education*, *12*(6), 1631-1651.

Singh, S., &Yaduvanshi, S. (2015). Constructivism in science classroom: Why and how. *International Journal of Scientific and Research Publications*, *5*(3), 1-5.

Smith, D. (2004). Issues and trends in higher education biology fieldwork. *Journal of Biological Education*, *39*(1), 6-10.

Susetyarini, E., & Fauzi, A. (2020). Trend of critical thinking skill researches in biology education journals across Indonesia: From research design to data analysis. *International Journal of Instruction*, *13*(1), 535-550.

Turiman, P., Omar, J., Mohd. Daud, A., & Osman, K. (2012). Fostering the 21st century skills through scientific literacy and science process skills. *Procedia - Social and Behavioral Sciences 59*, 110-116.

Watson, M. K., Pelkey, J., Noyes, C., & Rodgers, M. O. (2019). Using Kolbs Learning Cycle to improve student sustainability knowledge. *Sustainability*, *11*(17), 4602.

Wibowo, Y. G., &Sadikin, A. (2019). Biology in the 21st-Century: Transformation in biology science and education in supporting the sustainable development goals. *JPBI (Jurnal Pendidikan Biologi Indonesia)*, *5*(2), 285-296.

Wright, E. L., & Govindarajan, G. (1992). A vision of biology education for the 21st century. *The American Biology Teacher*, 269-274.

Younès, T. (2000). Biological education: Challenges of the 21st century. *Biology International*, *39*, 8-13.

Bio. Ed. 528 P: Modern Biology Teaching

Course No.: Bio. Ed. 528 P	Nature of course: Practical
Level: M.Ed. in Biology	Credit Hours: 3
Semester: Second	Teaching hours: 48*
	Periods per week: 3 pds/day/week/gr (P)**

1. **Course Description**

   This course is a practical course and designed to develop knowledge and skills for conducting practical classes at high school, Bachelor's and Master's level of Biology education courses. It develops the skills of development of reports, presentations, and seminar papers, conducting workshops and applying innovative and recent pedagogical approaches related to Biology teaching and learning at different levels.

2. **General Objectives**

   - To prepare research articles based on the recent pedagogical approaches in Biology education.
   - To prepare and present seminar papers by conducting seminars on the issues of Biology education in Nepal and abroad.
   - To develop the skills in PowerPoint presentations and skills of engaged and lived presentations.
   - To draft the manuscripts of research articles based on the concept mapping, constructivism, application of information, communication and technology and the developmental perspectives related to Biology education.

3. **Contents**

Students Activities/Contents	**Total hours (48)**
Unit 1. Issues and Trends in Biology Teaching • Prepare a report on the issues in school level Biology education. • Present in the class through PowerPoint presentation on teaching Biology in the wider context. • Prepare a report on the development of scientific and technological literacy. • Organize a seminar about teaching for the understanding of Biology • Education and the vision of teaching Biology.	6

Unit 2. Contemporary Psychological Perspectives of Biology Learning • Prepare a review paper on the learning theories of John Dewey, David Kolb, Ausubel and Bruner related to Biology education. • Present on the theoretical and philosophical understanding of constructivism. • Critically examine and prepare manuscripts on constructivism in • Curriculum and textbooks development, teaching methods and evaluation techniques. • Prepare a 5E model by the use of the improvised materials and display with its use in the class.	7
Unit 3. Concept Mapping and Biology Education • Prepare a paper and present the theoretical and philosophical meaning of concept mapping. • Construct concept maps on various models on the chart papers on the basis of the word parking approach.	6
Unit 4: Weaving e-learning in Biology Education • Present the importance of e-learning in Biology education and describe the principles of e-learning. • Prepare a paper on the goals and importance of e-learning as well as web-based learning. • Explore virtual field trips sites (based on the specific curriculum), organize a programme and discuss the importance of virtual field trips in Biology teaching/learning. • Explore new sources of information such as Google Scholar, education resource information center (ERIC) and Hinari. • Download papers, share and discuss in the class.	6
Unit 5. 21st Century Issues in Biology Education • Prepare a paper on scientific literacy and critical thinking. Also, explain and present the ways of developing values. • Organize a talk programme on the techniques of promoting scientific literacy among the citizens and the ways of developing Biology process skills among the students. • Explore the possibilities of the vision for Biology education and Biology learning pedagogy for the future and prepare a manuscript/paper based on it. Also, present in the class.	6

Unit 6. Biology Teachers Professional Development • Prepare a sample Biology teachers' training manual (based on the particular unit) and present it to the class. • Prepare a paper based on the importance of the Biology teachers' professional development programmes and Biology teachers' competencies. • Prepare PowerPoint presentation slides on the basic qualities of a Biology teacher and presents them in the practical class.	7
Unit 7. Biology Teaching Strategies • Prepare a paper on the approaches to Biology teaching and learning incorporating cooperative and collaborative learning strategies. • Design a sample class on the heuristic method and inquiry-based learning method, project-based learning, and context-based Biology learning. • Explain the importance of research-based Biology learning, self- directed learning and flipped learning methods. Discuss the importance of each and every method in the practical class and finally prepare a reflective journal (minimum 2500 words). • Design acafeteria learning and write a reflective memo based on it.	6
Unit 8 : Research Review in Biology Education • Review a research proposal in Biology education. • Develop a report based on the steps and cycle of the participatory action research (PAR) methodology. • Conduct a seminar/webinar on the issue of Biology education. • Review dissertations and articles related to Biology education (at least 2 articles within 1000 words of each).	4

4. Specific Instructional Techniques

- Internet surfing
- Develop manuscript by collaboration and discussion
- Workshops: Presentation, participatory activities
- Books and article review
- Field visit
- Preparation of charts, models, presentations slides, and reports.

5. Evaluation 35 Marks

Nature of course	Internal Evaluation	External Evaluation	Total Marks
Practical	15 Marks	20 Marks	35 Marks

5.1 Internal Evaluation 15 Marks

Marks distribution for practical internal evaluation will be as following.

1.	Attendance	5Marks
2.	Students' portfolios (Record book and Books and article review etc.)	5Marks
3.	Participation, collaborative work and construction of teaching learning resources and planning for teaching learning ***	5Marks
	Total	15Marks

5.2 External Evaluation 20 Marks

Marks distribution for practical external evaluation will be as following.

1.	Experiment/project work report and presentation / study reports	15Marks
2.	Viva-voce	5 Marks
	Total	20Marks

Note:

Students must pass both in internal as well as external assessments of practical examination

** Practical teaching hours is 3 times more than teaching hours of theory (3x 16 = 48 hours)*

***A group consists of 15 students and one teacher will be assigned for a group.*

****Construction of models, charts, teaching aids, develop concept map etc. Also, the collection of materials / designing Biology lab, preparation of lesson plan, unit plan, annual plan, preparation of rubrics, developing test items of various levels etc. for teaching learning.*

6. Recommended Books and References

Shivendra, C. (2006). Contemporary Biology teaching: New Delhi, Anmol Publication Pvt. Ltd.

Agarwal, P. K. (2018). Retrieval practice & Bloom's taxonomy: Do students need fact knowledge before higher-order learning? *Journal of Educational Psychology*.

Bio. Ed. 529: Biodiversity Conservation and Evolutionary Biology

Course No.	: Bio. Ed. 529	Nature of course: Theoretical
Level	: M. Ed. in Biology	Credit hours: 3
Semester	: Second	Teaching hours: 48 Period per
Week	: 3	

1. Course Description

This course aims to give knowledge on Biodiversity and Evolutionary Biology. The course on Biodiversity gives the fundamental knowledge on Biodiversity and its status, conservation, and management approaches with reference to global and national issues. It highlights on protected areas of Nepal and also addresses how we can best use the biological resources for the improvement of livelihoods of local people by maintaining the environment. The course on Evolutionary biology provides knowledge on evolution, theories of organic evolution, paleontological evidence and mechanism of the evolution.

2. General Objectives

The general objectives of this course are as follows:

- To explain the various facets of biodiversity, and the scope of biodiversity conservation and management
- To acquaint with the status of biodiversity and biomes
- To make critical analysis on threats to biodiversity and underpin the challenges of biodiversity conservation and management approaches
- To highlight the role of protected areas for environmental sustainability and its ecotourism nexus in Nepalese context
- To understand how to conserve biodiversity by imparting knowledge from national and international conservation initiatives and management approaches
- To familiarize with the evolutionary biology and their developmental pattern

3. Specific Objectives and Contents

Specific objectives	Contents
Biodiversity Conservation: (32 hrs.)	
● Explain briefly about introduction and the concept of biodiversity ● Describe scope and the importance of biodiversity ● Discuss briefly types of biodiversity ● Describe biodiversity conservation and management practices	**Unit I. Fundamentals of Biodiversity (2 hrs.)** 1.1. Introduction of biodiversity 1.2.Scope and importance of biodiversity 1.3.Types of biodiversity 1.4.Fundamental approaches of biodiversity conservation and management: traditional, conventional and community-based conservation
● Develop understanding on the concept and distribution of global biomes ● Explain the major biomes and their environmental characterizations ● Understand the basic concept on geological time scale and island biogeography	**Unit II: Biogeography and Biomes (4 hrs.)** 2.1. Concept and distribution of biomes in the world 2.2. Biome: Environmental characterizations of Tundra, Alpine, Forests, Savanna, Grassland, Desert, Mountain & Freshwater 2.3. Geological time scale, continental drift and theory of Island biogeography
● Discuss briefly the types of biodiversity in Nepalese context ● Discuss on forest types and their distribution in Nepal ● Discourse on biogeography of Nepal ● Explain the concept of phytogeography and zoogeography of the world	**Unit III: Status of Biodiversity (8 hrs.)** 3.1. Genetic diversity 3.2. Species diversity: (Floral diversity & Faunal diversity) 3.3. Microbial diversity 3.4.Agro-biodiversity 3.5. Ecosystem diversity: Status, types and distribution of forest 3.6. Forest regimes of Nepal 3.7. geographic regions of Nepal 3.8.Global biodiversity: Phytogeography and zoogeography of the world
● Give brief description of causes and consequences	**Unit IV: Biodiversity Conservation: Issues and Approaches (4 hrs.)**

of biodiversity loss • Explain the major issues of biodiversity conservation approaches • Describe in-situ and ex-situ conservation approaches • Acquaint with landscape and eco- region-based conservation approaches	• Major issues of biodiversity conservation • IUCN's red list for conservation priorities for species - Extinct, Critically Endangered, Vulnerable, Threatened, Rare and Common species • Measuring Biodiversity- alpha, Beta and Gamma diversity, Concepts of Flagship and Keystone Species • Concept of in-situ and ex-situ conservation • Conservation Approaches: Traditional and indigenous practices on biodiversity conservation; community-based conservation approaches • Landscape and eco-region-based conservation approach
• Explain the concept and development of protected areas system • Elucidate the role of protected areas on conserving of biological diversity • Describe the protected areas systems of Nepal • Familiarize on the relationship between protected areas and local stakeholders • Explain the role of protected areas system in promoting ecotourism and enhancing local's livelihoods	**Unit V: Protected Areas (8 hrs.)** 5.3. Concept and development of protected areas 5.4. Role of protected areas in biodiversity conservation 5.5. Major protected areas of Nepal: national parks, wildlife reserves, conservation areas, hunting reserve, zoo, botanical garden; buffer zones 5.6. Park-people relationship in Nepal 5.7. Role of people in biodiversity conservation 5.8. Role of ecotourism on peoples' Livelihoods in Nepalese context.

• Enlighten briefly the major national and international initiatives in biodiversity conservation and management • Underpin international conservation initiatives and their relevancy in Nepalese context	**Unit VI: Policy Initiatives (6 hrs.)** 6.1.National and international policy, plans, strategies, legislations for biodiversity conservation: 6.2.Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) 6.3.Convention on Biological Diversity (CBD) 6.4.Ramsar Convention 6.5.Intellectual Property Right (IPR) and Patent Rights 6.6.The World Conservation Union (IUCN) management category 6.7.Major national initiatives 6.8.Forest Protection Act and Regulations 6.9.National Parks and Wildlife Conservation Act-1973 6.10. Relevance of global conservation treaties in Nepalese context
Evolutionary Biology: (16 hrs.)	
• Explain the history of evolution. • Clarify the misconception of evolution and significance of evolutionary biology. • Impart knowledge on basic patterns of evolution • Differentiate between divergent and convergent evolution.	**Evolution (3 hrs.)** **Unit I.** **1.1.Introduction** 1.2.History of evolution (earth history and evolution) 1.3.Misconception of evolution 1.4.Significance of evolutionary biology. 1.5.Basic patterns of evolution **1.6.**Divergent evolution and convergent evolution

• Explain the theory of natural selection (Darwinism) • Explain the development of modern concept of evolution • Describe the evolution of animals at different levels (micro, macro and mega levels)	**Unit II. Theories of organic evolution (3 hrs.)** 2.1. Darwinism 2.2. Modern synthetic theory of evolution. 2.3. Natural selection at different levels 2.4. Natural 2.5. selection at micro, macro and mega levels
• Explain the different kinds of fossils and fossilization • Describe the evolutionary changes occurred in vertebrates (bird and horse) • Explain the early and later • Evolution of flowering plants.	**Unit III. Paleontological evidence (4 hrs)** 3.1. Fossils and fossilization 3.2. Evolutionary changes in vertebrates 3.3. Early and later evolution flowering plants
• Explain the different mechanisms of evolution.	**Unit IV. Mechanism of evolution (6 hrs)** 4.1. Isolating mechanisms (reproductive and geographical isolation) 4.2. Genetic interaction (recombination, co- dominance, multiple allele) **4.3.** Ploidy (types and causes of ploidy with Examples e.g., Wheat, Raphanobrassica etc.) 4.4. Hybridization and genetic drift Speciation

Note: *The figures in the parenthesis indicate the approximate teaching hours for the respective units.*

4. Instructional Techniques

The instructional techniques are divided into two groups. The first group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to

the specific units.

S.N.	Units	Name of Unit	General Instructional techniques	Specific Instructional techniques	Remarks
Biodiversity Conservation					
1.	I	Fundamentals of Biodiversity	Lecture and discussion methods; power-point presentation	Demonstration method; internet search	
2.	II	Biogeography and Biomes	Lecture and discussion methods; Power-point presentation	Demonstration method; field work; assignment for preparing charts, models and book and article review; internet search	
3.	III	Status of Biodiversity	Lecture and discussion methods; power-point presentation	Book and research reports review ; article review and discussion; field work; problem solving and reports	

4.	IV	Biodiversity Conservation: Issues and Approaches	Lecture and discussion methods; power point presentation	Article and book review, project method, preparation of charts, and field trip	
5.	V	Protected Areas	Lecture and discussion methods; power-point presentation	Project work; group work; field work; case studies; and reports	
6.	VI	Policy Initiatives	Lecture and discussion methods; power-point presentation	Review policy documents	
Evolutionary Biology					
7.	I	Evolution	Lecture and discussion methods; power-point presentation	Article and book review	
8.	II	Theories of organic evolution	Lecture and discussion methods; power-point presentation	Project work; Internet search; preparation of charts, presentations; book review	
9.	III	Paleontological evidence	Lecture and discussion methods; power-point presentation	Internet search; preparation of charts, presentations; book review	
10.	IV	Mechanism of evolution	Lecture and discussion methods; power-point presentation	Inquiry method; project method; article review	

4.1 Evaluation [Internal Evaluation and End Semester (External) Evaluation]:

Nature of course	Internal Assessment	Semester Examination	Total Marks
Theory	40 Marks	60 Marks	100 Marks

***Note**: Students must pass separately in internal assessment and semester examination.*

4.2 Internal Evaluation **40 Marks**

Internal evaluation will be conducted by course teacher based on following activities:

1.	Attendance	5 Marks
2.	Participation in learning activities	5 Marks
3.	First assignment (written assignment)	10 Marks
4.	Second assignment (Project work / report writing and presentation)	10 Marks
5.	Third assignment/ Term Exam	10 Marks
	Total	**40 Marks**

Note: *First assignment/assessment might be book review /article review, quiz, home assignment etc according to nature of course. Second assignment/assessment might be project work, case study, seminar, survey/field study and individual/group report writing, term paper based on secondary data or review of literature and documents etc. and third assignment will be term exam.*

4.3 External Evaluation (Final Examination)60 Marks Examination Division, office of the Dean, Faculty of Education will conduct final examination at the end of semester. The marks distribution will be

1.	Objective type question (Multiple choice question 10 x1mark)	10 Marks
2.	Short answer questions (6 questions with 2 ‘OR’ questions × 5 marks)	30 Marks
3.	Long answer questions (2 questions with 1 ‘OR’ questions ×10 marks)	20 Marks
	Total	**60 Marks**

5. Recommended books and References for Biodiversity

Chaudhary, R.P. (1998). *Biodiversity of Nepal*. S. Devi Saharanpur (U.P.) & Tec Press Books 487/42 Soi Wattanasilp, Pratunam Bangkok-10400, Thailand

(Unit I to VI: All Units).

Primack R.B., Paudel P.K. & Bhattarai B.P. (2013). *Conservation biology*: A Primer for Nepal. Dreamland Publication Pvt. Kathmandu Nepal**.**

(Unit I, II, III & IV)

Bhuju, U.R., Shakya, P.R.,Basnet, T.B. and Shrestha, S. (2007). *Nepal Biodiversity Resource Book*. ICIMOD, UNEP and GoN, Kathmandu.

Conservation Foundation, (1985). *National Parks for a New Generation: Visions, Realities, Prospect:*a Report from the Conservation Foundation Richard King Mellon Foundation Washington, DC.

GoN/MFSC (2009). *Nepal Fourth Assessment Report to the Convention on Biological Diversity*. Ministry of Forests and Soil Conservation, GoN, Kathmandu.

Groom, J.M., Meffe, G.K. and Carroll, C.R. (2006). *Principles of Conservation Biology*. 3rd Edition.Sinauer Associates Publication,USA.

Huston, M.A. (1994). Biological Diversity: *The Coexistence of Species on Changing Landscape.* Cambridge University Press, New York.

McNeely, J.A. and Miller, K.R. (1984). *National Parks, Conservation and Development*. Smithsonian Institution Press, Washington, DC.

McNeely, J.A. (1989). *Conserving the World's Biological Resource*. A Primer on Principles and Practice for Development Action. World Resource Institute, Washington, DC.

Primack, R.B. (2006). *Essentials of Conservation Biology*. Sinauer Associates Inc. Publishers,Sunderland, Massachusetts.

Rastogi, V.B. (1990). *Invertebrate Zoology*. Kedar Nath and Ram Nath, Meerut, Delhi Waring, R.H. and Schlesinget, W.R.(1985). *Forest Ecosystem: Concepts and Management*. Academic Press, Orlando, Florida.

6. Recommended books and References for Evolutionary Biology

Barry Cox, C., Moore, Peter D., *Biogeography: An Ecological and Evolutionary approach*.

8th edition

Bhamrah HS and Chaturvedi CM (1997). *A text book of Genetics*. Anmol Publication Pvt.

Ltd, New Delhi

Moody P.A. (1970). *Introduction to Evolution*. Harper and Raw, London Ridley, Mark (1993), *Evolution*. Black Well Science Massachusetts, U.S.A. Smith, John Maynard (1993). *Theory of Evolution.* Cambridge University Press

Tyagi, Rajiv (2011), *Understanding Evolutionary Biology*. Discovery Publishing House, New Delhi

Verma, P.S. and V.K. Agarwal (1998). *Cell Biology, Genetics, Molecular Biology, Evolution and Ecology*. S. Chand and company Ltd. New Delhi.

Vidyarthi RD and Pandey PN (2000). *Textbook of Zoology.* S Chand and Company LTD, New Delhi.

White MJD (1973). *Animal Cytology and Evolution.* Cambridge University Press, London.

Ltd, New Delhi

Moody P.A. (1970). *Introduction to Evolution*. Harper and Raw,

London Ridley, Mark (1993), *Evolution*. Black Well Science

Massachusetts, U.S.A. Smith, John Maynard (1993). *Theory of*

Evolution. Cambridge University Press

Tyagi, Rajiv (2011), *Understanding Evolutionary Biology*. Discovery

Publishing House, New Delhi

Verma, P.S. and V.K. Agarwal (1998). *Cell Biology, Genetics, Molecular Biology,*

Evolution

and Ecology. S. Chand and company Ltd. New Delhi.

Vidyarthi RD and Pandey PN (2000). *Textbook of Zoology.* S Chand and

Company LTD, New Delhi.

White MJD (1973). *Animal Cytology and Evolution.* Cambridge University Press, London.

Chemistry Education

Chem. Ed. 525 T: Applied Physical Chemistry

Course No.: Chem. Ed. 525 T | Nature of course: Theoretical

Level: M.Ed. in Chemistry | Credit hours: 2

Semester: Second | Teaching hours: 32 Period per week: 2

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1. Course Description

This course aims to provide theoretical knowledge to the students pursuing Masters in Chemistry Education. The course provides the fundamental knowledge and skills by dealing with concepts, theories and practical aspects of physical chemistry. Furthermore, this course will help to make competent teachers in the field of chemistry required for schools and universities. The theory includes topics like liquid mixture, photochemistry, phase equilibria, chemical kinetics and electrolytic conductance.

2. General Objectives

The general objectives of this course are as follows:

- To introduce the advance knowledge on the principle, laws and theories in the area of physical chemistry.
- To acquaint the students with knowledge related to liquid mixture.
- To make the students familiar with principle and process involved in photochemistry.
- To acquaint the students with the knowledge of phase equilibria.
- To familiarize the students about the theories and process of chemical kinetics.
- To acquaint the students with the knowledge of electrolytic conductance.

3. Specific Objectives and Contents

Specific Objectives	Contents
• State and explain Raoult's law. • Explain ideal and non-ideal liquid mixture in terms of their types and properties. • Elaborate the idea of distillation of binary liquids. • Explain the behavior of liquid mixture in terms of the distillation diagram. • Describe the working principle, construction, and process in the fractionating	**Unit I: Liquid Mixture (7)** 1.1.Raoult's Law 1.2. Ideal and non-ideal liquid mixture: types and properties 1.3. Distillation of binary liquid 1.4.Temperature composition diagrams and fractional distillation using fractionating columns 1.5. Partially miscible Liquids: Type I, Type II, and Type III 1.6. Immiscible liquids- Steam distillation Solutions of gases in liquids 1.7. Effect of pressure on solubility-

column. • Illustrate three different types of partially miscible liquids. • Describe the principle and process involved in steam distillation. • State and explain Henry's law showing the effect of pressure on the solubility of the gas in the liquid. • State and explain the Nernst distribution law. • Derive an expression for Nernst distribution law. • Point out the advantages and limitations of Nernst distribution law. • Describe the application of Nernst distribution law. • Explain the principles and processes • Involved in solvent extraction.	Henry's Law 1.8.Effect of temperature on solubility Nernst distribution law 1.9.Statement, derivation, and limitations of Nernst distribution law 1.10. Thermodynamic derivation of distribution law 1.11. Applications of Nernst distribution law 1.12. Principles and processes involved in solve extraction
• Explain the photochemical reactions. • Describe the process of thermochemical reactions. • Determine absorption of light by photoelectric cell, thermopile and chemical actinometer. • Derive Lamberts' Beer's law. • Explain GrothusDrapler law. • Derive an expression for Stark-Einstein law of photochemical equivalence. • Describe the causes of low quantum yield and high quantum yield. • Explain the processes: phosphorescence, chemical luminescence, fluorescence and thermoluminescence. • Illustrate photochemical kinetics, gas reactions and photosensitized reaction. • Explain photochemical equilibrium.	**Unit II. Photochemistry (7)** 2.1. Photochemical and thermochemical reactions 2.2. Absorption of light 2.3. Determination of absorption of light by photoelectric cell, thermopile and chemical actinometer 2.4. Lamberts' and Beer's law 2.5. Law of photochemistry Grothus –Drapler law Stark –Einstein law of photochemical equivalence 2.6.Quantum yield, low quantum yield and high quantum yield 2.7.Causes of low and high quantum yield 2.8. Photophysical processes Phosphorescence Fluorescence Chemiluminescence 2.9.Thermoluminescence 2.10.Photochemical kinetics 2.11.Photochemical gas reaction 2.12.Photosensitized reaction

	2.13. Primary and secondary photochemical processes **2.14.** Photochemical equilibrium
• Illustrate parallel, opposing and consecutive reaction. • Derive integrated rate law equation for parallel, opposing and consecutive reactions • Derive Arrhenius equation for activation energy. • Determine the activation energy using Arrhenius equation. • Explain the role of activation energy on chemical reaction. • Explain the collision theory of unimolecular and bimolecular theory and derive the equation. • Explain the theory of absolute reaction rate and derive the equation • Explain the transition state theory and de rive the equation • Explain the effect of temperature on reaction rate. • Solve related numerical problems.	**Unit III Chemical Kinetics (8)** 3.1. Kinetics of chemical reactions 3.2. Parallel reaction 3.3. Opposing reaction 3.4. Consecutive reaction 3.5. Activation energy and chemical reaction, Arrhenius equation for activation energy 3.6. Theories of reaction rate 3.7. Collision theory of unimolecular and bimolecular reaction 3.8. Theory of absolute reaction rates 3.9. Transition state theory 3.10. Effect of temperature on reaction rate 3.11. Numerical problems
• Introduce various terms involved in phase equilibrium. • State phase rule and derive a mathematical expression. • Explain the concept of stability of phases. • Draw various phase diagrams. • Illustrate two component system. • Describe the Type I, Type II, and Type III two components phase diagrams. • Explain simple eutectic system.	**Unit IV: Phase Equilibrium (4)** 4.1. Introduction 4.2. Derivation of the phase rule 4.3. Stability of phases 4.4. Phase diagrams 4.5. Two component system, 4.6. Two component phase diagrams: Type I, Type II, and Type III **4.7.** Simple eutectic system
• Explain Debye -Huckel theory of inter- ionic attraction and its limitations. • Explain the Kohlrausch law of independent migration of ions. • Calculate the conductance ratio. • Describe the concepts of ionic mobilities and transport number.	**Unit V: Electrolytic conductance (6)** 5.1. Debye -Huckel theory of inter-ionic attraction and its limitations 5.2. Limitation of Debye-Huckel law 5.3. Kohlrausch law of independent migration of Ions 5.4. The conductance ratio 5.6. Ionic mobilities

• Explain conductometric titration involving neutralization and precipitation titration. • Describe the application of conductometric titration. • Explain the advantages of conductometric titration. • Solve related numerical problems.	5.7. Transport number 5.8. Conductometric titration involving neutralization and precipitation reactions 5.9. Advantage of conductometric titration Numerical problems

Note: *The figures in the parenthesis indicate the appropriate teaching hours for the respective units*.

4. Instructional techniques

The instructional techniques for this course are divided into two groups. The first group consists of the general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to specific units.

4.1 General instructional techniques

Discussion	Inquiry
Demonstration	Project work
Presentation	Cooperative and collaborative work
Group work	Internet (web) surfing

4.2 Specific Instructional Techniques

Units	***Specific Instructional Techniques***
I	Classroom presentation on the liquid mixture and perform individual practical activities in it.
II	Report writing and presentation followed by discussion
III	Performing individual simple practical experiments on chemical kinetics and Electrolytic conduction.
IV	Presentation by studying the handouts provided by the teacher followed by teachers' suggestions and performing individual practical activities on chemical kinetics.
V	Performing project work, presentation and discussions

5. Evaluation (Internal Assessment and External Assessment)

Nature of course	Internal Assessment	Semester Examination	Total Marks
Theory	25 Marks	40 Marks	65 Marks

Note: Students must pass separately in internal assessment and semester examination.

5.1 Internal Evaluation **25 Marks**

Internal evaluation will be conducted by course teacher based on following activities:

1.	Attendance and participation in learning activities	5 marks
2.	First assignment (written assignment)	5 marks
3.	Second assignment (report writing and presentation)	5 marks
4.	Third assignment/ Term Exam	10 marks
	Total	25 Marks

Note: *First assignment/assessment might be book review/article review, quiz, home assignment, etc., according to the nature of the course. The second assignment/assessment might be project work, case study, seminar, survey/field study and individual/group report writing, term paper based on secondary data or review of literature and documents, etc., and the third assignment will be a term exam.*

5.1 External Evaluation (Final Examination) **40 Marks**

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester. The marks distribution will be:

1.	Objective questions (Multiple Choice Questions 10 × 1 mark)	10 Marks
2.	Subjective questions (6 questions with 2 'OR' questions × 5 marks)	30 Marks
	Total	40 Marks

6. Recommended Books and References Recommended Books

Bahl, B. S. (2008). *Essentials of Physical Chemistry*, New Delhi: S Chand & Co. Ltd. (**For all units**)

Engel, T., & Reid, P. (2013). *Physical chemistry*. India: Dorling Kindersley (India) Ltd. **(For all units)**

Maron, S. H & Prutton, C. F. (1972) *Principles of physical chemistry (4th ed.):* New Delhi Oxford and IBH Co. Pvt. Ltd. (**For all units**)

Nagi, S. & Anand, S.C.A. (1991). A *Textbook of physical chemistry*. India: New Age International (P) Limited Publishers. **(For all units)**

Gurtu, J. N. & Gurtu, A. (2010). *Physical chemistry Vol I*. Meerut: Pragati Prakashan**(For Unit III)**

7. References

Atkins, P. & Paula, J. D., (2010) *Physical chemistry* (9th ed.): Oxford University Press.

Glasstone, S. & Lewis, D. *Elements of physical chemistry*. India: McMillan and Co. Ltd. Gurtu, J. N. &Gurtu, A. (2006). *Advance physical chemistry*. Meerut: Pragati Prakashan Kapoor (1992). *Textbook of physical chemistry*. India: McMillan India Ltd.

Madan, R. L. &Tuli, G. D.(2001) *Physical chemistry*. New Delhi: S Chand and Co. Ltd. Silbey, J., Robert, A., &Barendi, G. M. (2006). *Physical chemistry*. New Delhi: Wiley India

Pvt. Ltd.

Chem. Ed. 525 P: Applied Physical Chemistry

Course No: Chem. Ed. 525 P	Nature of the course: Practical
Level: M.Ed. in Chemistry	Credit Hours: 1
Semester: Second	Teaching hours: 48*
	Period per week: 3pds/day/week/gr(P)**

1. Course Description

This course aims to provide knowledge and skills related to the practical aspect of physical chemistry through lab-based experiments. Students are expected to be competent in applying the knowledge and skills learned to real teaching and other professional careers. The practical portion includes lab-based practical activities and experiments on chemical kinetics, electrolytic conduction, photochemistry, and partition coefficient.

2. General Objectives

- To provide knowledge on the practical aspect of physical chemistry
- To develop hands-on skills through physical lab-based activities
- To familiarize the students with the recent advances in chemistry experiments and their applications in teaching carrier.

3. Specific Objectives and Contents

Specific Objectives	Contents
• Determine the activation energy of acid- catalyzed hydrolysis of methyl acetate. • Find out the kinetics of oxidation of alcohol by acidified $K_2Cr_2O_7$. • To study the hydrolysis of ethyl acetate with sodium hydroxide. • Find out the reaction between $K_2S_2O_8$ and KI by titrimetric method.	**Unit 1. Chemical Kinetics (15)** 1.1. Determining the activation energy 1.2. Finding out the kinetic of reaction (oxidation) 1.3. Hydrolysis of ethyl acetate 1.4. Study the reaction between $K_2S_2O_8$ and KI by the titrimetric method

• Determine the equivalent Conductance at infinite dilution of strong electrolyte (Eg.KCl, AgCl) at several concentrations and verify the Onsagar's equation. • Verify Ostwald dilution law by conductance determining the equivalent conductance of a weak electrolyte (CH_3COOH) by conductance measurement. • Conduct acid base titrations • Conductometrically. • Determine the composition of a mixture of • acetic acid and hydrochloric acid by conductometric titration.	**Unit 2. Electrolytic Conductance (21)** 2.1 Conductometric acid and base titration Conductometric determination of equivalent conductance. 2.3 Verification of Ostwald dilution law by conductance measurement
• To verify Lambert's -Beers' law	**Unit 3. Photochemistry (6)** 3.1 Verification of Lambert's –Beers' law
• Determine the partition coefficient of iodine between inorganic and organic solvents (Benzene, Carbon tetrachloride, Kerosene).	**Unit 4. Partition Coefficient (6)** 4.1. Determination of partition coefficient of iodine between organic and inorganic solvents

Note: *The figures in the parenthesis indicate the appropriate teaching hours for the respective units*.

4. Specific Instructional Techniques

- Performing experiments
- Interview
- Report writing

4.1 Evaluation **35 Marks**

Nature of course	Internal Evaluation	External Evaluation	Total Marks
Practical	15 Marks	20 Marks	35 Marks

4.2 Internal Evaluation **15 Marks**

Marks distribution for practical internal evaluation will be as following.

1.	Attendance	5Marks
2.	Students' portfolios (Record book and Books and article review etc.)	5Marks
3.	Participation, collaborative work and construction of teaching learning resources and planning for teaching learning ***	5Marks
	Total	15Marks

4.3 External Evaluation **20 Marks**

Marks distribution for practical external evaluation will be as following.

1.	Experiment / project work report and presentation / study reports	15Marks
2.	Viva-voce	5 Marks
	Total	20Marks

Note:

Students must pass both in internal as well as external assessment of practical examination

** Practical teaching hours is 3 times more than teaching hours of theory (3x 16 = 48 hours)*

***A group consists of 15 students and one teacher will be assigned for a group.*

****Construction of models, charts, teaching aids, develop concept map etc. Also, the collection of materials / designing science lab, preparation of lesson plan, unit plan, annual plan, preparation of rubrics, developing test items of various levels etc. for teaching learning.*

5. Recommended Books

Ghimire, K.N. & Bohara, K. P. (2008). *University Experimental Physical Chemistry*.

Kathmandu: Quest Publication.

Gurtu, J. N. &Gurtu, A. (2014). *Advanced Physical Chemistry Experiments,* (6th ed.), Meerut, India: Pragati Prakashan.

Khadka, D. B. (2009). *Practical Physical Chemistry*. Kathmandu: Sunlight Publication. Vishwanathan, B. & Raghavan, P. S. (2005). *Practical Physical Chemistry.* New Delhi:

Viva Books Pvt. Ltd.

Chem. Ed. 526 T: Advanced Inorganic Chemistry

Course Code: Chem. Ed. 526 T	Nature of Course: Theoretical
Level: M.Ed. in Chemistry	Credit Hours: 2
Semester: Second	Teaching hours: 32 Period / Week: 2

1. Course Description

This course is designed for the students who specialize in chemistry Education at M.Ed. Level. The main aim of this course is to provide a broad and advanced knowledge of inorganic chemistry. It deals with the different theoretical expertise in inorganic chemistry and focuses on studying the structure and properties of inorganic compounds. This course includes six units: Periodic classification of elements, Chemical bonding, Coordination chemistry, organometallic compounds, Acid-base chemistry, and Redox reactions.

2. General Objectives

The general objectives of the course are as follows:

- To acquaint the students with the chemistry of elements and their compounds
- To make the students familiar with different types of chemical bonding and approaches to chemical bonding
- To use various methods to study coordination compounds' structure and reaction mechanism.
- To acquaint the students with knowledge of organometallic compounds, their preparation, properties, and uses
- To familiarize the students with different concepts of acid-base strength, hardness and softness of acid and base.
- To provide the students with the knowledge of redox reactions

3. Specific Objectives and Contents

Specific Objectives	Contents
• Classify the elements based on their electronic configuration. • Illustrate the trends in physical and chemical properties of the Groups IA, IIIA, IVA and IVB. • Explain the sources, isolation, and properties of noble gases. • Describe the chemistry of xenon compounds and clathrates compounds of noble gas. • Describe the sources, isolation, and properties of noble gases. • Explain the chemistry of Ti compounds. • Explain the chemistry of Cr compounds.	**UNIT I: Periodic Classification of the Elements (8)** 1.1. Classification of elements Group discussion: IA (Na, K, Rb, and Cs) IIIA (Al, Ga, In, Tl) VI A (Si, Ge, Sn, Pb) VIB (Ti, Zr, and Hf) 1.2. Noble gases: Sources, isolation, and properties of noble gases Compounds of Xenon Clathrates compound of noble gases Occurrence, extraction, and properties of some metals: Titanium and chromium Chemistry of: Ti compounds, Cr compounds
• Define and explain the role of ionization energy, electron affinity, and solvation energy in chemical bond formation. • Explain the lattice energy. • Calculate the lattice energy for ionic compounds by use of Born- the Lande equation. • Explain the Born Haber cycle for the formation of an ionic compound. • State and illustrate Fajan's rule for polarizability. • Explain the valence bond theory for the formation of homonuclear and heteronuclear molecules. • Explain the molecular orbital theory for the construction of homonuclear and heteronuclear molecules. • Elaborate the Pauling-Slater's theory for atomic orbital overlap.	**UNIT II: Chemical Bonding (7)** 2.1. Ionization energy, electron affinity, and solvation energy 2.2. Lattice energy 2.3. Calculation of lattice energy (Born- Lande Equation) 2.4. The Born Haber cycles 2.5. Polarizing power and polarizability (Fajan's rule) 2.6. VBT and MOT for the formation of homonuclear and heteronuclear diatomic molecules, i.e., H_2, H_2^+, HCl molecules, etc. 2.7. Pauling-Slater's theory

• Define coordination compounds. • Describe the Effective atomic number rule of coordination compounds • Explain Sidgwick's Effective Atomic Number (EAN) rule • Illustrate the application of the EAN rule • Discuss Elements symmetry and Symmetry operations • Explain the isomerism's in the coordination compounds • Illustrate the inner and outer orbital complexes • Explain the nature of linkage and factors affecting the stability of complexions and coordination Compounds	**UNIT III: Coordination Chemistry (5)** 3.1. Introduction 3.2. EAN rule 3.3. Elements symmetry and symmetry operations 3.4. Isomerism in the coordination compounds 3.5. Inner and outer orbital complexes 3.6. Factors affecting the stability of complexions and coordination compounds
• Classify the organometallic compounds based on the polarity of the metal-carbon bond. • Describe the general characteristics of organometallic compounds. • Illustrate the apt nomenclature of organometallic compounds. • Explain the preparation, properties, and uses of organolithium and organoaluminium compounds. • Explain the preparation and uses of metal-olefin complexes. • Explain the general methods of preparation and properties of metallocenes. • Describe the specific properties of ferrocene.	**UNIT IV: Organometallic Compounds (5)** 4.1. Introduction 4.2. Classification based on the polarity of the M-C bond 4.3. General methods of preparation and characteristics of organometallic compounds 4.4. Haptonomenclature 4.5. Organolithium compounds 4.6. Organoaluminium compounds 4.7. Metal-olefin (alkene) complexes 4.8. Cyclopentadienyl complexes: metallocene 4.9. Preparation and general properties of metallocene 4.10. Properties of ferrocene

• Describe the solvent system. • Describe the steric effects, symbiosis, and solvation effect. • Illustrate the hard and soft acids and bases. • Explain the theoretical basis for hardness and softness of acid and base.	**UNIT V: Acid-Base Chemistry (4)** 5.1. Solvent system 5.2. Measures of acid-base strength 5.3. Steric effects, symbiosis, solvation effect 5.4. Hard and soft acids and bases 5.5. Theoretical basis of hardness and softness of acids and bases
• Explain electron transfer reaction. • Illustrate the electron tunneling mechanism. • Explain the complementary of two equivalent exchange. • Study electron transfer through the extended bridge. • Explain atom transfer reaction. • State and explain Marcus theory of redox reaction.	**UNIT VI Redox Reactions (3)** 6.1.Electron transfer reaction 6.2.Electron tunneling mechanism 6.3.Electron transfer through the extended bridge 6.4.Atom transfer reaction 6.5.Complementary two equivalent exchange **6.6.**Marcus theory

Note: *The figures in the parenthesis indicate the appropriate teaching hours for the respective units*.

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. The first group consists of the general instructional strategies, and the second group consists of specific instructional techniques appropriate to particular units.

4.1 General Instructional Techniques

- Discussion
- Demonstration
- Presentation
- Group work
- Inquiry
- Project work
- Cooperative and collaborative work
- Internet (web) surfing

4.2. Specific Instructional Techniques/Activities

Units	Specific Instructional Techniques
I	Classroom presentation on the periodic classification of elements.

II	Report writing and presentation followed by a discussion on chemical bonding.
III	Performing individual simple practical experiments
IV	Performing individual and group project work and presenting in the classroom
V	Assessing learning through students'presentations and demonstration
VI	Performing demonstrations on specific topics.

5. **Evaluation (Internal Assessment and External Assessment**)

Nature of course	Internal Assessment	Semester Examination	Total Marks
Theory	25 Marks	40 Marks	65 Marks

Note: Students must pass separately in internal assessment and semester examination.

5.1. Internal Evaluation **25 Marks**

Internal evaluation will be conducted by the course teacher based on the following activities:

1.	Attendance and participation in learning activities	5 marks
2.	The first assignment (written assignment)	5 marks
3.	Second assignment (report writing and presentation)	5 marks
4.	Third assignment/ Term Exam	10 marks
	Total	25 Marks

Note: *First assignment/assessment might be book review /article review, quiz, home assignment, etc., according to the nature of the course. The second assignment might be project work, case study, seminar, survey/field study and*

individual/group report writing, term paper based on secondary data or review of literature and documents, etc. The third assignment will be the term exam.

5.3 External Evaluation (Final Examination) 40 Marks

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester. The marks distribution will be

1. Objective questions (Multiple Choice Questions 10 × 1mark)	10 Marks
2. Subjective questions (6 questions with 2 'OR 'questions × 5 marks)	30 Marks
Total	40 marks

6. Recommended Books and References Recommended Books

Huheey, J. E., Keiter, E.A,Keiter,R.L., Medhi,O.K.(2009). *Inorganic Chemistry Principles of Structure and Reactivity* 4th ed., Pearson Education (UNIT II, III, IV, V)

Miessler, G.L.Tarr, A.D.(2011) *Inorganic Chemistry* 3rd ed. Pearson (UNIT I, III, IV) Prakash, S.Tuli, G.D.Basu, S.K.&Madan, R.D. (2006*). Advanced Inorganic Chemistry Vol.*

*I*New Delhi: S.Chand& Company Ltd. (UNIT I, II, V)
Prakash, S.Tuli, G.D.Basu, S.K.&Madan, R.D. (2006). *Advanced Inorganic Chemistry Vol.II*

New Delhi: S.Chand& Company Ltd. (UNIT III, IV)

7. References

Aggarwal, R.C. (1999).*Modern Inorganic Chemistry*. Allahabad, India: Kitab Mahal (UNIT I, III

Chakrabarty,D.K.(2003). *Inorganic Chemistry.* India.New Age International (UNIT II, III, IV, V

Cotton, F.A., Wilkinson, G.&Gaus, P.L.*Basic Inorganic Chemistry 3rd* ed.A-Wiley Interscience publication. (UNIT I, II, III, V)

Cotton, F.A.Wilkinson, G.Murillo, C.A.& Bochmann, M. *Advanced Inorganic Chemistry* 6th ed. A Wiley-Interscience Publication John Wiley and Sons, Inc. (UNIT I)

Gurdeep, R.(1996) *Advanced Inorganic Chemistry*, Meerut, India: Goel Publishing House Huheey, J. E.,Keiter,E.A,Keiter,R.L.,(1993).*Inorganic Chemistry* 4th ed., Harper Collins

College Publishers

Jordan, R.B. (1991) *Reaction Mechanisms of Inorganic and Organometallic Systems*. Newyork: Oxford University Press. (UNIT III, IV, VI)

Lee, J.D. (1977), *Concise Inorganic Chemistry*, London: ELBS and Van Nostrand Reinhold Company Ltd.

Liptrot, G.F.(1978), *Modern Inorganic Chemistry*. Mills & Boon.

Pearson, A.J.(1988). *Metallo-organic Chemistry.*John Wiley & Sons A- Wiley Interscience Publication. (UNIT IV)

Shriver, D.F. & Atkins, P.W. *Inorganic Chemistry*. Oxford University Press

Taube, H.(1970), *Electron Transfer Reactions of Complex Ion in Solution*. Newyork: Academic Press (UNIT VI)

Chem. Ed. 526 P: Advanced Inorganic Chemistry

Course Code: Chem. Ed. 526 P	Nature of Course: Practical.
Level: M.Ed. in Chemistry	Credit hours: 1
Semester: Second	Teaching hours: 48*
	Period per week: 3pds/day/week/gr(P) **

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1. Course Description

This course aims to provide knowledge and skills related to the practical aspect of inorganic chemistry through lab-based experiments. Students are expected to be competent in applying the knowledge and skills learned to real teaching and other professional careers. The practical portion includes lab-based practical activities and experiments on qualitative salt analysis, gravimetric analysis, and preparation of some inorganic compounds.

2. General Objectives

- The general objectives of this course are as follows:
- To develop practical knowledge of the inorganic salt analysis and preparation of chemicals
- To develop practical skills in the inorganic salt analysis and preparation of some inorganic compounds.

3.Specific Objectives and Contents

Specific objectives	Content
Detect the acidic and basic radicals present in the inorganic salt mixture by qualitative analysis.	**Unit:1 Qualitative Analysis (30)** 1.1 Analysis of inorganic salt mixture containing at least six radicals. Any five Sample mixture
Estimate Iron as Iron (III) oxide. Estimate Calcium as Calcium Oxide. Estimate Cu as thiocyanate and Zn as pyrophosphate in the mixture of salt.	**Unit:2 Gravimetric Analysis (12)** Iron in iron (III) Salt Calcium in Calcium Salt Cu and Zn in the mixture of the two salts

Prepare some chemical compounds in the laboratory	**Unit:3 Inorganic Preparations (6)** Preparation of potassium dichromate Preparation of Sodium thiosulphate Preparation of Sodium nitroprusside

4. Specific Instructional Techniques

- Performing experiments
- Interview
- Report writing

5. **Evaluation**

35 Marks

Nature of course	**Internal Evaluation**	**External Evaluation**	**Total Marks**
Practical	15 Marks	20 Marks	35 Marks

5.1 Internal Evaluation **15 Marks**

Marks distribution for practical internal evaluation will be as following.

1.	Attendance	5Marks
2.	Students' portfolios (Record book and Books and article review etc.)	5Marks
3.	Participation, collaborative work and construction of teaching learning resources and planning for teaching learning ***	5Marks
	Total	15Marks

5.2 External Evaluation **20 Marks**

Marks distribution for practical external evaluation will be as following.

1.	Experiment / project work report and presentation / study reports	15Marks
2.	Viva-voce	5 Marks
	Total	20Marks

Note:

Students must pass both in internal as well as external assessment of practical examination

** Practical teaching hours is 3 times more than teaching hours of theory (3x 16 = 48 hours)*

***A group consists of 15 students and one teacher will be assigned for a group.*

****Construction of models, charts, teaching aids, develop concept map etc. Also, the collection of materials / designing science lab, preparation of lesson plan, unit plan, annual plan, preparation of rubrics, developing test items of various levels etc. for teaching learning.*

6. Recommended Text Books

Ghimire, K.N., Pokhrel, M.R. & Bohara, K.P. (2008), *University Experimental Inorganic Chemistry*, Kathmandu: Quest Publication

Gurtu, J.N.*Advanced Experimental Chemistry Inorganic Vol II*, New Delhi: S.Chand& Company Ltd.

Pokhrel, M.R.,Yadav,P.N.&Shrestha,S.(2009), *Advanced Practical Inorganic Chemistry,* Kathmandu: Kshitiz Publication

Sharma, K.K. & Sharma, D.S. (1999). An Introduction to Practical Chemistry, New Delhi: Vikas Publishing House Pvt. Ltd.

Svehla, G. (Revised by) Vogel'*s Qualitative Inorganic Analysis 7th ed.*

Pearson Verma, R.M. (1991) *Analytical Chemistry Theory and Practical 2nd ed*.Delhi: CBS

Publishers & Distributers Vogel, A.I. (1994) *Text Book of Practical Inorganic Chemistry* London: ELBS and Longman

Chem. Ed. 528 T: Modern Chemistry Teaching

Course No.: Chem. Ed. 528 T	Nature of course: Theoretical
Level: M.Ed. in Chemistry	Credit Hours: 2
Semester: Second	Teaching hours: 32
Period per week: 2	

1. Course Description

This course is designed to develop advanced knowledge and understanding of the realms of Chemistry education. The main aim of the course is to widen the horizon of knowledge and understanding of students with a view to make them able to identify significant problems in school and the university level Chemistry education. It deals with different aspects of Chemistry education with special emphasis on the philosophical, theoretical and methodological understanding of constructivism, misconception, e-learning, instructional module, research, concept mapping and post-modern approaches.

2. General Objectives

The general objectives of this course are as follows:

- To provide in-depth knowledge of modern pedagogical approaches in Chemistry education.
- To develop planning skills to prepare lesson modules and instructional activities.
- To identify different teaching-learning techniques to implement in classroom situations;
- To develop essential teaching-learning materials, activities and tools of assessments in Chemistry teaching and learning;
- To apply the knowledge of Chemistry education to address scientific inquiries in contemporary pedagogical approaches;
- To acquire the ability to think scientifically, and independently and to make rational discussions in relation to Chemistry education.

3. Specific Objectives, Contents and Activities

Specific Objectives	Contents
• Elaborate on the prevalent issues in school Chemistry education related to classroom dynamics, the role of Chemistry teachers and students, pedagogical orientation, knowledge generation, and evaluation. • Explain the meaning, importance and strategies of teaching Chemistry in the wider context. • Describe the techniques for the development of scientific and technological literacy. • Elaborate teaching for the understanding of Chemistry education. • Describe the model of teaching for understanding and application of Chemistry education.	**Unit 1. Issues and Trends in Chemistry Teaching (4pds.)** 1.1. Introduction 1.2. Issues of chemistry education at school level 1.3. Teaching chemistry in the wider context 1.4. Development of scientific and technological literacy 1.5. Scientific temper: A theoretical framework and dimensions 1.6. Teaching for the understanding of chemistry education
• Explain the meaning of the philosophical and theoretical understanding of contemporary perspectives of Chemistry education. • Elaborate on the meaning of the constructivist paradigm of learning. • Explain the basic foundation of constructivism philosophy. • Describe the application of praxis and project work in Chemistry teaching and learning. • Explain the Kolb learning cycle and its application in Chemistry learning. • Describe the application of David Kolb's experiential learning cycle. • Write down the implications of Ausubel and Bruner's theory of cognitive development. • Describe the theoretical and philosophical background of the	**Unit 2. Contemporary Psychological Perspectives of Chemistry Learning (4pds.)** 2.1. Introduction to contemporary perspectives of learning 2.2. Learning theories of John Dewey, David Kolb, Ausubel and Bruner Constructivist paradigm of learning Constructivist epistemology of Chemistry learning 2.3. Theoretical and philosophical understanding of constructivism 2.4. Types of constructivism (socio-cultural and radical) 2.5. Constructivism in teaching chemistry Constructivism in curriculum and textbooks development, teaching methods and evaluation techniques Constructivist checklist for the chemistry teachers **2.6.** 5E teaching model

constructivist perspective of learning. • Explain the implications of socio-cultural and radical constructivism in Chemistry teaching and learning. • Explain the importance of constructivism epistemology in the development of Chemistry curricula and textbooks. • Construct a constructivist checklist of a Chemistry teacher. • Explain the 5E teaching model and its implications in Chemistry teaching/learning. • Discuss the techniques of promoting constructivist classroom culture.	
• Give the introduction of concept map and its origins. • Describe the various models of concept maps. • Discuss the psychological foundations of concept maps. • Explain the epistemological foundations of concept maps. • Describe meta-cognition and meaningful learning. • Explain the theoretical and philosophical meaning of concept mapping. • Explain the ways of developing concept maps to develop social qualities of students. • Explain steps of developing concept maps. • Develop concept maps on the basis of the word parking approach. • Describe the implications of concept mapping in Chemistry education. • Construct different models of concept maps.	**Unit 3. Concept Mapping and Chemistry Education (4pds.)** 3.1. Introduction 3.2. Origin of concept maps 3.3. Models of concept maps 3.4. Psychological foundations of concept maps 3.5. Epistemological foundations of concept maps 3.6. Meta-cognition and meaningful learning 3.7. Theoretical framework of concept mapping 3.8. Constructing concept maps 3.9. Steps of developing concept maps 3.10. Develop concept maps by word parking method 3.11. Implications of concept mapping in Chemistry education

• Explain the importance of e-learning in Chemistry education. • Describe the principles of e-learning. • Explain the goals and importance of e- learning. • Explain Web-based learning. • Elaborate on the meaning of WebQuest and its use in Chemistry education. • Explore virtual field trips in Chemistry teaching and learning. • Explain the steps of Moodle platform to deliver the content of Chemistry education in the virtual learning environment. • Explore the new source of information such as Google scholar, education resource information centre (ERIC) and Hinari.	**Unit 4: Weaving e-learning in Chemistry Education (4pds.)** 4.1. Introduction of e-learning 4.2. Principles of e-learning 4.3. Approaching of e-learning 4.4. Integrating ICT in Chemistry teaching and learning 4.5. Web-based learning 4.6. WebQuest 4.7. Virtual field trips 4.8. Moodle platform
• Define scientific literacy with examples. • Explore the ways of developing scientific literacy and critical thinking. • Explain the meaning, nature and characteristics of values. • Enlist the sources of establishing values among the students. • Explain the identification and categorization of values. • Describe the techniques for promoting scientific literacy among the students. • Illustrate the meaning of creativity. • Discuss the characteristics of creative persons. • Discuss the ways of stimulating creativity in chemistry classes. • Explain the ways of developing chemistry process skills. • Predict the vision for chemistry education for the future. • Explain chemistry pedagogy for the 21st century.	**Unit 5. 21st Century Issues in Chemistry Education (4pds.)** 5.1. Scientific literacy 5.2. Critical thinking 5.3. Value education 5.4. Life skills development 5.5. Chemistry process skills 5.6. 21st-century relevant Chemistry pedagogy 5.7. Vision of Chemistry education

• Explain the meaning and importance of the Chemistry teachers' professional development programmes. • Elaborate on the meaning of Chemistry teachers' competencies. • Discuss the basic qualities of a Chemistry teacher. • Describe the importance of the professional development activities in recent instructional pedagogies. • Evaluate the need for Chemistry teachers' professional development programmes in Nepal. • Illustrate the Chemistry teachers' competencies (CTC). • Explain the approaches for teachers' professional development programs. • Explain the strategies for teachers' professional development in Nepal. • Explain the purposes of understanding Chemistry teachers' competencies. • Critique on the existing strategies of Chemistry teachers' professional development programs in Nepal.	**Unit 6. Chemistry Teachers Professional Development (4pds.)** 6.1. Introduction 6.2. History of teachers' professional development in Nepal 6.3. Importance of Chemistry teachers' professional development 6.4. Approaches to professional development 6.5. Strategies of professional development **6.6.** Chemistry teachers' competencies

• Describe the approaches to Chemistry teaching and learning. • Elaborate on cooperative and collaborative learning strategies. • Explain the implications of the heuristic method in teaching Chemistry. • Illustrate the importance of inquiry-based learning. • Explain the types of inquiry-based learning. • Explain the characteristics of project-based learning. • Design project-based Chemistry learning. • Explore the meaning and importance of context-based Chemistry learning. • Explain the meaning and importance of research-based Chemistry learning. • Define self-directed learning. • Explain the importance and procedural steps of self-directed learning. • Discuss the importance and strategies of flipped classrooms. • Critique on the models of flipped learning method. • Explain the importance of cafeteria learning in the changing context. • Explore the procedure of the cafeteria • learning method.	**Unit 7. Chemistry Teaching Strategies (4pds.)** 7.1. Introduction 7.2. Approaches to Chemistry teaching 7.3. Cooperative and collaborative 7.4. learning strategies 7.5. Heuristic method 7.6. Inquiry-based learning 7.7. Project-based learning 7.8. Context-based Chemistry learning 7.9. Research-based learning 7.10. Self-directed learning 7.11. Flipped learning 7.12. Cafeteria learning method
• Review a research proposal in Chemistry education. • Explain the meaning and cycle of participatory action research (PAR). • Discuss the principles of participatory action research methodology. • Describe the sources of data generation and analysis techniques related to participatory action research.	**Unit VIII: Research Review in Chemistry Education (4 Pds)** 8.1. Research proposa in Chemistry education 8.2. Participatory action research (PAR) methodology in Chemistry education 8.3. Webinar on contemporary issues in Chemistry education 8.4 Review of dissertations and articles related to Chemistry education

• Conduct a seminar/webinar on the issue of Chemistry education. • Review dissertations and articles related to Chemistry education (at least 2 articles within 1000 words of each).	

Note: *The figures in the parenthesis indicate the appropriate teaching hours for the respective units*.

4. Instructional Techniques

4.1 General Instructional Techniques

- Discussion
- Demonstration
- Presentation
- Inquiry
- Project work
- Cooperative and collaborative work
- Internet (web) surfing
- Group work

4.2 Specific Instructional Techniques

Units	Specific Instructional Techniques
I	Classroom presentation on issues and trends in Chemistry teaching.
II	Report writing and presentation followed by discussion.
III	Presentation by studying the handouts provided by the teacher followed by teachers' suggestions.
IV	Video display about e-learning and reflect on it with comments. Perform ICT activities in ICT lab.
V	Paper writing and presentation followed by discussion.
V I	Presentation by studying the handouts provided by the teacher followed by teachers' suggestions on. Construct module on the basis of Moodle.
V II	Classroom presentation and group discussion orientated to the presentation.
VIII	Lived discussions and engagement through group activities.

5. Evaluation

5.1 Evaluation (Internal Assessment and External Examination)

Nature of course	Internal Assessment	Semester Examination	Total Marks
Theory	25 Marks	40 Marks	65 Marks

Note: Students must pass separately in internal assessment and semester examination.

5.2 Internal Evaluation **25 Marks**

Internal evaluation will be conducted by course teacher based on following activities:

1.	Attendance and participation in learning activities	5 Marks
2.	First assignment (written assignment)	5 Marks
3.	Second assignment (report writing and presentation)	5 Marks
4.	Third assignment/ Term exam	10 Marks
	Total	**25 Marks**

Note: *First assignment/assessment might be book review /article review, quiz, home assignment etc. according to nature of course. Second assignment/assessment might be project work, case study, seminar, survey/field study and individual/group report writing, term paper based on secondary data or review of literature and documents etc. and third assignment will be term exam.*

5.3 External Evaluation (Final Examination) **40 Marks**

Examination Division, office of the Dean, Faculty of Education will conduct final examination at the end of semester. The marks distribution will be

3. Objective questions (Multiple Choice Questions 10 questions x 1 mark)	10 Marks
4. Subjective short questions (6 questions with 2 'OR 'questions x 5 marks)	30 Marks
Total	**40 Marks**

6. Recommended Books and References

Acharya, K. P. (2020). *Methods of Science Teaching*. Intellectuals Book Palace, Kathmandu.

Agrawal, J. C. (2005). Essential of educational technology, Teaching-learning innovation in education, Vikas Publishing House Pvt. Ltd.

Anyon, J. (1980). Social class and the hidden curriculum of work. Journal of education, 162, 67-69.

Bloom, B. S., Hastings, T. J., and Madaus, G. F. (1971). Handbook *On Formative And Summative Evaluation Of Student Learning*. New York: McGraw-Hill.

Brophy, J. E. (1980). Recent research on teaching, East Lansing, Mich.: Institute for research on teaching, Michigan State University.

Gagne, R. M., and White, R. (1978). Memory structures and learning outcomes, Review of Educational Research, 48 (2), 187-222.

Leinhardt, G., and Greeno, J. (1986). The cognitive skill of teaching, Journal of Educational Psychology, 78, 75-95.

Radha, M. (2010). Innovative Science Teaching, Prentice-Hall of India Pvt. Ltd., New Delhi.

Richard. I. (2007). Learning to Teach, McGraw Hill, Inc. New York, U.S.A. Sood, J.K. (2001). Teaching of Science. Vikash Publishing House, New Delhi.

7. References

Barmby, P., Kind, P. M., & Jones, K. (2008). Examining changing attitudes in secondary school science. *International journal of science education*, *30*(8), 1075-1093.

Blumenfeld, P. C., Soloway, E., Marx, R. W., Krajcik, J. S., Guzdial, M., &Palincsar, A. (1991). Motivating project-based learning: Sustaining the doing, supporting the learning. *Educational psychologist*, *26*(3-4), 369-398.

Chadwick, R. (2018). *Development and assessment of scientific literacy for secondary level Chemistry education* (Doctoral dissertation, Dublin City University).

Colley, K. (2008). Project-based science instruction: A primer. *The Science Teacher*, *75*(8), 23.

Datta, R. K. (2018). Rethinking environmental science education from Indigenous knowledge perspectives: An experience with a Dene First Nation community. *Environmental Education Research*, *24*(1), 50-66.

DeFillippi, R. J. (2001). Introduction: Project-based learning, reflective practices and learning.

Dowd, J. E., Duncan, T., & Reynolds, J. A. (2015). Concept maps for improved science reasoning and writing: Complexity isn't everything. *CBE—Life Sciences Education*, *14*(4), ar39.

Gautam, A. (2018). Effectiveness Of Constructivist Approach Based Instructional Material On Reaction Achievement And Retention Of Secondary Level Students.

Greenhow, C., Gibbins, T., & Menzer, M. M. (2015). Re-thinking scientific literacy out-of- school: Arguing science issues in a niche Facebook application. *Computers in Human Behavior*, *53*, 593-604.

Grimalt-Álvaro, C., Ametller, J., &Pintó, R. (2019). Factors shaping the uptake of ICT in science classrooms. A study of a large-scale introduction of interactive whiteboards and computers. *International Journal of Innovation in Science and Mathematics Education*, *27*(1).

Hoeg, D. G., & Bencze, J. L. (2017). Values underpinning STEM education in the USA: An analysis of the Next Generation Science Standards. *Science Education*, *101*(2), 278- 301.

Huizenga, J. C., Ten Dam, G. T. M., Voogt, J. M., & Admiraal, W. F. (2017). Teacher perceptions of the value of game-based learning in secondary education. *Computers & Education, 110*, 105-115.

Chem. Ed. 528 P: Modern Chemistry Teaching

Course No.: Chem. Ed. 528 P

Nature of course: Practical Level: M.Ed. in Chemistry
Credit Hours: 3
Semester: Second Teaching hours: 48*
Periods per week: 3 pds/day/week/gr (P)**

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1. **Course Description**

This course is a practical course and designed to develop knowledge and skills for conducting practical classes at high school, Bachelor's and Master's level of Chemistry education courses. It develops the skills of development of reports, presentations, and seminar papers, conducting workshops and applying innovative and recent pedagogical approaches related to Chemistry teaching and learning at different levels.

2. **General Objectives**

- To prepare research articles based on the recent pedagogical approaches in Chemistry education.
- To prepare and present seminar papers by conducting seminars on the issues of Chemistry education in Nepal and abroad.
- To develop the skills in PowerPoint presentations and skills of engaged and lived presentations.
- To draft the manuscripts of research articles based on the concept mapping, constructivism, application of information, communication and technology and the developmental perspectives related to Chemistry education.

3. **Contents**

Students Activities/Contents	**Total hours (48)**
Unit 1. Issues and Trends in Chemistry Teaching • Prepare a report on the issues in school level Chemistry education. • Present in the class through PowerPoint presentation on teaching Chemistry in the wider context. • Prepare a report on the development of scientific and technological literacy. • Organize a seminar about teaching for the understanding of Chemistry education and the vision of teaching Chemistry.	6

Unit 2. Contemporary Psychological Perspectives of Chemistry Learning • Prepare a review paper on the learning theories of John Dewey, David Kolb, Ausubel and Bruner related to Chemistry education. • Present on the theoretical and philosophical understanding of constructivism. • Critically examine and prepare manuscripts on constructivism in curriculum and textbooks development, teaching methods and evaluation techniques. • Prepare a 5E model by the use of the improvised materials and display with its use in the class.	7
Unit 3. Concept Mapping and Chemistry Education • Prepare a paper and present the theoretical and philosophical meaning of concept mapping. • Construct concept maps on various models on the chart papers on the basis of the word parking approach.	6
Unit 4: Weaving e-learning in Chemistry Education • Present the importance of e-learning in Chemistry education and describe the principles of e-learning. • Prepare a paper on the goals and importance of e-learning as well as web-based learning. • Explore virtual field trips sites (based on the specific curriculum), organize a programme and discuss the importance of virtual field trips in Chemistry teaching/learning. • Explore new sources of information such as Google Scholar, education resource information centre (ERIC) and Hinari. Download papers, share and discuss in the class.	6
Unit 5. 21st Century Issues in Chemistry Education • Prepare a paper on scientific literacy and critical thinking. Also, explain and present the ways of developing values. • Organize a talk programme on the techniques of promoting scientific literacy among the citizens and the ways of developing Chemistry process skills among the students. • Explore the possibilities of the vision for Chemistry education and Chemistry learning pedagogy for the future and prepare a manuscript/paper based on it. Also, present in the class.	6

Unit 6. Chemistry Teachers Professional Development • Prepare a sample Chemistry teachers' training manual (based on the particular unit) and present it to the class. • Prepare a paper based on the importance of the Chemistry teachers' professional development programmes and Chemistry teachers' competencies. • Prepare PowerPoint presentation slides on the basic qualities of a Chemistry teacher and presents them in the practical class.	7
Unit 7. Chemistry Teaching Strategies • Prepare a paper on the approaches to Chemistry teaching and learning incorporating cooperative and collaborative learning strategies. • Design a sample class on the heuristic method and inquiry-based learning method, project-based learning, and context-based Chemistry learning. • Explain the importance of research-based Chemistry learning, self-directed learning and flipped learning methods. Discuss the importance of each and every method in the practical class and finally prepare a reflective journal (minimum 2500 words). • Design cafeteria learning and write a reflective memo based on it.	6
Unit 8: Research Review in Chemistry Education • Review a research proposal in Chemistry education. • Develop a report based on the steps and cycle of the participatory action research (PAR) methodology. • Conduct a seminar/webinar on the issue of Chemistry education. • Review dissertations and articles related to Chemistry education (at least 2 articles within 1000 words of each).	4

Note: *The figures in the parenthesis indicate the appropriate teaching hours for the respective units*.

4. Specific Instructional Techniques

- Internet surfing
- Develop manuscript by collaboration and discussion
- Workshops: Presentation, participatory activities
- Books and article review
- Field visit
- Preparation of charts, models, presentations slides, and reports.

5. Evaluation **35 Marks**

Nature of course	Internal Evaluation	External Evaluation	Total Marks
Practical	15 Marks	20 Marks	35 Marks

5.1 Internal Evaluation **15 Marks**

Marks distribution for practical internal evaluation will be as following.

1.	Attendance	5Marks
2.	Students' portfolios (Record book and Books and article review etc.)	5Marks
3.	Participation, collaborative work, and construction of teaching-learning resources and planning for teaching-learning ***	5Marks
	Total	15Marks

5.2 External Evaluation **20 Marks**

Marks distribution for practical external evaluation will be as following.

1.	Experiment/project work report and presentation / study reports	15Marks
2.	Viva-voce	5 Marks
	Total	20Marks

Note:

Students must pass both in internal as well as external assessments of practical examination

** Practical teaching hours is 3 times more than teaching hours of theory (3x 16 = 48 hours)*

***A group consists of 15 students and one teacher will be assigned for a group.*

****Construction of models, charts, teaching aids, develop concept map etc. Also, the collection of materials / designing Chemistry lab, preparation of lesson plan, unit plan, annual plan, preparation of rubrics, developing test items of various levels etc. for teaching learning.*

6. Recommended Books and References

Shivendra, C. (2006). Contemporary Science teaching: New Delhi, Anmol Publication Pvt.Ltd.

Agarwal, P. K. (2018). Retrieval practice & Bloom's taxonomy: Do students need fact knowledge before higher-order learning? *Journal of Educational Psychology*.

Chem. Ed. 529 T: Food Chemistry

Course No.: Chem. Ed. 529 T	Nature of Course:
Theoretical Level: M. Ed. in Chemistry	Credit Hours: 2
Semester: Second	Teaching Hours: 32
Period per Week: 2	

1. Course Description

This course is designed to acquaint the students with the knowledge and skills of Food chemistry. The main aim of the course is to widen the horizon of knowledge and understanding of students to make them able to identify significant problems and their solutions to food chemistry. It deals with food chemistry with special emphasis on food and nutrition, functional components of foods, browning in foods, food additives, minerals in foods, and human nutrition.

2. General Objectives

The objectives of this course are as follows:

- To provide in-depth knowledge of food chemistry.
- To acquaint the students with in-depth knowledge of food and nutrition, functional components of foods, browning in foods, food additives, minerals in foods, and human nutrition.
- To understand the relationship between nutrition and human health.
- To assist the students to know about the importance of minerals in food and their role in body mechanisms.
- To acquaint the students with the knowledge of compositional analysis of food.
- To develop practical knowledge of food chemistry through laboratory experiments and activities.

3. Specific Objectives, Contents

Specific Objectives	Contents
• Explain the types of food and selection. • Elaborate on the meaning of moisture in foods and the techniques of prevention. • Describe the role of water activity in foods. • Elaborate on the concept of methods of determination of moisture and water activity in food	**Unit 1: Food and Nutrition (7)** 1.1. Food selection and purchases (perishable, semi-perishable, and non-perishable foods) 1.2. Moisture types, water activity, methods of moisture determination 1.3. Water balance in the body

• Explain the water balance in the body • Illustrate the role of macro and micro minerals in food. • Illustrate the functions of calcium, copper, iron, phosphorous, and arsenic in the body • Adopt the habit of safe food practices to gain good health. • Explain the causes, types, effects, and prevention of food poisoning. • Discuss the techniques of food storage.	1.4.Minerals: macro and micro minerals Calcium, copper, iron, phosphorous, and arsenic in the body 1.5.Food poisoning and safe food practices Storage of foods
• Explain the concept of phytochemicals and antioxidants in food. • Describe crude fiber and pectic substances in food. • Illustrate the role of crude fiber and pectic substances in food in human health. • Explain the types and functions of natural pigments in food items. • Appraise critically the role of essential oils and oleoresin in human health.	**Unit 2: Functional Components of Foods (5)** 2.1. Phytochemicals and antioxidants 2.2. Crude fiber 2.3. Pectic substance 2.4. Natural pigments 2.5. Essential oil and oleoresin
• Explain the enzymatic and non-enzymatic food browning. • Explore the effects of the food browning mechanism. • Describe the effects of food browning. • Analyze the prevention of browning of foods.	**Unit 3: Browning of Foods (4)** 3.1. Introduction 3.2. Enzymatic and non-enzymatic browning 3.3. Mechanism of food browning 3.4. Effects of browning on quality of foods and prevention of unwanted browning
• Explain the advantages and disadvantages of food preservatives. • Discuss the types and effects of coloring agents in food. • Appraise critically the role of sweetening agents in food. • Illustrate the meaning, types, and role of flavoring agents in food. • Describe emulsifying agents and their role in food items.	**Unit 4: Food Additives (4)** 4.1. Food preservatives 4.2. Coloring agents 4.3. Sweetening agents 4.4. Flavoring agents and flavor enhancers 4.5. Emulsifying agents
• Elucidate the methods of determination of minerals. • Explain the procedure of analysis of fat in foods. • Describe the process of protein	**Unit 5: Compositional Analysis of Foods (6)** 5.1. Mineral analysis in food 5.2. Fat analysis in food 5.3. Protein analysis in food

analysis in foods. • Discuss carbohydrate analysis in foods. • Explain the procedure of analysis of vitamin in foods.	5.4. Carbohydrate analysis in food 5.6. Vitamin analysis in food
• Explain the energy value in foodstuffs. • Discuss basal metabolism. • Illustrate energy balance in human body. • Interpret the role of major and minor nutrients in food. • Define glycemic index in common food. • Discuss the role of a balanced diet for infants, children, lactating mothers, pregnant women, and old age people. • Classify the role of food as probiotics, prebiotics, and nutraceuticals. • Explain electrolytic balance and acid-base balance in the human body. • Identify the nutritional deficiency diseases and methods of prevention (PEM, CVD, diabetes, degenerative diseases, etc.).	**Unit 6: Human Nutrition (6)** 6.1.Energy value of foodstuffs 6.2.Basal metabolism 6.3.Energy balance in the human body 6.4.Nutritive value of common foods and glycemic index 6.5.Role of balanced diet 6.6.Functional foods-probiotics, prebiotics, and nutraceuticals 6.7.Electrolyte and acid-base balance in the human body **6.8.**Nutrition-related disorders-PEM, CVD, diabetes, degenerative diseases, etc.

Note: *The figures in the parenthesis indicate the appropriate teaching hours for the respective units*.

4. Instructional techniques

The instructional techniques for this course are divided into two groups. The first group consists of the general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to specific units.

4.1 General instructional techniques:

- Discussion
- Demonstration
- Presentation
- Inquiry
- Project work
- Cooperative and collaborative work

- Internet (web) surfing
- Group work

4.2 Specific Instructional Techniques

Units	Specific Instructional Techniques
1	Classroom presentation on food and nutrition and floor open to discussion.
2	Report writing and presentation followed by discussion.
3	Presentation by studying the handouts provided by the teacher followed by teachers' suggestions.
4	Perform collaborative discussion and reflect on it with comments.
5	Group discussion, experience sharing of laboratory activities, paper writing, and presentation followed by discussion.
6	Classroom presentation and made group discussion orientated to the presentation.

5. **Evaluation (Internal Assessment and External Assessment**)

Nature of course	Internal Assessment	Semester Examination	Total Marks
Theory	25 Marks	40 Marks	65 Marks

Note: Students must pass separately in internal assessment and semester examination.

5.1 Internal Evaluation **25 Marks**

Internal evaluation will be conducted by the course teacher based on the following activities:

1.	Attendance and participation in learning activities	5 marks
2.	First assignment (written assignment)	5 marks
3.	Second assignment (report writing and presentation)	5 marks
4.	Third assignment/ Term Exam	10 marks
	Total	25 Marks

Note: *First assignment/assessment might be book review /article review, quiz, home assignment, etc according to the nature of the course. Similarly, the second assignment/assessment might be project work, case study, seminar, survey/field study and individual/group report writing, term paper based on secondary data or review of literature and documents, etc. And the third assignment will be term exam.*

- **External Evaluation (Final Examination)** **40 Marks**

Examination Division, Office of the Dean, Faculty of Education will conduct the final examination at the end of the semester. The marks distribution will be

1.	Objective questions (Multiple Choice Questions 10 x 1mark)	10 Marks
2.	Subjective questions (6 questions with 2 'OR' Questions x 5marks	30 Marks
	Total	40 Marks

6. Recommended Books and References Recommended Books

Jain, J. L. (1992). *Fundamentals of Biochemistry*. S. Chand and Company, New Delhi.

(For all units)

Demann, J. (2011). *Principles of food Chemistry*. **(For all units)**

Potter, N. P. (1987). *Food Science, 3rd ed.* CBS Publishers and Distributers, India. **(For all units)**

Mudambi, S. R. & Rajagopal, M. V. (2007). *Fundamentals of Foods, Nutrition And Diet Therapy*. New Age International Publications, New Delhi-5th edition. (641.3 m883f) **(For unit 1)**

7. References

Swaminathan, M. (2005). *Food and Nutrition*, vol. 1 and II.

Mullick, P. (2006). *Textbook of home science*. Kalyani Publishers, India. 2nd edition. (640 – M912T)

Chem. Ed. 529 P: Food Chemistry

Course No.: Chem. Ed. 529 P Nature of course: Practical Level: M.Ed. in Chemistry

Credit hours: 1

Semester: Second Teaching hours: 48*

Period per week: 3pds/day/week/gr(P)**

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1. Course Description

This course is designed to acquaint the students with the knowledge and skills of Food Chemistry. The practical part includes practical activities/ experiments on moisture determination, estimation of crude fibers, determination of acidity, estimation of vitamins, and acid value of fats and oil in food chemistry.

2. General Objectives

The general objectives of this course are as follows:

- To develop practical knowledge of food chemistry through laboratory experiments and activities.
- To develop practical skills in food chemistry through laboratory experiments and activities.

3. Specific Objectives and Content

Specific Objectives	Contents
• Explain the laboratory safety rules in the chemistry laboratory. • Describe the laboratory operating procedures in the laboratory.	**Unit 1.** Laboratory safety and laboratory operating procedure. (3)
• Determine the moisture level in the food stuffs by oven drying method. • Determine the moisture level in the food stuffs by the distillation method. • Estimate the moisture level in food stuffs by Karl Fisher's reagent method.	**Unit 2.** Determination of moisture by: (12) Oven drying method Distillation method Karl Fisher reagent method
• Determine the acidity and pH of given food samples by qualitative analysis.	**Unit 3.** Determination of acidity and pH of food samples. (6)

• Estimate the ash and minerals matter in the given samples of food.	**Unit 4.** Determination of the ash and minerals in food items: (9) 4.1 Total ash, acid-soluble and insoluble ash, alkalinity of ash, calcium, phosphorous, iron, copper, and arsenic.
• Estimate the crude fibers in samples of food items.	**Unit 5.** Estimation of crude fibers in the given samples of food items. (6)
• Determine the acid value in the given food sample. • Determine the refractive index in the given sample of food.	**Unit 6.** The acid value of fat/oil (6) 6.1 Refractive index of oil
• Estimate the amount of vitamin C present in foodstuffs.	**Unit 7.** Estimation of vitamin C (6)

Note: *The figures in the parenthesis indicate the appropriate teaching hours for the respective units*.

4. Specific Instructional Techniques

- Performing experiments
- Interview
- Report writing

5. Evaluation

Practical Examination Full Marks **35 Marks**

Nature of course	**Internal Evaluation**	**External Evaluation**	**Total Marks**
Practical	15 Marks	20 Marks	35 Marks

5.1 Internal Evaluation 15 Marks

Marks distribution for practical internal evaluation will be as follows.

1.	Attendance	5Marks
2.	Students' portfolios (Record book and Books and article review etc.)	5Marks
3.	Participation, collaborative work, and construction of teaching-learning resources and planning for teaching-learning ***	5Marks
	Total	15Marks

5.2 External Evaluation 20 Marks

Marks distribution for practical external evaluation will be as follows.

1.	Experiment performance/ data generation, accuracy, and evaluation of experiment/project work report and presentation / study reports	15Marks
2.	Viva-voce	5 Marks
	Total	20Marks

Note:

Students must pass both Internal as well as external assessments of the Practical examination

** Practical teaching hour is 3 times more than teaching hour of theory (3x 16 = 48 hours)*

***A group consists of 15 students and one teacher will be assigned to a group.*

****Construction of models, charts, teaching aids, development of concept map, etc. / Collection of materials / Designing science lab, Preparation of lesson plan, unit plan, annual plan, rubrics, developing test items, etc. for teaching-learning.*

6. Recommended Books

K.C. et. al., (2004). *Experiment in Basic Biochemistry And Industrial Microbiology.* Phulchouki Enterprise Publication, Kathmandu.

Sahay, S. (2006). *Quantitative chemical analysis.* S. Chand and Company, New Delhi.

Physics Education

Phy. Ed. 525 T: Electrodynamics

Course No.	: Phy. Ed. 525 T	Nature of course: Theoretical
Level	: M. Ed. in Physics	Credit hours: 2
Semester	: Second	Teaching hours: 32
		Period per week: 2

1. Course Description

This course is designed for second semester in Physics Education. The aim of this course is to provide skill and knowledge in the field of electrodynamics which can help the prospective Physics teachers teach with confidence at the higher level of science education. This course covers Electrostatic field and Potential, Electrostatics fields in Dielectric, Theories of Magnetism, Magnetic devices and Electromagnetic Induction and Maxwell's Electromagnetic Equation.

2. General Objectives

The general objectives of this course are as follows:

- To provide the students with adequate theoretical knowledge of electromagnetism.
- To develop problem solving skills in electricity and magnetism.
- To familiarize the students with the activities of some topics related to the course content and to enhance the practical knowledge related to Physics.

3. Specific Objectives and Contents

Specific Objectives	Contents
• State Coulomb's law (In Vector notation). • Discuss the scope and limitations of the Coulomb's law. • Define electric field and electric field intensity. • Derive formula for electric field due to a charged particle. • Define electric flux by using vector notation and in integral form. • Define solid angle and calculate its value subtended by a sphere at its center. • State Gauss's law in integral form and apply it to uniformly charged spherical shell, uniformly charged solid sphere, an infinitely long uniformly charged hollow cylinder, plane charged sheet and linear charge distribution. • Derive Coulomb's law from Gauss's law. • Express Gauss's law in differential form. • Define equipotential surface and explain about its properties. • Calculate electric field due to dipole, quadru pole, charged ring and linear charge distribution. • Derive potential due to charged particles and due to continuous charge distribution. • Calculate potential due to dipole and quadru pole. • Derive electrostatic potential energy. • Calculate the work done by a dipole when placing in a uniform electric field. • Solve some related numerical problems.	**Units I: Electrostatic Field and Potential (7pds)** 1.1.Coulomb's law 1.2.Scope and limitations of the Coulomb's law 1.3.Electric field and electric field Intensity 1.4.Electric field due to a charged particle 1.5.Electric flux 1.6.Solid angle 1.7.Gauss's law and its applications 1.8.Gauss's law in differential form 1.9.Equipotential surface 1.10. Electric field due to dipole, quadrupole, charged ring and linear charge 1.11. Potential due to charged particles 1.12. Potential due to continuous charge distribution 1.13. Potential due to dipole and quadru pole 1.14.Electrostatic potential energy 1.15. A dipole in a uniform electric field

• Explain displacement and polarization vector. • Derive Gauss law for dielectric media. • Calculate energy stored in dielectric system. • Derive the relation between **D**, **E** and **P** vector. • Discuss the boundary conditions of D and E at the interface separating two media. • Explain the physical meaning of polarization of dielectric. • Discuss the mechanism of polarization. • Derive Clausius-Mosotti equation and discuss its limitations. • Solve some related numerical problems.	**Units II: Electrostatics Fields in Dielectric(6pds.)** 2.1. Displacement and polarization vector 2.2. Gauss's law for dielectric media 2.3. Energy in dielectric system 2.4. Relation between **D**, **E** and **P** 2.5. Boundary conditions of D and E at the interface 2.6. Physical meaning of polarization of dielectric 2.7. Mechanism of polarization 2.8. Clausius-Mosotti equation and its limitations
• Discuss the Langevin's theory of día magnetism with its results. • Describe Langevin's theory of para magnetism and its failure. • Explain Weiss molecular field theory of para magnetism. • Discuss domain theory of ferromagnetism. • Explain anti- ferromagnetism and ferrimagnetism. • Discuss briefly the approach to quantum theory of ferromagnetism. • Solve some related numerical problems.	**Units III: Theories of Magnetism (7pds.)** 3.1. Langevin's theory of día magnetism and results 3.2. Langevin's theory of para magnetism and its failure 3.3. Weiss molecular field theory of para magnetism 3.4. Domain theory of ferromagnetism 3.5. Anti- ferromagnetism and ferrimagnetism 3.6. Approach to quantum theory of ferromagnetism
• Discuss theory of moving coil ballastic galvanometer and its current and voltage sensitivity. • Describe construction and uses of search coil. • Explain construction and theory of Grassot's fluxmeter. • Discuss construction and theory of earth inductor. • Define electromagnetic induction, self- induction, mutual induction and their coefficients as review. • Derive an expression for the	**Units IV: Magnetic Devices and Electromagnetic Induction (5pds.)** 4.1. Ballastic galvanometer and its sensitivity 4.2. Search Coil 4.3. Grassot's fluxmeter 4.4. Earth inductor 4.5. Electromagnetic induction (Review) 4.6. Coefficient of self-induction of solenoid and toroid 4.7. Energy stored in magnetic field

coefficient of self-induction of a long uniformly wound solenoid and a toroid. • Define and derive energy stored in magnetic field. • Derive an equation for the growth and decay of an electric current in a circuit with resistance and self-inductance and also find time constant for the respective circuit. • Solve some related numerical problems.	4.8. LR-series circuit and time constant
• Define displacement current with examples and derive its expression. • Discuss the significance of displacement current. • Distinguish between conduction and displacement current. • Derive Maxwell's equations and their use in propagation of e.m. wave in free space and in dielectrics. • Find the solutions of electromagnetic wave equations and show that electric and magnetic vectors are normal to each other. • Derive Gauss's, Faraday's, • Biot-savart's and Ampere's law on the basis of Maxwell's electromagnetic equation. • Discuss the physical significance of Maxwell's equations. • Calculate energy of charged particle in electromagnetic field. • Define Poynting vector and derive its expression. • Solve some related numerical problems.	**Units V: Maxwell's Electromagnetic Equation (7pds.)** 5.1. Displacement current 5.2. Maxwell's equations and their use in propagation of electromagnetic wave 5.3. Solutions of electromagnetic wave Equations. 5.4. Derivation of Gauss's, Faraday's, 5.5. Biot-savart's and Ampere's law on the basis Maxwell's electromagnetic equation 5.6. Physical significance of Maxwell's equations 5.7. Energy of charged particle in electromagnetic field 5.8. Poynting vector

Note: *The figures in the parenthesis indicate the approximate teaching hours for the respective units.*

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. First group consists of general instructional techniques applicable to most

of the units. The second group consists of specific instructional techniques applicable to specific units.

4.1 General Techniques

- Lecture
- Demonstration
- Discussion
- Inquiry
- Project work
- Collaborative work

4.2 Specific Instructional Techniques/Activities

Unit	Activities and Instructional Techniques
I	Power point presentation, Preparation of charts
II	Web surfing, Interaction, Report writing
III	Problem solving, Library works, Assignments like searching audio-visual work (animated film from internet)
IV	Group work, presentations, report writing, construction of teaching materials like model, leaflet etc. related to content
V	ICT based teaching, Lab work

5. Evaluation

5.1 Evaluation (Internal Assessment and External Examination)

Nature of course	Internal Assessment	Semester Examination	Total Marks
Theory	25 Marks	40 Marks	65 Marks

***Note**: Students must pass separately in internal assessment and semester examination.*

5.2 Internal Evaluation 25 Marks

Internal evaluation will be conducted by course teacher based on following activities:

1.	Attendance and participation in learning activities	5 Marks
2.	First assignment (written assignment)	5 Marks

3.	Second assignment (report writing and presentation)	5 Marks
4.	Third assignment/ Term Exam	10 Marks
	Total	25 Marks

Note: *First assignment/assessment might be book review /article review, quiz, home assignment etc. according to nature of course. Second assignment/assessment might be project work, case study, seminar, survey/field study and individual/group report writing, term paper based on secondary data or review of literature and documents etc. and third assignment will be term exam.*

5.3 External Evaluation (Final Examination) 40 Marks

Examination Division, office of the Dean, Faculty of Education will conduct final examination at the end of semester. The marks distribution will be

1.	Objective questions (Multiple Choice Questions 10 × 1mark)	10 Marks
2.	Subjective questions (6 questions with 2 'OR 'questions × 5 marks)	30 Marks
	Total	40 marks

1. **Recommended Books and References Recommended Books:**

Reitz, J., Melford, F., & Christy, R. (2008). ***Foundations of Electrodynamics.*** New Delhi: Narosa Publishing House.**(For Unit-I, II, III&V)**

Tewari, K. (2009). *Electricity & Magnetism with electronics***.**New Delhi: S. Chand & Company Pvt. Ltd.**(For Unit - IV)**

2. **References:**

Duncan, T. (2004). ***Advanced Physics (fifth edition)***. London: John Murray Publishers Ltd.

Halliday, Resnic, & Walker. (2008). ***Fundamentals of Physics(8th extended edition).*** New Delhi: Wiley India Pvt.Ltd.

Murugesan, R. (2009). ***Modern Physics.*** New Delhi: S. Chand

Publications. Smith, C. (2009). ***Electricity and Magnetism.*** New

Delhi: Radh CBS Publishers.

Phy. Ed. 525 P: Electrodynamics

Course No.	: Phy. Ed. 525 P	Nature of course: Practical
Level	: M. Ed. in Physics	Credit hour: 1
Semester	: Second	Teaching hours: 48*
		Period per week:3pds/day/week/gr(P) **

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1. **Course Description**

This course includes practical works from the **Electrodynamics.** The aim of this course is to develop knowledge and skills required to conduct Physics practical classes at higher level of Science Education.

2. **General Objectives**

The general objectives of this course are as follows:

- To provide students adequate practical knowledge of Electrodynamics.
- To develop skills to students to perform experiments using scientific instruments and apparatus, including techniques of operation and aspects of safety/precaution.
- To enable the students in designing and planning investigations
- To make students to understand the correlation between theory and the experiment.

3. **Specific Objectives and Contents**

Specific Objectives	**Contents (48pds.)**
• Measure the sensitivity and constant of Ballistic galvanometer. • Measure high resistance by the method of leakage. • Determine the temperature coefficient of resistance of a coil by P.O. Box • Convert a moving coil galvanometer into an ammeter of a given range. • Convert a moving coil	• Sensitivity and constant of ballistic galvanometer • High resistance by leakage method • Temperature coefficient of resistance • Conversion of galvanometer into an ammeter • Conversion of galvanometer into a voltmeter • Chemical effects of current • Low resistance by Carey Foster Bridge. • Determination of high resistance

galvanometer into a voltmeter of a given range. • Check the accuracy of an ammeter using copper voltameter. • Determine electro chemical equivalence of copper using copper voltameter. • Measure the low resistance by Carey Foster bridge. • Determine high resistance by substitution method. • Study charging and discharging of a capacitor through a resistor R. • Study a series resonant LCR circuit, its resonant frequency and quality factor. • Determine magnetic field by using search coil. • Determine angle of dip by using earth inductor. • Study the variation of magnetic field along the axis of a current carrying circular coil. • Determine the magnetic susceptibility of diamagnetic substances by Gouy balance method. • Determine paramagnetic Substances by Quincke's method.	• Charging and discharging of a capacitor. • Alternating current • Magnetic field by search coil • Angle of dip by earth inductor • Variation of magnetic field due to a current carrying circular coil • Magnetic susceptibility of dia- and para-magnetic materials

Note: *The figures in the parenthesis indicate the appropriate teaching hours for the respective units*.

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. First group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to specific units.

4.1 General Techniques

- Demonstration
- Discussion
- Inquiry
- Project
- Collaborative work

4.2 Specific Instructional Techniques/Activities

- Problem solving, Presentation
- Handling of instrument, observation
- Internet surfing, discussion
- Presentation, participatory activities

Field visit, Preparation of charts, models, presentations slides, and reports.

The teachers may decide the project work related to the course work.

5. Evaluation 35 Marks

Nature of course	Internal Evaluation	External Evaluation	Total Marks
Practical	15 Marks	20 Marks	35 Marks

5.1 Internal Evaluation 15 Marks

Marks distribution for practical internal evaluation will be as following.

1.	Attendance	5Marks
2.	Students' portfolios (Record book and Books and article review etc.)	5Marks
3.	Participation, collaborative work and construction of teaching learning resources and planning for teaching learning ***	5Marks
	Total	15Marks

5.2 External Evaluation 20 Marks

Marks distribution for practical external evaluation will be as following.

1.	Experiment / project work report and presentation / study reports	15Marks
2.	Viva-voce	5 Marks
	Total	20Marks

Note:

Students must pass both in internal as well as external assessment of practical examination

** Practical teaching hours is 3 times more than teaching hours of theory (3× 16 = 48 hours)*

***A group consists of 15 students and one teacher will be assigned for a group. ***Construction of models, charts, teaching aids, develop concept map etc. Also, the collection of materials / designing science lab, preparation of lesson plan, unit plan, annual plan, preparation of rubrics, developing test items of various levels etc. for teaching learning.*

6. Recommended Books and References Recommended Books:

Arora, C. (2009). ***B.Sc. Practical Physics***. New Delhi: S. Chand & Company (Pvt) Ltd.

Singh, H., & Dr. Hemne, P. (2011). ***B.Sc. Practical Physics***. New Delhi: S. Chand & Co. Ltd.

7. References:

Halliday, Resnick, & Krane. (2009). ***Laboratory Physics***. Singapore: John Wiley & Sons.

Mittal, R., & Singal, S. (1995). ***Laboratory manual in Physics***. Karol Bagh, New Delhi: Arya Book Depot.

Sharma, Singh, & Prasad. (2008). ***Degree Level Practical Physics***. Patana: Bharati Bhawan Publication.

Phy. Ed. 526 T : Electronics

Course No.: Phy. Ed. 526 T

Level : M. Ed. in Physics

Semester: Second

Nature of course: Theoretical

Credit hours: 2

Teaching hours: 32

Period per week: 2

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1. **Course Description**

   This course aims to provide skill and knowledge in the field of electronics. It deals with circuit analysis, physical transport phenomena in semiconducting materials, characteristics of diodes, bipolar junction, digital electronics, amplifiers and oscillator, which help the prospective science teachers to teach with confidence at the higher level and to be able to pursue higher studies in physics education.

2. **General Objectives**

   The general objectives of the course are as follows:

   - To provide the students with adequate theoretical knowledge of electronics.
   - To familiarize the students with the activities of some topics related to the course content.
   - To develop problem solving skills in electronics.

3. **Specific Objectives and Contents**

Specific Objectives	Contents
• State and explain Superposition theorem and apply it in circuit analysis. • Explain Thevenin's theorem and apply it for circuit analysis. • Describe Norton's theorem and apply it for circuit analysis. • Solve some related numerical problems.	**Units I: Circuit Analysis (5pds.)** 1.1.Superposition theorem 1.2.Thevenin's theorem 1.3.Norton's theorem

• Define mobility and conductivity. • Explain the conduction mechanism in intrinsic and extrinsic semiconductor with the help of derivation. • Solve some related numerical problems.	**Units II: Physical Transport Phenomena in Semiconducting Materials (3pds.)** 2.1. Mobility and conductivity in Semiconductor 2.2. Conduction in intrinsic and extrinsic semiconducting materials.
• Explain the formation of P-N junction diode discuss the I-V characteristics of P-N junction diode as a revision. • Explain application of junction diode as a half and full wave rectifier. • Discuss the RMS value, ripple factors, efficiency and peak inverse voltage in half wave rectifier. • Discuss the rms value and ripple factor in full wave rectifier. • Describe use of junction diode as a full wave rectifier by bridge rectifier. • Explain LC- pi filter circuit • Explain Zener diode as a voltage regulator. • Describe Tunnel diode and discuss its VI-characteristics. • Solve some related numerical problems.	**Units III: Semiconductor Diodes (6pds.)** 3.1. PN- Junction diode (as revision) 3.2. Diode characteristics (as a revision) 3.3. Half and full wave rectifier 3.4. Bridge rectifier 3.5. Filter circuit (L-C) 3.6. Zener diode 3.7. Tunnel diode
• Explain briefly about the formation and symbol of bipolar junction transistor. • Discuss the different biasing methods of transistor. • Explain the transistor in CE-mode and its input and output characteristics. • Introduce parameters like α and β of transistor. • Describe transistor as an	**Units IV: Bipolar Junction Transistors (7pds.)** 4.1. Transistor review 4.2. Transistor biasing 4.3. Input and Output characteristics of CE- Mode 4.4. α and β of transistor 4.5. Transistor as an amplifier (CB, CC and CE- mode) 4.6. Amplifier gain calculation

amplifier in CB, CC and CE-mode. • Discuss calculation of amplifier gain. • Solve some related numerical problems.	
• Describe decimal and binary numbers system and their inter conversation. • Explain Addition, Subtraction and Multiplication of binary numbers system. • Explain Boolean algebra. • State and explain De-Morgan's theorem. • Explain half and full adders with their block diagram and truth table. • Solve some related numerical problems.	**Units V: Digital Electronics (5pds.)** 5.1 Decimal and binary numbers 5.2. Addition, Subtraction and Multiplication of binary numbers 5.3. Boolean algebra 5.4. De-Morgan's theorem 5.5. Half adders and full adders.
• Explain operational amplifier and it as a voltage amplifier with negative feedback. • Discuss operational amplifier as an adder and subtractor. • Explain principles of oscillation. • Describe Phase shift oscillator with circuit diagram. • Explain Multivibrators and their following types: ▪ Astable Multivibrator. ▪ Monostable Multivibrator. ▪ Bistable Multivibrator or Flip- Flop Circuit. • Solve some related numerical problems.	**Units VI: Amplifiers and Oscillators (6pds.)** 6.1.Operational amplifier 6.2.Operational amplifier as a voltage amplifier with negative feedback 6.3.Operational amplifier as an adder and subtractor 6.4.Principles of oscillation 6.5.Phase shift oscillator **6.6.**Multivibrators and their types

Note:*The figures in the parenthesis indicate the appropriate teaching hours for the respective units.*

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. First group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to specific units.

4.1 General Techniques

- Lecture
- Demonstration
- Discussion
- Inquiry
- Project work
- Collaborative work

4.2. Specific Instructional Techniques/Activities

Unit	Activities and Instructional techniques
I	Power point presentation, demonstration, preparation of charts and problem solving
II	Project Method and Power point presentation
III	Demonstration, Assignment for preparing charts, models and problem solving
IV	Power point presentation, Demonstration, Book review
V	Power point presentation, Book review and field trip
VI	Project Method, Power point presentation, Field trip reporting

5. Evaluation

5.1 Evaluation (Internal Assessment and External Assessment)

Nature of course	Internal Assessment	Semester Examination	Total Marks
Theory	25 Marks	40 Marks	65 Marks

***Note**: Students must pass separately in internal assessment and semester examination.*

5.2 Internal Evaluation **25 Marks**

Internal evaluation will be conducted by the course teacher based on following activities:

1.	Attendance and participation in learning activities	5 Marks
2.	First assignment (written assignment)	5 Marks
3.	Second assignment (report writing and presentation)	5 Marks
4.	Third assignment/ Term exam	10 Marks
	Total	25 Marks

Note: First assignment/assessment might be book review /article review, quiz, home assignment etc. according to nature of course. Second assignment/assessment might be project work, case study, seminar, survey/field study and individual/group report writing, *term paper based on secondary data or review of literature and documents etc. and third assignment will be term exam.*

5.3 **External Evaluation (Final Examination)** **40 Marks**

Examination Division, office of the Dean, Faculty of Education will conduct final examination at the end of semester. The marks distribution will be

1.	Objective questions (Multiple Choice Questions 10 ×1mark)	10 Marks
2.	Subjective short questions (6 questions with 2 'OR 'questions × 5 marks)	30 Marks
	Total	40 marks

Recommended Books and References Recommended Book

Thereja B.L. (2008), ***Basic Electronics and Solid State***; S. Chand and Company Ltd., New Delhi. **(For unit- I, II, III, IV, V&VI)**

6. References

Halliday-Resnic-Walker (2008), ***Fundamentals of Physics (8th extended edition)***, Wiley India Pvt.Ltd.

Havill R.L. and Walton A.K. (1975), ***Elements of Electronics for Physical Scientist***, English Language Society and Macmillan, England.

Malvino A.P. (2009), ***Electronic Principles***, Tata McGraw Hill Publishing Co. Ltd., India

Mehta V.K. (2009), ***Principles of Electronics***, S. Chand and Co. Ltd., New Delhi. Jain R. P. (1991) ***Modern Digital Electronics***, New Delhi; Tata McGraw Hill

Publishing Company Ltd.,

Ryder J. D. (1955) ***Network, Lines and Fields***, New Delhi; Prentice Hall of India. Tiwari K.K. (2009), ***Electricity & Magnetism with Electronics***, S. Chand &

Company Pvt. Ltd.

Tom Duncan (2004), ***Advanced Physics (fifth edition)***, John Murray Publishers Ltd., London.

Phy. Ed. 526 P: Electronics

Course No.	: Phy. Ed. 526 P	Nature of course: Practical	
Level	: M. Ed. in Physics	Credit hours:	1
Semester	: Second	Teaching hours:	48*
		Period per week: 3pds/day/week/group(P)**	

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1. Course Description

This course aims to provide skill and knowledge in the practical field of electronics. It deals with experiments on different topics of electronics such as circuit analysis, characteristics of diodes, bipolar junction, digital electronics, amplifiers and oscillator, which help the prospective science teachers to conduct Physics practical classes at Higher Secondary School, Bachelor and Master level of Science Education.

2. General Objectives

The general objectives of the course are as follows:

- To provide practical knowledge of electronics.
- To develop skills to perform experiments using scientific instruments and apparatus, including techniques of operation and aspects of safety/precautions.
- To familiarize practical activities of some topics related to the course.
- To develop practical skills in conducting experiments on electronics.

3. Specific Objectives and Contents

Specific Objectives	**Contents (48pds)**
• Evaluate different given circuits using Superposition theorem, Thevenin's theorem and Norton's theorem • Study the characteristics of	• Circuit analysis • P-N Junction diode • Characteristics of P-N Junction diode. • Full Wave bridge rectifier

P-N Junction diode. • Study a full wave bridge rectifier using a step-down transformer with several output tapings. • Study the characteristics of Zener diode at forward and reverse biasing conditions. • Use Zener diode to construct voltage supply at varying input voltage. • Study the characteristics of PNP transistors in CE-mode. • Study the characteristics of NPN transistors in CE mode. • Study the operational amplifier for its input-output characteristics. • Use Operational amplifier waveform and use it as an adder and as a subtractor. • Construct Monostable multivibrator and to study it's functioning for the estimation of the repetition frequency. • Construct and verify the truth table of OR, AND, NOT and NOR gates. (Using BJT). • Construct and verify truth table of OR, AND, NOT and NOR gates. (Using IC 7400, 7402). • Construct a resistive D/A ladder network and study its performances with and without Operational amplifier • Obtain the wave form of A.C. mains supply using a cathode	• Zener diode • Characteristics of Zener diode • Zener diode as a voltage regulator • Bi-Polar junction Transistors • Characteristics of PNP Transistors in CE-mode • Characteristics of NPN Transistors in CE-mode • Operational amplifier • Input and output characteristics • Op-Amp as adder and subtractor • Monostable Multivibrator and estimation of frequency • Logic Gates by using BJT and using IC 7400, 7402 OR-gate AND-gate NOT-gate NOR-gate D/A ladder Cathode Ray Oscilloscope

ray oscilloscope.	

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. First group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to specific units.

4.1 General Techniques

- Demonstration
- Discussion
- Inquiry
- Project work
- Collaborative work

4.2 Specific Instructional Techniques/Activities

- Experimental method
- Project work, problem solving method
- Collaborative method and power point presentation.
- The teachers may decide the project work related to the course content.

5. Evaluation 35 Marks

Nature of course	**Internal Evaluation**	**External Evaluation**	**Total Marks**
Practical	15 Marks	20 Marks	35 Marks

5.1 Internal Evaluation 15 Marks

Marks distribution for practical internal evaluation will be as following.

1.	Attendance	5Marks
2.	Students' portfolios (Record book and Books and article review etc.)	5Marks

3.	Participation, collaborative work and construction of teaching learning resources and planning for teaching learning ***	5Marks
	Total	15Marks

5.2 External Evaluation **20 Marks**

Marks distribution for practical external evaluation will be as following.

1.	Experiment / project work report and presentation / study reports	15Marks
2.	Viva-voce	5 Marks
	Total	20Marks

Note:

Students must pass both in internal as well as external assessment of practical examination

** Practical teaching hours is 3 times more than teaching hours of theory (3× 16 = 48 hours)*

***A group consists of 15 students and one teacher will be assigned for a group.*

****Construction of models, charts, teaching aids, develop concept map etc. Also, the collection of materials / designing science lab, preparation of lesson plan, unit plan, annual plan, preparation of rubrics, developing test items of various levels etc. for teaching learning.*

6. Recommended Books and References Recommended Books

Arora, CL (2012), ***B.Sc. Practical***, S. Chand and Co., New Delhi.

Sharma, Singh, Prasad (2008), ***Degree level Practical Physics***, Bharati Bhawan Pub., Patana.

Singh Harman, Dr. Hemne P.S. (2011), ***B.Sc. Practical Physics***, S. Chand & Co. Ltd., New Delhi.

7. References

Halliday-Resnic-Walker (2008), ***Fundamentals of Physics (8th extended edition)***, Wiley India Pvt.Ltd.

Havill R.L. and Walton A.K. (1975), ***Elements of Electronics for Physical Scientist***, English Language Society and Macmillan, England.

Malvino A.P. (2009), ***Electronic Principles***, Tata McGraw Hill Publishing Co. Ltd., India

Mehta V.K. (2009), ***Principles of Electronics***, S. Chand and Co. Ltd., New Delhi.

Tewari K.K. (2009), ***Electricity & Magnetism with Electronics***, S. Chand & Company

Pvt. Ltd.

Tom Duncan (2004), ***Advanced Physics (fifth edition)***, John Murray Publishers Ltd. London.

Phy. Ed. 528 T: Modern Physics Teaching

Course No.: Phy. Ed. 528 T
Level: M.Ed. in Physics
Semester: Second

Nature of course: Theoretical
Credit Hours: 2
Teaching hours: 32
Period per week: 2

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1. Course Description

This course is designed to develop advanced knowledge and understanding of the realms of Physics education. The main aim of the course is to widen the horizon of knowledge and understanding of students with a view to make them able to identify significant problems in school and the university level Physics education. It deals with different aspects of Physics education with special emphasis on the philosophical, theoretical and methodological understanding of constructivism, misconception, e-learning, instructional module, research, concept mapping and post-modern approaches.

2. General Objectives

The general objectives of this course are as follows:

- To provide in-depth knowledge of modern pedagogical approaches in Physics education.
- To develop planning skills to prepare lesson modules and instructional activities.
- To identify different teaching-learning techniques to implement in classroom situations;
- To develop essential teaching-learning materials, activities and tools of assessments in Physics teaching and learning;
- To apply the knowledge of Physics education to address scientific inquiries in contemporary pedagogical approaches;
- To acquire the ability to think scientifically, and independently and to make rational discussions in relation to Physics education.

3. Specific Objectives, Contents and Activities

Specific Objectives	Contents
• Elaborate on the prevalent issues in school Physics education related to classroom dynamics, the role of Physics teachers and students, pedagogical orientation, knowledge generation, and evaluation. • Explain the meaning, importance and strategies of teaching Physics in the wider context. • Describe the techniques for the development of scientific and technological literacy. • Elaborate teaching for the understanding of Physics education. • Describe the model of teaching for understanding and application of Physics education.	**Unit 1. Issues and Trends in Physics Teaching (4pds.)** 1.1.Introduction 1.2.Issues in school Physics education 1.3.Teaching Physics in the wider context 1.4.Development of scientific and technological literacy 1.5.Scientific temper: A theoretical framework and dimensions 1.6.Teaching for the understanding of Physics education
• Explain the meaning of the philosophical and theoretical understanding of contemporary perspectives of Physics education. • Elaborate on the meaning of the constructivist paradigm of learning. • Explain the basic foundation of constructivism philosophy. • Describe the application of praxis and project work in Physics teaching and learning. • Explain the Kolb learning cycle and its application in Physics learning. • Describe the application of David Kolb's experiential learning cycle. • Write down the implications of Ausubel and Bruner's theory of cognitive	**Unit 2. Contemporary Psychological Perspectives of Physics Learning** **(4pds.)** 2.1. Introduction of contemporary 2.2. perspectives of learning 2.3. Learning theories of John Dewey, David Kolb, Ausubel and Bruner 2.4. Constructivism paradigm of learning 2.5. Constructivism epistemology of Physics learning 2.6. Theoretical and philosophical understanding of constructivism 2.7. Types of constructivism (socio-cultural and radical) 2.8. Constructivism in teaching Physics 2.9. Constructivism in curriculum and textbooks development, teaching methods and evaluation techniques

development. • Describe the theoretical and philosophical background of the constructivist perspective of learning. • Explain the implications of socio-cultural and radical constructivism in Physics teaching and learning. • Explain the importance of constructivism epistemology in the development of Physics curricula and textbooks. • Construct a constructivist checklist of a Physics teacher. • Explain the 5E teaching model and its implications in Physics teaching/learning. • Discuss the techniques of promoting constructivist classroom culture.	2.10. Constructivist checklist for the Physics teachers 2.11. 05E teaching model
• Give the introduction of concept map and its origins. • Describe the various models of concept maps. • Discuss the psychological foundations of concept maps. • Explain the epistemological foundations of concept maps. • Describe meta-cognition and meaningful learning. • Explain the theoretical and philosophical meaning of concept mapping. • Explain the ways of developing concept maps to develop social qualities of students. • Explain steps of developing concept maps. • Develop concept maps on the basis of the word parking approach. • Describe the implications of concept mapping in Physics education. • Construct different models of concept maps.	**Unit 3. Concept Mapping and Physics Education (4pds.)** 3.1. Introduction 3.2. Origin of concept maps 3.3. Models of concept maps 3.4. Psychological foundations of concept maps 3.5. Epistemological foundations of concept maps 3.6. Meta-cognition and meaningful learning 3.7. Theoretical framework of concept mapping 3.8. Developing concept maps 3.9. Steps of developing concept maps 3.10. Develop concept maps by word parking method 3.11. Implications of concept mapping in Physics education

• Explain the importance of e-learning in Physics education. • Describe the principles of e-learning. • Explain the goals and importance of e-learning. • Explain Web-based learning. • Elaborate on the meaning of WebQuest and its use in Physics education. • Explore virtual field trips in Physics teaching and learning. • Explain the steps of Moodle platform to deliver the content of Physics education in the virtual learning environment. • Explore the new source of information such as Google scholar, education resource information center (ERIC) and Hinari.	**Unit 4: Weaving e-learning in Physics Education (4pds.)** 4.1. Introduction of e-learning 4.2. Principles of e-learning 4.3. Approaching of e-learning 4.4. Integrating ICT in Physics teaching and learning 4.5. Web-based learning 4.6. WebQuest 4.7. Virtual field trips 4.8. Moodle platform
• Define scientific literacy with examples. • Explore the ways of developing scientific literacy and critical thinking. • Explain the meaning, nature and characteristics of values. • Enlist the sources of establishing values among the students. • Explain the identification and categorization of values. • Describe the techniques for promoting scientific literacy among the students. • Illustrate the meaning of creativity. • Discuss the characteristics of creative persons. • Discuss the ways of stimulating creativity in Physics classes. • Explain the ways of developing Physics process skills. • Predict the vision for Physics education for the future. • Explain Physics pedagogy for the 21st century.	**Unit 5. 21st Century Issues in Physics Education (4pds.)** 5.1. Scientific literacy 5.2. Critical thinking 5.3. Value education 5.4. Life skills development 5.6. Physics process skills 5.7. 21st-century relevant Physics pedagogy 5.8. Vision of Physics education

• Explain the meaning and importance of the Physics teachers' professional development programmes. • Elaborate on the meaning of Physics teachers' competencies. • Discuss the basic qualities of a Physics teacher. • Describe the importance of the professional development activities in recent instructional pedagogies. • Evaluate the need for Physics teachers' professional development programmes in Nepal. • Illustrate the Physics teachers' competencies (PTC). • Explain the approaches for teachers' professional development programs. • Explain the strategies for teachers' professional development in Nepal. • Explain the purposes of understanding Physics teachers' competencies. • Critique on the existing strategies of Physics teachers' professional development programs in Nepal.	**Unit 6. Physics Teachers Professional Development (4pds.)** 6.1.Introduction 6.2.History of teachers' professional development in Nepal 6.3.Importance of Physics teachers' professional development 6.4.Approaches to professional development 6.5.Strategies of professional development **6.6.**Physics teachers competencies
• Describe the approaches to Physics teaching and learning. • Elaborate on cooperative and collaborative learning strategies. • Explain the implications of the heuristic method in teaching Physics. • Illustrate the importance of inquiry-based learning. • Explain the types of inquiry-based learning. • Explain the characteristics of project-based learning.	**Unit 7. Physics Teaching Strategies** **(4pds.)** 7.1. Introduction 7.2. Approaches to Physics teaching 7.3. Cooperative and collaborative learning strategies 7.4. Heuristic method 7.5. Inquiry-based learning 7.6. Project-based learning 7.7. Context-based Physics learning 7.8. Research-based learning 7.9. Self-directed learning 7.10. Flipped learning

• Design project-based Physics learning. • Explore the meaning and importance of context-based Physics learning. • Explain the meaning and importance of research-based Physics learning. • Define self-directed learning. • Explain the importance and procedural steps of self-directed learning. • Discuss the importance and strategies of flipped classrooms. • Critique on the models of flipped learning method. • Explain the importance of cafeteria learning in the changing context. • Explore the procedure of the cafeteria learning method.	7.11. Cafeteria learning method
• Review a research proposal in Physics education. • Explain the meaning and cycle of participatory action research (PAR). • Discuss the principles of participatory action research methodology. • Describe the sources of data generation and analysis techniques related to participatory action research. • Conduct a seminar/webinar on the issue of Physics education. • Review dissertations and articles related to Physics education (at least 2 articles within 1000 words of each).	**Unit VIII: Research Review in Physics Education (4 pds.)** 8.1. Research proposal in Physics education 8.2. Participatory action research 8.3. (PAR) methodology in Physics education 8.4. Webinar on contemporary issues in Physics education 8.5. Review of dissertations and articles related to Physics education

Note: *The figures in the parenthesis indicate the appropriate teaching hours for the respective units*.

4. Instructional Techniques

4.1 General Instructional Techniques

- Discussion
- Demonstration
- Presentation
- Inquiry
- Project work
- Cooperative and collaborative work
- Internet (web) surfing
- Group work

4.2. Specific Instructional Techniques

Units	Specific Instructional Techniques
I	Classroom presentation on issues and trends in Physics teaching.
II	Report writing and presentation followed by discussion.
III	Presentation by studying the handouts provided by the teacher followed by teachers' suggestions.
IV	Video display about e-learning and reflect on it with comments. Perform ICT activities in ICT lab.
V	Paper writing and presentation followed by discussion.
V I	Presentation by studying the handouts provided by the teacher followed by teachers' suggestions on. Construct module on the basis of Moodle.
V II	Classroom presentation and group discussion orientated to the presentation.
VIII	Lived discussions and engagement through group activities.

5. Evaluation

5.1 Evaluation (Internal Assessment and External Examination)

Nature of course	**Internal Assessment**	**Semester Examination**	**Total Marks**
Theory	25 Marks	40 Marks	65 Marks

Note: Students must pass separately in internal assessment and semester examination.

5.2 Internal Evaluation **25 Marks**

Internal evaluation will be conducted by course teacher based on following activities:

1.	Attendance and participation in learning activities	5 Marks
2.	First assignment (written assignment)	5 Marks
3.	Second assignment (report writing and presentation)	5 Marks
4.	Third assignment/ Term exam	10 Marks
	Total	25 Marks

Note: *First assignment/assessment might be book review /article review, quiz, home assignment etc. according to nature of course. Second assignment/assessment might be project work, case study, seminar, survey/field study and individual/group report writing, term paper based on secondary data or review of literature and documents etc. and third assignment will be term exam.*

5.2 External Evaluation (Final Examination) **40 Marks**

Examination Division, office of the Dean, Faculty of Education will conduct final examination at the end of semester. The marks distribution will be

1.	Objective questions (Multiple Choice Questions 10 × 1mark)	10 Marks
2.	Subjective short questions (6 questions with 2 'OR' questions × 5marks)	30 Marks
	Total	40 Marks

6. Recommended Books and References Recommended Books

Bernardini, C., Tarsitani, C., &Vicentini, M. (Eds.). (2012). *Thinking Physics For Teaching*. Springer Science & Business Media.

Buabeng, I. (2018). Physics classroom interactions: Teaching strategies and practices.

Clark, R. C., & Mayer, R. E. (2016). *E-learning and the Science Of Instruction: Proven guidelines for consumers and designers of multimedia learning*. john Wiley & sons.

Dahal, B. K. (2021). *Teaching of Physics: A contemporary issues and new trends*. Bhaktapur, Nepal: Nisha Sharma.

1. References

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Arendt, A., Trego, A., & Allred, J. (2016). Students reach beyond expectations with cafeteria style grading. *Journal of Applied Research in Higher Education*, *8*(1), 2-17.

Atwa, Z. M., Din, R., & Hussin, M. (2018). Effectiveness of flipped learning in physics education on Palestinian high school students' achievement. *Journal of Personalized Learning*, *2*(1), 73-85.

Davar, M. (2012). *Teaching of Science.* New Delhi: PHI Learning Private Limited.

Douglas, J., & McKenzie, S. (2016). *Let them choose: Cafeteria learning style for adults*.

Association for Talent Development.

Gedgrave, I. (2009). *Modern teaching of physics*. Global Media.

Gisbert, M., & Bullen, M. (Eds.). (2015). *Teaching and Learning in Digital World: Strategies and Issues in Higher Education* (Vol. 70). PublicacionsUniversitat Rovira i Virgili.

Jeong, E. J. (2015). *Physics of the New Millennium Birth Of The New Paradigm.* USA: Research Gate.

John, M. (2016). Physics Teaching Methods.

Lewis, J. L. (1976). *New Trends In Physics Teaching.* France: The United Nations Educational, Scientific and Cultural Organization.

Mohan, R. (2007). *Innovative Science Teaching.* New Delhi: Prentice-Hall of India Pvt. Ltd. Moon, B., Hoffman, R. R., Novak, J., & Canas, A. (Eds.). (2011). *Applied concept mapping:*

Capturing, analyzing, and organizing knowledge. CRC Press.

Pietrocola, M., & Gurgel, I. (Eds.). (2017). *Crossing the border of the traditional science curriculum: innovative teaching and learning in basic science education*. Springer.

Rao, A. (1993). *Teaching of Physics.* New Delhi: Anmol Publications

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Aziz, M. S., Zain, A. N. M., Samsudin, M. A. B., & Saleh, S. B. (2014). The effects of problem-based learning on self-directed learning skills among physics undergraduates. *International Journal of Academic Research in Progressive Education and Development*, *3*(1), 126-137.

Bao, L., & Koenig, K. (2019). Physics education research for 21 st century learning. *Disciplinary and Interdisciplinary Science Education Research*, *1*(1), 1-12. Buabeng, I., Conner, L., & Winter, D. (2015). Preparing physics teachers for the classroom:

The role of initial teacher education providers. In *American Research Association Conference*.

Bybee, R. W. (2010). *The teaching science: 21st century perspectives - PB283X.* UK: National Science Teachers Association - NSTA Press.

Feierabend, T., &Eilks, I. (2011). Innovating Science Teaching by Participatory Action Research--Reflections from an Interdisciplinary Project of Curriculum Innovation on Teaching about Climate Change. *Center for Educational Policy Studies Journal*, *1*(1), 93-112.

Foletta, J., & Calder, J. (2018). *(Participatory) Action Research: Principles, Approaches and Applications*. Nova Science Publishers Incorporated.

Goodwin, J. A., & Gilbert, B. D. (2001). Cafeteria-style grading in general chemistry. *Journal of Chemical Education*, *78*(4), 490.

Hammer, D. (1994). Epistemological beliefs in introductory physics. *Cognition and instruction*, *12*(2), 151-183.

Heiland, T. L. (2019). Kolb Learning Styles of dancers who do and don‟t use dance notation compared to other fields. *Research in Dance Education*, *20*(2), 148-173.

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Jacobs, D. B. (2012). Professional development of science and physics teachers in England. *Journal of Education and Future*, (1), 61.

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Kaminski, W., & Michelini, M. (Eds.). (2014). *Teaching and Learning Physics Today: Challenges? Benefits? Proceedings of Selected Papers of the GIREP-ICPE-MPTL International Conference, Reims, August 22-27, 2010, France*. Universitàdegli Studi.

Matthews, M. R. (1993). Constructivism and science education: Some epistemological problems. *Journal of Science Education and Technology*, *2*(1), 359-370.

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Miedijensky, S., & Sasson, I. (2022). Participatory action research as a way to innovate mathematics and science teaching, teachers' professional development perceptions and performances. *Educational Action Research*, *30*(1), 39-60.

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Moyer, Albert E. (1981). *Physics teaching and the learning theories of G. Stanley Hall and Edward L. Thornidike. The Physics Teacher, 19(4), 221*

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Novak, J. D., & Cañas, A. J. (2007). Theoretical origins of concept maps, how to construct them, and uses in education. *Reflecting education*, *3*(1), 29-42.

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Phy. Ed. 528 P: Modern Physics Teaching

Course No.: Phy. Ed. 528 P
Level: M.Ed. in Physics
Semester: Second

Nature of course: Practical
Credit Hours: 3
Teaching hours: 48*
Periods per week: 3 pds/day/week/gr (P)**

1. Course Description

This course is a practical course and designed to develop knowledge and skills for conducting practical classes at high school, Bachelor's and Master's level of Physics education courses. It develops the skills of development of reports, presentations, and seminar papers, conducting workshops and applying innovative and recent pedagogical approaches related to Physics teaching and learning at different levels.

2. General Objectives

- To prepare research articles based on the recent pedagogical approaches in Physics education.
- To prepare and present seminar papers by conducting seminars on the issues of Physics education in Nepal and abroad.
- To develop the skills in PowerPoint presentations and skills of engaged and lived presentations.
- To draft the manuscripts of research articles based on the concept mapping, constructivism, application of information, communication and technology and the developmental perspectives related to Physics education.

3. Contents

Students Activities/Contents	**Total hours (48)**
Unit 1. Issues and Trends in Physics Teaching • Prepare a report on the issues in school level Physics education. • Present in the class through PowerPoint presentation on teaching Physics in the wider context. • Prepare a report on the development of scientific and technological literacy. • Organize a seminar about teaching for the understanding of Physics education and the vision of teaching Physics.	6

Unit 2. Contemporary Psychological Perspectives of Physics Learning • Prepare a review paper on the learning theories of John Dewey, David Kolb, Ausubel and Bruner related to Physics education. • Present on the theoretical and philosophical understanding of constructivism. • Critically examine and prepare manuscripts on constructivism in curriculum and textbooks development, teaching methods and evaluation techniques. • Prepare a 5E model by the use of the improvised materials and display with its use in the class.	7
Unit 3. Concept Mapping and Physics Education • Prepare a paper and present the theoretical and philosophical meaning of concept mapping. • Construct concept maps on various models on the chart papers on the basis of the word parking approach.	6
Unit 4: Weaving e-learning in Physics Education • Present the importance of e-learning in Physics education and describe the principles of e-learning. • Prepare a paper on the goals and importance of e-learning as well as web-based learning. • Explore virtual field trips sites (based on the specific curriculum), organize a programme and discuss the importance of virtual field trips in Physics teaching/learning. • Explore new sources of information such as Google Scholar, education resource information center (ERIC) and Hinari. • Download papers, share and discuss in the class.	6
Unit 5. 21st Century Issues in Physics Education • Prepare a paper on scientific literacy and critical thinking. Also, explain and present the ways of developing values. • Organize a talk programme on the techniques of promoting scientific literacy among the citizens and the ways of developing Physics process skills among the students. • Explore the possibilities of the vision for Physics education and • Physics learning pedagogy for the future and prepare a manuscript/paper based on it. Also, present in the class.	6

Unit 6. Physics Teachers Professional Development • Prepare a sample Physics teachers' training manual (based on the particular unit) and present it to the class. • Prepare a paper based on the importance of the Physics teachers' professional development programmes and Physics teachers' competencies. • Prepare PowerPoint presentation slides on the basic qualities of a Physics teacher and presents them in the practical class.	7
Unit 7. Physics Teaching Strategies • Prepare a paper on the approaches to Physics teaching and learning incorporating cooperative and collaborative learning strategies. • Design a sample class on the heuristic method and inquiry-based learning method, project-based learning, and context-based Physics learning. • Explain the importance of research-based Physics learning, self- directed learning and flipped learning methods. Discuss the importance of each and every method in the practical class and finally prepare a reflective journal (minimum 2500 words). • Design acafeteria learning and write a reflective memo based on it.	6
Unit 8: Research Review in Physics Education • Review a research proposal in Physics education. • Develop a report based on the steps and cycle of the participatory action research (PAR) methodology. • Conduct a seminar/webinar on the issue of Physics education. • Review dissertations and articles related to Physics education (at least 2 articles within 1000 words of each).	4

4. Specific Instructional Techniques

- Internet surfing
- Develop manuscript by collaboration and discussion
- Workshops: Presentation, participatory activities
- Books and article review
- Field visit
- Preparation of charts, models, presentations slides, and reports.

5. Evaluation **35 Marks**

Nature of course	Internal Evaluation	External Evaluation	Total Marks
Practical	15 Marks	20 Marks	35 Marks

5.1 Internal Evaluation **15 Marks**

Marks distribution for practical internal evaluation will be as following.

1.	Attendance	5Marks
2.	Students' portfolios (Record book and Books and article review etc.)	5Marks
3.	Participation, collaborative work and construction of teaching learning resources and planning for teaching learning ***	5Marks
	Total	15Marks

5.2 External Evaluation **20 Marks**

Marks distribution for practical external evaluation will be as following.

1.	Experiment/project work report and presentation / study reports	15Marks
2.	Viva-voce	5 Marks
	Total	20Marks

Note:

Students must pass both in internal as well as external assessments of practical examination

** Practical teaching hours is 3 times more than teaching hours of theory (3x 16 = 48 hours)*

***A group consists of 15 students and one teacher will be assigned for a group.*

****Construction of models, charts, teaching aids, develop concept map etc. Also, the collection of materials / designing Physics lab, preparation of lesson plan, unit plan, annual plan, preparation of rubrics, developing test items of various levels etc. for teaching learning.*

6. Recommended Books and References

Shivendra, C. (2006). Contemporary Physics teaching: New Delhi, Anmol Publication Pvt. Ltd.

Agarwal, P. K. (2018). Retrieval practice & Bloom's taxonomy: Do students need fact knowledge before higher-order learning? *Journal of Educational Psychology*.

Phy. Ed. 529 T : Optics and Quantum Mechanics

Course No.	: Phy. Ed .529 T	Nature of course: Theoretical
Level	: M. Ed. in Physics	Credit hours : 2
Semester	: Second	Teaching hour: 32 Period per week: 2

1. Course Description

This course aims to give knowledge on optics and quantum mechanics. It consists of theoretical section includes the topic optics which covers nature and propagation of light, aberration at spherical surfaces, interference, diffraction and polarization, dispersion, scattering and holography. This course also provides the theoretical background for practical and research work.

2. General Objectives

The general objectives of this course are to enable students

- To acquire adequate knowledge of optics and quantum mechanics.
- To be familiar with modern concepts in optics and quantum mechanics.
- To familiarize the students with the activities of some topics related to the course content and to enhance the practical knowledge related to Physics.
- To provide knowledge and skills to research work.

3. Specific Objectives and Contents

Specific Objectives	**Contents**
	A) Optics **(16pds.)**
• Explain following various theories regarding the nature of light: o -Newton's corpuscular theory o -Huygen's wave theory o -Electromagnetic theory o -Quantum theory o -Dual nature of light • Define optical path and derive its expression. • Describe the determination of velocity of	**Units I: Nature of Light and Holography (3pds.)** 1.1.Nature of Light 1.2.Newton's corpuscular theory 1.3.Huygen's wave theory 1.4.Electromagnetic theory 1.5.Quantum theory 1.6.Dual nature of light

light with advantages and disadvantages by following methods: -Fizeau method - Foucault's method -Michelson's method • Explain the basic principles of holography. • Recording of hologram • Reconstruction of the image • Explain the applications of holograph. • Solve some related numerical problems.	1.7.Optical Path 1.8. Velocity of light -Fizeau method - Foucault's method -Michelson's method 1.9. Basic principle of holography and applications
• Explain spherical aberration and their removal. • Describe chromatic aberration. • Derive an expression for longitudinal chromatic aberration. • Derive a circle of least chromatic aberration. • Discuss achromatic lenses and condition for achromatism of the lenses. • Solve some related numerical problems.	**Units II: Aberration at Spherical Surfaces (3pds.)** 2.1. Spherical aberration and their removal 2.2. Chromatic aberration and their removal 2.2.1. Expression for longitudinal chromatic aberration 2.2.2. Circle of least chromatic aberration 2.2.3. Achromatic lenses and condition for achromatism of the lenses
• Review the theory of interference of fringes. • Explain Lloyd's mirror for the determination of fringe width of interference pattern and wavelength of radiation. • Explain Fresnel's bi-prism for the determination of fringe width of interference pattern and wavelength of radiation. • Derive the theory of interference due to reflected light (thin film). • Derive the theory of interference due to transmitted light (thin film). • Solve some related numerical problems.	**Units III: Interference (4pds.)** 3.1. Theory of interference fringes 3.2. Lloyd's mirror 3.3. Fresnel's bi-prism 3.4. Interference in thin films 3.5. Interference due to reflected light. 3.6. Interference due to transmitted light

• Explain the diffraction with its revision. • Explain the theory of plane transmission grating as a revision and calculate its dispersive power. • Calculate resolving power of plane-transmission grating. • Explain the phenomenon polarization as revision. • Describe polarization due to refraction. • Explain Malus law. • Discuss the double refraction with suitable illustrations. • Describe the Nicol prism with its use as an analyzer and polarizer. • Explain half wave plate and quarter wave plate. • Define optical activity and Specific rotation. • Describe the determination of specific rotation of an optically active substance by using Laurent's half shade polarimeter. • Solve some related numerical problems.	**Unit IV: Diffraction and Polarization (4pds.)** 4.1. Review of diffraction 4.2. Dispersive power of grating 4.3. Resolving power of optical instruments plane- transmission grating 4.4. Review of polarization 4.5. Polarization by refraction 4.6. Malus law 4.7. Double refraction 4.8. Nicol prism 4.9. Half wave plate and quarter wave plate 4.10. Optical activity (Rotatory polarization) 4.11. Specific rotation
• Explain normal and anomalous dispersion. • Describe dispersion in gases with necessary theory and calculate dispersion formula. • State and explain the light pollution and effects of it. • Solve some related numerical problems.	**Unit V: Dispersion and Scattering (2pds.)** 5.1. Normal and anomalous dispersion 5.2. Dispersion in gases (Lorentz theory) 5.3. Light pollution
	B) Quantum Mechanics (16 pds.)
• Write down the inadequacy of classical mechanics. • Discuss de-Broglie's concept of matter wave. • Express the de-Broglie's wavelength by non-relativistic and relativistic ways. • Describe the experimental study of matter waves by Davisson and Germer's method. • State and explain Heisenberg's uncertainty principle. • Explain exact proof of Heisenberg's	**Unit VI: Introductory Wave Mechanics (3pds.)** 6.1. Inadequacy of classical mechanics **6.2.** de-Broglie's concept of matter wave **6.3.** Davisson and Germer's experiment **6.4.** Heisenberg's uncertainty

uncertainty relation and mention its physical significance. • Discuss the illustrations of Heisenberg's Uncertainty principles by following thought experiments: Diffraction of a beam of electrons through a slit Determination of the position of a particle with microscope. • Explain following applications of uncertainty principle: • Non-existence of the electrons in the nucleus. • Size of hydrogen atom. • Minimum energy of harmonic oscillator. • Conditions for simultaneity of kinetic and potential energy. • Solve some related numerical problems.	principle **6.5.** Exact proof **6.6.** Physical significance Illustrations by thought experiments **6.7.** Applications
• Write down the basic postulate of quantum mechanics. • Explain wave motion and wave function. • Discuss the wave function in an arbitrary direction for a free particle. • Obtain time dependent and time independent Schrodinger's wave equation. • Describe physical interpretation of Schrodinger's wave equation. • Explain probability density and normalization of wave function with their importance. • Discuss the limitations of wave function. • Define expectation value of dynamical quantities or average value and derive expectation value for position vector, potential, energy, and momentum. • Derive an expression of probability current density or continuity equation. • Discuss Newton's law of motion as a special case of quantum mechanics in Ehrenfest's theorem. • Solve some related numerical problems.	**Unit VII: Quantum Mechanical Wave Propagation (4pds.)** 7.1. Basic postulate of quantum mechanics 7.2. Wave motion and wave function 7.3. Wave function for free particle 7.4. Schrodinger's wave equation 7.5. Time dependent Schrodinger's wave equation 7.6. Time independent Schrodinger's wave equation 7.7. Physical interpretation of Schrodinger wave equation 7.8. Probability density 7.9. Normalization of wave function 7.10. Limitations of wave function 7.11. Expectation values of 7.12. Dynamical quantities or average value 7.13. Probability current density or continuity equation 7.14. Ehrenfest's theorem

• Define operator explain linear operators. • Describe eigen functions and eigen values. • Explain linear momentum, kinetic energy, total energy operators and angular momentum operator. • Discuss commutation relations and its fundamental rules with following examples: • Commutation relation between position and momentum. • Commutation relation between Hamiltonian and linear momentum. • Commutation rules for angular momentum. • Commutation relation of angular and linear momentum. • Explain parity operator and its properties. • Solve some related numerical problems.	**Unit VIII: Operator Formalism in Quantum Mechanics (2pds.)** 8.1. Operator 8.2. Linear operator 8.3. Eigen functions and eigen values 8.4. Linear momentum operator 8.5. Kinetic energy operator 8.6. Total energy operator 8.7. Angular momentum operator 8.9. Commutation relations 8.10. Parity operator
• Define free particle and derive wave function, energy and probability density of it. • Discuss the motion of particle in one dimensional box and find expression of wave function and energy eigen value. • Describe the quantum mechanical description of the particle in three-dimensional box. • Define potential step and discuss the theory of transmission and reflection probabilities of a free quantum particle encounters with a potential step. • Explain potential barrier and barrier penetration. • Explain the tunneling effect of a particle through a potential barrier and also discuss the theory of reflection and transmission coefficient. • Solve some related numerical problems.	**Unit IX: Particle in Box (5pds.)** 9.1. Free particle 9.2. Particle in box in one dimension 9.3. Infinite square well potential 9.4. Particle in three-dimensional box 9.5. Potential step 9.6. Barrier penetration

• Define and explain linear harmonic oscillator. • Write down the energy of harmonic oscillator according to quantum theory and explain zero-point energy. • Find the expression for energy Eigen values of a one-dimensional harmonic oscillator using creation and annihilation operator and relationships. • Solve some related numerical problems.	**Unit X: The Harmonic Oscillator (2pds.)** 10.1Linear harmonic oscillator 10.2Energy of harmonic oscillator and zero-point energy 10.3Application of operator

Note: *The figures in the parenthesis indicate the approximate teaching hours for the respective units.*

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. First group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to specific units.

S.N.	Units	Title	General Instructional techniques	Specific Instructional techniques	Remarks
1.	I	Nature of light and Holography	Lecture, Discussion	Demonstration, Audio visual method	
2.	II	Aberration at spherical surfaces	Discussion, Demonstration	ICTs based methods	
3.	III	Interference	Lecture, Discussion, Demonstration	Experimentation, Audio visual method	
4.	IV	Diffraction and polarization	Discussion, Demonstration	Audio visual methods, Model preparation, Report writing	
5.	V	Dispersion and scattering	Discussion, Demonstration	Power point presentation, ICTs based methods, Experimentation	

6.	VI	Introductory wave Mechanics	Lecture, Discussion	Induction, Deduction	
7.	VII	Quantum mechanical wave propagation	Lecture, Deduction	Book review, Library reading, Visualization	
8.	VIII	Operator formalism in quantum mechanics	Lecture	Induction, Deduction	
9.	IX	Barrier penetration	Lecture, Discussion	Web surfing Animated video presentation	
10.	X	The harmonic oscillator	Lecture	Induction, Deduction	

5. Evaluation

5.1 Evaluation (Internal Assessment and External Examination)

Nature of course	Internal Assessment	Semester Examination	Total Marks
Theory	25 Marks	40 Marks	65 Marks

***Note**: Students must pass separately in internal assessment and semester examination.*

5.2 Internal Evaluation 25 Marks

Internal evaluation will be conducted by course teacher based on following activities:

1.	Attendance and participation in learning activities	5 Marks
2.	First assignment (written assignment)	5 Marks
3.	Second assignment (report writing and presentation)	5 Marks
4.	Third assignment/ Term exam	10 Marks
	Total	25 Marks

Note: *First assignment/assessment might be book review /article review, quiz, home assignment etc. according to nature of course. Second assignment/assessment might*

be project work, case study, seminar, survey/field study and individual/group report writing, term paper based on secondary data or review of literature and documents etc. and third assignment will be term exam.

5.3 External Evaluation (Final Examination) 40 Marks

Examination Division, office of the Dean, Faculty of Education will conduct final examination at the end of semester. The marks distribution will be

3.	Objective questions (Multiple Choice Questions 10 × 1mark)	10 Marks
4.	Subjective short questions (6 questions with 2 'OR' questions × 5 marks)	30 Marks
	Total	40 Marks

6. Recommended books and References Recommended Books:

Subrahmanyam, N., Brij, L. & Avadhanulu, M.N. (2013), *Text Book Of Optics*. Chand S. &Company Ltd: New Delhi. **(For Unit-I to V units)**

John, L. Powell& Bernd C. (1998), *Quantum Mechanics.* Narosa Publishing House: New Delhi. **(For Unit VI, VII, VIII, IX and X)**

7. References:

Agrawal, B.K.& Prakash, H. (2012), *Quantum Mechanics*. PHI Learning Pvt. Ltd.: New Delhi. (For Unit VIII)

Ghatak, A. (2014), *Optics*. McGraw Hill Education (India) Pvt. Ltd.: New Delhi.

Jenkins, F.A., Harvey, E.& White (2014), *Fundamentals of Optics*. McGraw Hill Education (India) Pvt. Ltd.: New Delhi.

Gupta, Kumar & Sharma (2012), *Quantum Mechanics*. Jai Prakash Nath Publication: Meerut city.

Leonard, I. &Schiff (2012***),*** *Quantum Mechanics*. Tata McGraw Hill Book Company: New Delhi.

Mathews, P.M. &Venkatesan, K. (2010), *A Text book of Quantum mechanics*. Tata McGraw Hill Education Pvt. Ltd.: New Delhi.

Murugeshan, R. &Sivaprasath, K. (2012), *Modern Physics.* Chand S.& Company Ltd:New Delhi.

Phy. Ed. 529 P: Optics and Quantum Mechanics

Course No.	: Phy. Ed .529 P	Nature of course: Practical
Level	: M. Ed. in Physics	Credit hours : 1
Semester	: Second	Teaching hour: 48*
		Period per week: 3pds/day/week/gr(P) **

1. Course Description

This course is designed to acquaint the students with the knowledge and skills on "**Optics and Quantum Mechanics"**. It consists of only Practical Parts which helps the student to acquire the knowledge and scientific skills to conduct Physics practical classes at Higher level of Science Education. It also provides the foundation for new inventions.

2. General Objectives

The general objectives of this course are as follows:

- To developed skills to students to perform experiments using scientific instruments and apparatus, including techniques of operation and aspects of safety precaution.
- To acquaint the students to handle instruments related to interference, diffraction and polarization.
- To verify the theories and principles of optics and quantum mechanics.
- To equip students with problem solving skills in Optics and Quantum mechanics.

3. Specific Objectives and Contents

Specific Objectives	**Contents (48 pds.)**
• To use the Fresnel bi-prism for the determination of the wavelength of a given monochromatic light and thickness of mica sheet. • To use Lloyd's mirror for the determination of wavelength of the given source of sodium light. • To use the Michelson's Interferometer to determine:	• Wavelength of radiation by using • Fresnel bi-prism • Lloyd's mirror • Michelson's interferometer • Diffraction Grating • Interference pattern by wedge shape • Refractive Index.

i) the wavelength of monochromatic light and ii) the thickness of the mica sheet. • To use grating element for the determination of wavelength of the given source of Na-light. • To study the formation of Interference fringe pattern by wedge shape. • To determine refractive index of material of prism by using spectrometer. • To study the variation of refractive index with different concentration of sugar solutions using a hollow prism. • To determine refractive indices of different colors and plotting a graph between refractive index (μ) and $\frac{1}{\lambda^2}$ using mercury vapor lamp. • Determine the angle of prism and dispersive power of material of the prism using spectrometer. • To study specific rotation (Optical activity) of cane sugar solution using Laurent's half shade polarimeter. • Determine the wavelength of He-Ne laser light and use it to measure the thickness of a thin wire by diffraction of light. • Determine the value of Cauchy's constants A and B for the material of glass prism using Hg lamp. • Derive energy and wavelength using Franck Hertz's experiment. • Construct the terrestrial telescope using local materials and lenses. • Construct the periscope using local materials and plane mirror.	• Dispersive power • Specific rotation in polarization. • Diffraction by laser light. • Cauchy's constants for the material of glass Prism. • Franck-Hertz's experiment • Project works and report writing

4. Instructional Techniques

The instructional techniques for this course are divided into two groups. First group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to specific

units.

4.1 General Techniques

Demonstratin

Discussion

Inquiry

Project Works

Collaborative Works

ICT based teaching

4.2 Specific instructional techniques

- Internet surfing
- Develop manuscript by collaboration and discussion
- Workshops: Presentation, participatory activities
- Books and article review
- Field visit Preparation of charts, models, presentations slides, and reports.
- The teachers may decide the project work related to the course work.

5. Evaluation **35 Marks**

Nature of course	Internal Evaluation	External Evaluation	Total Marks
Practical	15 Marks	20 Marks	35 Marks

5.1 Internal Evaluation **15 Marks**

Marks distribution for practical internal evaluation will be as following.

1.	Attendance	5Marks
2.	Students' portfolios (Record book and Books and article review etc.)	5Marks
3.	Participation, collaborative work and construction of teaching learning resources and planning for teaching learning ***	5Marks
	Total	15Marks

5.2 External Evaluation **20 Marks**

Marks distribution for practical external evaluation will be as following.

1.	Experiment / project work report and presentation / study reports	15Marks
2.	Viva-voce	5 Marks
	Total	20Marks

Note:

Students must pass both in internal as well as external assessment of practical examination

** Practical teaching hours is 3 times more than teaching hours of theory (3x 16 = 48 hours)*

***A group consists of 15 students and one teacher will be assigned for a group.*

****Construction of models, charts, teaching aids, develop concept map etc. Also, the collection of materials / designing science lab, preparation of lesson plan, unit plan, annual plan, preparation of rubrics, developing test items of various levels etc. for teaching learning.*

1. Recommended Books and Reference Recommended books

Arora, C. (2009). ***B.Sc. Practical Physics***. New Delhi: S. Chand & Company (Pvt) Ltd.

Singh, H., & Dr. Hemne, P. (2011). ***B.Sc. Practical Physics***. New Delhi: S. Chand & Co. Ltd.

2. References:

Halliday, Resnick, & Krane. (2009). ***Laboratory Physics***. Singapore: John Wiley & Sons.

Mittal, R., & Singal, S. (1995). ***Laboratory manual in Physics***. Karol Bagh, New Delhi: Arya Book Depot.

Sharma, Singh, & Prasad. (2008). ***Degree Level Practical Physics***. Patana: Bharati Bhawan Publicat

नेपाली शिक्षा

नेपा.शि. ५२५ : नेपाली कविताकाव्य	क्रे.आ. : ३
पाठ्यांश संख्या : नेपा.शि. ५२५	पूर्णाङ्क : ६०
पाठ्यांश प्रकृति : सैद्धान्तिक	उत्तीर्णाङ्क : ३०
तह : एम.एड.	प्रतिहप्ता पाठघन्टी : ३
सत्र : दोस्रो	जम्मा पाठघन्टी : ४८

१. पाठयांश परिचय

यो पाठ्यांश शिक्षाशास्त्र सङ्कायअन्तर्गत सेमेस्टर प्रणालीमा आधारित नेपाली शिक्षा विषयमा स्नातकोत्तर (एम.एड.) विशिष्टीकरण गर्न चाहने विद्यार्थीहरूका लागि तयार गरिएको हो । यस पाठ्यांशमा कविता सिद्धान्त र नेपाली कविताको विकासक्रम, निर्धारित कविहरूका फुटकर कविता र गीत गजलहरू, प्रतिनिधि कविहरूका खण्डकाव्य, नाट्यकाव्य र महाकाव्यहरू रहेका छन् ।

२. साधारण उद्देश्य

यस पाठ्यांशको अध्ययनपछि विद्यार्थीहरू निम्नलिखित साधारण उद्देश्यहरू हासिल गर्न सक्षम हुनेछन् :

- पूर्वीय-पाश्चात्य मान्यताका आधारमा फुटकर कविता, खण्डकाव्य र महाकाव्यको सैद्धान्तिक परिचय दिन
- नेपाली कविता, खण्डकाव्य, नाट्यकाव्य र महाकाव्यको विकासक्रम, प्रमुख मोड तथा मूल प्रवृत्तिहरूको परिचय दिन
- निर्धारित कविका कवितात्मक प्रवृत्ति तथा तिनका कविताहरुलाई विभिन्न दृष्टिकोणले विवेचना गर्न
- निर्धारित काव्यकारहरूका काव्यात्मक प्रवृत्ति तथा तिनका खण्डकाव्य, नाट्यकाव्य र महाकाव्यको विभिन्न दृष्टिकोणले विवेचना गर्न
- उल्लिखित कविता-काव्यभित्रका विशिष्ट पङ्क्तिहरूको अलङ्कार विधान, विम्बविधान र छन्द वा लय विधानको व्याख्या गर्न ।

३. विशिष्ट उद्देश्य तथा पाठ्यविषय

विशिष्ट उद्देश्य	पाठ्यविषय
• कविताको स्वरूप निर्धारण गर्न • कविताको परिभाषा बताउन • कविताका तŒवहरू छुट्याउन • कविताका प्रकारहरूको वर्णन गर्न • नेपाली कविताको विकासक्रमका प्रमुख मोड, उपमोड, धारा-उपधारा र तिनका प्रवृत्तिको रेखाङ्कन गर्न ।	एकाइ एक : कविता सिद्धान्त र नेपाली कविताको विकासक्रम (८) **१.१ कविताको स्वरूप** **१.२ कविताको परिभाषा +** **१.३ कविताका तŒवहरू +** **१.४ कविताका प्रकार +** **१.५ नेपाली कविताको विकासक्रमका प्रमुख मोड, उपमोड, धारा-उपधारा र तिनका प्रवृत्तिहरू**
• निर्धारित कविहरूका मुख्य प्रवृत्ति निर्धारण गर्न • निर्धारित कविता, गीत र गजलको पठन, बोध र आस्वादन गर्न • निर्धारित कविता, गीत र गजलहरूको तŒवगत विश्लेषण गर्न • निर्धारित कविता, गीत र गजलका विशिष्ट	एकाइ दुई : निर्धारित कविहरूका कविता, गीत र गजलहरू (१०) **२.१ लेखनाथ पौड्याल : वयोवृद्ध कोइलीको बिलौना** **२.२ लक्ष्मीप्रसाद देवकोटा : पागल** **२.३ गोपालप्रसाद रिमाल : ... प्रति (३)**

पङ्क्तिहरुको छन्द वा लय विधान तथा अलङ्कार वा विम्वविधानको व्याख्या गर्न ।	**२.४ मोहन कोइराला : घाइते युग** **२.५ वैरागी काइँला : हाट भर्ने मानिस +** **२.६ भूपि शेरचन : हामी** **२.७ कृष्णहरि बराल : फूल +** **२.८ बूद राना : सुनभैं हजार चोटि +** **२.९ उल्लिखित कविता, गीत र गजलका विशिष्ट पङ्क्तिको व्याख्या**
• खण्डकाव्यको सैद्धान्तिक स्वरूपको परिचय दिन, • खण्डकाव्यका तŒवहरूको वर्णन गर्न • खण्डकाव्यका प्रकारको वर्गीकरण गर्न • नेपाली खण्डकाव्यको विकासक्रमको रूपरेखा प्रस्तुत गर्न, • खण्डकाव्यकार सिद्धिचरण श्रेष्ठको परिचय र प्रवृत्ति ठम्याउन • खण्डकाव्य तत्व (कथानक, चरित्र, परिवेश, उद्देश्य, द्वन्द्वविधान र भाषाशैली)का दृष्टिले 'उर्वशी' खण्डकाव्यको विवेचना गर्न	एकाइ तिन : खण्डकाव्यको अध्ययन (१०) **३.१ खण्डकाव्यको सैद्धान्तिक स्वरूप** **३.२ खण्डकाव्यका तŒवहरू** **३.३ खण्डकाव्यका प्रकारहरू +** **३.४ नेपाली खण्डकाव्यको विकासक्रम +** **३.५ खण्डकाव्यकार सिद्धिचरण श्रेष्ठ र 'उर्वशी' खण्डकाव्य** **३.५.१ खण्डकाव्यकार सिद्धिचरण श्रेष्ठको परिचय र प्रवृत्ति** **३.५.२ खण्डकाव्य तŒवका आधारमा 'उर्वशी' खण्डकाव्यको अध्ययन** **३.५.३ उक्त खण्डकाव्यका विशिष्ट पङ्क्तिको व्याख्या**
• नाट्यकाव्यका स्वरूप ठम्याउन • नाट्यकाव्यका तŒवहरूको वयान गर्न • नाट्यकाव्यका प्रकार उल्लेख गर्न • नेपाली नाट्यकाव्यको विकासक्रमको चर्चा गर्न, • नाट्यकाव्यकार माधव घिमिरेको परिचय र नाट्य काव्यात्मक प्रवृत्ति ठम्याउन • नाट्यकाव्य तत्व (कथानक, चरित्र, परिवेश, उद्देश्य, द्वन्द्वविधान, भाषाशैली, संवाद र मञ्चनीयता) का दृष्टिले 'अश्वत्थामा' नाट्यकाव्यको अध्ययन गर्न	एकाइ चार: अश्वत्थामा नाट्यकाव्यको अध्ययन (१०) **४.१ नाट्यकाव्यको स्वरूप** **४.२ नाट्यकाव्यका तŒवहरू +** **४.३ नाट्यकाव्यका प्रकार** **४.४ नेपाली नाट्यकाव्यको विकासक्रम** **४.५ नाट्यकाव्यकार माधव घिमिरे र 'अश्वत्थामा' नाट्यकाव्य** **४.५.१ नाट्यकाव्यकार माधव घिमिरेको परिचय र प्रवृत्ति** **४.५.२ नाट्यकाव्य तत्वका दृष्टिले 'अश्वत्थामा' नाट्यकाव्यको अध्ययन** **४.५.३ उक्त नाट्यकाव्यका विशिष्ट पङ्क्तिको व्याख्या +**

• महाकाव्यको सैद्धान्तिक स्वरूप स्पष्ट पार्न, • पूर्वीय र पाश्चात्य महाकाव्य मान्यताको चर्चा गर्न, • महाकाव्यका आधारभूत तŒव बताउन • नेपाली महाकाव्यको विकासक्रमको रूपरेखा प्रस्तुत गर्न • महाकवि लक्ष्मीप्रसाद देवकोटाको परिचय र महाकाव्यात्मक प्रवृत्तिहरूको विवेचना गर्न • 'शाकुन्तल' महाकाव्यको अध्ययन, आस्वादन र तत्त्वगत विश्लेषण गर्न, • 'शाकुन्तल' महाकाव्यका १-३ सर्ग भित्रका विशिष्ट पङ्क्तिको भावविधान छन्द विधान र आलङ्कारिक विम्वविधानको व्याख्या गर्न ।	एकाइ पाँच : महाकवि लक्ष्मीप्रसाद देवकोटा र उनको 'शाकुन्तल' महाकाव्यको विवेचना (१०) **३.७ महाकाव्यको सैद्धान्तिक स्वरूप** **३.८ पूर्वीय र पाश्चात्य महाकाव्य मान्यता** **३.९ महाकाव्यका आधारभूत तत्वहरू** **५.१ नेपाली महाकाव्यको विकासक्रम** **५.२ महाकवि लक्ष्मीप्रसाद देवकोटाको परिचय र प्रवृत्ति** **५.३ विभिन्न कोणबाट 'शाकुन्तल' महाकाव्यको अध्ययन** **५.३.१ कथावस्तु** **५.३.२ चरित्र** **५.३.३ परिवेश** **५.३.४ उद्देश्य** **५.३.५ भाषाशैली** **५.४ उक्त महाकाव्यका १-३ सर्गका विशिष्ट पङ्क्तिको व्याख्या +**

४. शिक्षण प्रविधि

यस पाठ्यांशको अध्ययन अध्यापनका क्रममा प्रयोग हुने शिक्षण प्रविधिलाई दुई भागमा वर्गीकरण गरिएको छ । अधिकांश पाठ्यवस्तुहरू अध्यापन गर्न प्रयोग गरिने शिक्षण प्रविधि साधारण शिक्षण प्रविधिमा राखिएका छन् भने कुनै निश्चित एकाइअन्तर्गतका पाठ्यवस्तु अध्यापन गर्न प्रयोग गरिने शिक्षण प्रविधिलाई विशिष्ट शिक्षण प्रविधि अन्तर्गत राखिएको छ ।

४.१ साधारण शिक्षणप्रविधि

प्रत्येक एकाइमा आवश्यकताअनुसार व्याख्यान, प्रश्नोत्तर, छलफल तथा प्रस्तुतीकरण विधिको उपयोग गरिने छ । एकाइको प्रकृतिअनुरूप पाठ्यपुस्तक, सहायक पुस्तक, सन्दर्भ पुस्तक, पाठपत्र, तालिका र आरेखहरूको उपयोग गरिने छ ।

४.२ विशिष्ट शिक्षणप्रविधि

- एकाइ एकमा सैद्धान्तिक सामग्रीको विश्लेषणका लागि व्याख्यान र छलफल विधिको उपयोग गरिनेछ ।
- एकाइ दुईमा व्याख्यान, छलफल र प्रस्तुतीकरण विधिको उपयोग गरिनेछ ।
- एकाइ तिनमा व्याख्यान, छलफल र प्रस्तुतीकरण विधि अवलम्बन गरिनेछ ।
- एकाइ चारमा व्यक्तिगत र सामूहिक रूपमा कार्यपत्र लेखन र कक्षा प्रस्तुति गर्न लगाइनेछ ।
- एकाइ पाँचमा व्याख्यानका अतिरिक्त सामूहिक कार्यपत्र लेखन र प्रस्तुति गर्न लगाइनेछ ।

एकाइ एक	प्रायोगिक कार्यकलाप
कविताको परिभाषा	**व्यक्तिगत कक्षा प्रस्तुति**
कविताका तत्वहरू	**सामूहिक प्रस्तुति**
कविताका प्रकार	**व्यक्तिगत कक्षा प्रस्तुति**

एकाइ दुई **लक्ष्मीप्रसाद देवकोटा : पागल** **वैरागी काइँला : हाट भर्ने मानिस** **कृष्णहरि बराल : फूल** **बूद राना : सुनभैँ हजार चोटि**	व्यक्तिगत कक्षा प्रस्तुति अध्ययनपत्र लेखन र प्रस्तुति व्यक्तिगत कक्षा प्रस्तुति सामूहिक प्रस्तुति
, एकाइ तीन **खण्डकाव्यका प्रकारहरू** **नेपाली खण्डकाव्यको विकासक्रम**	व्यक्तिगत कक्षा प्रस्तुति सामूहिक प्रस्तुति
अध्याय चार **नाट्यकाव्यका तŒवहरू** **अश्वत्थामा नाट्यकाव्यका विशिष्ट पङ्क्तिको व्याख्या +**	व्यक्तिगत कक्षा प्रस्तुति समूहगत अध्ययनपत्र लेखन
एकाइ पाँच **शाकुन्तल महाकाव्यका १-३ सर्गका विशिष्ट पङ्क्तिको व्याख्या**	परियोजना कार्य

प्रायोगिक कार्यकलाप अन्तर्गत माथि विभिन्न एकाइका उपशीर्षकमा योग (+) चिन्हद्वारा संकेत गरिएका सामग्रीका साथसाथै पाठ्यक्रम भित्र समावेश भएका अरू सामग्रीहरूलाई पनि शिक्षकले आवश्यकताअनुसार व्यक्तिगत तथा सामूहिक कक्षाकार्य एवम् परियोजना कार्य, गोष्ठीपत्र लेखन, प्रस्तुति र टिप्पणी जस्ता कार्यकलापहरू गराउनु आवश्यक ठानिएको छ ।

५. मूल्याङ्कन प्रक्रिया

यस पाठ्यांशको मूल्याङ्कन प्रक्रिया दुई प्रकृतिको हुनेछ :

(१) आन्तरिक मूल्याङ्कन

(२) बाह्य मूल्याङ्कन

(१) आन्तरिक मूल्याङ्कन

आन्तरिक मूल्याङ्कनका लागि ४०% अङ्कभार छुट्याइएको छ । उक्त मूल्याङ्कनका लागि निर्दिष्ट प्रायोगिक कार्यअन्तर्गत रही विषय शिक्षकले निम्न आधारहरू अवलम्बन गर्नुपर्ने छ :

(क) उपस्थिति - ५ अङ्क

(ख) शिक्षण सिकाइमा सहभागिता - ५ अङ्क

(ग) पहिलो आन्तरिक परीक्षा - १० अङ्क

(घ) दोस्रो आन्तरिक परीक्षा - १० अङ्क

(ङ) तेस्रो आन्तरिक परीक्षा - १० अङ्क

पहिलो आन्तरिक परीक्षाका लागि विषय शिक्षकले निम्नलिखित कार्यहरू गर्न लगाउने छन्:

अध्ययनपत्र लेखन, पुस्तक समीक्षा, लेख पुनरावलोकन, कुनै विषय शीर्षक केन्द्रित अध्ययन पत्र तयारी, आन्तरिक परीक्षा, एकाइ परीक्षा, ज्ञान/प्रतिभा परीक्षण आदि ।

दोस्रो आन्तरिक परीक्षाका लागि विषय शिक्षकले निम्नलिखित कार्यहरू गर्न लगाउने छन् :

परियोजना कार्य, अवस्था/घटना अध्ययन, गोष्ठी, क्षेत्रकार्य, व्यक्तिगत वा समूहगत प्रतिवेदन लेखन, द्वितीय स्रोत सामग्रीमा आधारित अध्ययनपत्र लेखन, पूर्वाध्ययन, पुनरावलोकन र अभिलेखीकरण आदि ।

तेस्रो आन्तरिक परीक्षाका लागि आन्तरिक सुधार परीक्षाका रुपमा ६० पूर्णाङ्कको परीक्षा लिई त्यसलाई १० अङ्कमा रुपान्तर गरिनेछ ।

उपर्युक्त पहिलो, दोस्रो, तेस्रो आन्तरिक परीक्षा मध्ये दुईवटा लिखित परीक्षामा विद्यार्थीहरु अनिवार्य रूपमा समावेश हुनुपर्ने छ ।

२. बाह्य मूल्याङ्कन

बाह्य मूल्याङ्कनका लागि ६०% अङ्कभार छुट्याइएको छ । उक्त मूल्याङ्कनका लागि त्रि.वि. शिक्षाशास्त्र सङ्काय, डीनको कार्यालयद्वारा सत्रान्तमा परीक्षा लिइने छ । सो परीक्षामा सोधिने प्रश्नको प्रकृति, ढाँचा र त्यसको अङ्कभार निम्नानुसार हुने छ :

प्रश्नको प्रकृति	सोधिने प्रश्न सङ्ख्या	उत्तर दिनुपर्ने प्रश्न सङ्ख्या	प्रतिप्रश्न छुट्याइएको अङ्क	पूर्णाङ्क
समूह 'क' : बहुवैकल्पिक प्रश्न	१०	१०	१	१०
समूह 'ख' : छोटो उत्तर आउने प्रश्न	६ (कुनै दुईवटा प्रश्नमा अथवा)	६	५	३०
समूह 'ग' : लामो उत्तर आउने प्रश्न	२ (कुनै एउटा प्रश्नमा अथवा)	२	१०	२०

८ *सप्रसङ्ग व्याख्या गर्न दिइने प्रश्नमा स्रोत सन्दर्भ समावेश गरिने छ ।*

उपस्थिति र कक्षा सहभागिता

(क) सेमेस्टर प्रणालीमा ८० प्रतिशत उपस्थिति अनिवार्य हुनेछ । ९० प्रतिशतसम्म उपस्थिति हुने विद्यार्थीलाई ४ अङ्क र ९० भन्दा माथि उपस्थित हुने विद्यार्थीलाई ५ अङ्क प्रदान गरिनेछ ।

(ख) कक्षा सहभागिताको ५ अङ्क मध्ये सम्बन्धित विषय शिक्षकले विद्यार्थीको कक्षा कार्यकलापको मूल्याङ्कन गरी अङ्क प्रदान गर्नेछन्

नेपा.शि. ५२४ : भाषिक परीक्षण | क्रे.आ. : ३

पाठ्यांश संख्या : नेपा.शि. ५२४

पूर्णाङ्क : ६०

पाठ्यांश प्रकृति : सैद्धान्तिक | उत्तीर्णाङ्क : ३०

तह : एम.एड. | प्रतिहप्ता पाठघन्टी : ३

सेमेस्टर : दोस्रो | जम्मा पाठघन्टी : ४८

१. पाठ्यांश परिचय

प्रस्तुत पाठ्यांश शिक्षाशास्त्रमा ँनेपाली शिक्षा' विषय लिएर स्नातक वा सो सरहको तह उत्तीर्ण गरी स्नातकोत्तर शिक्षा (एम.एड.) कार्यक्रमअन्तर्गत मुख्य विषय ँनेपाली शिक्षा' मा विशिष्टीकरण गर्न चाहने विद्यार्थीहरूका लागि तयार पारिएको हो । यस पाठ्यांशमा भाषिक परीक्षणका सैद्धान्तिक अवधारणा, मान्यता र धार, भाषिक परीक्षणका युक्ति र साधन, भाषिक परीक्षण योजना तथा भाषिक प्रश्ननिर्माण र विश्लेषणका विविध पक्षहरूको सैद्धान्तिक र प्रायोगिक सुझ विकास गर्ने दृष्टिकोण राखिएको छ । यसबाट विद्यार्थीहरूमा नेपाली भाषाशिक्षणका सन्दर्भमा भाषिक परीक्षणको सोद्देश्यपूर्ण उपयोग क्षमता वृद्धि हुने अपेक्षा गरिएको छ ।

२. साधारण उद्देश्य

यस पाठ्यांशको अध्ययनपछि विद्यार्थीहरू निम्नलिखित साधारण उद्देश्यहरू हासिल गर्न सक्षम हुनेछन् :

- भाषिक परीक्षणको सैद्धान्तिक अवधारणा व्यक्त गर्न
- भाषिक परीक्षणका ऐतिहासिक मान्यता र धार, भाषिक परीक्षणका गुण, पश्चमार्जन प्रभाव र नेपाली भाषिक परीक्षण परिपाटीको वर्णन गर्न
- भाषिक परीक्षणका युक्ति र साधनहरूको रूपरेखा बताउन
- भाषिक परीक्षण योजना र साधनहरूको निर्माण र कार्यान्वयन प्रक्रिया उल्लेख गर्न
- भाषिक प्रश्ननिर्माण र विश्लेषणका सैद्धान्तिक आधारहरू पहिल्याई विभिन्न परीक्षण प्रयोजन अनुसारका साधन तथा प्रश्ननिर्माण र विश्लेषणको अभ्यास गर्न ।

३. विशिष्ट उद्देश्य र पाठ्यवस्तुको विवरण

विशिष्ट उद्देश्य	पाठचवस्तुको विवरण
▪ भाषिक परीक्षणको परिचय दिन	एकाइ एक :भाषिक परीक्षणको सैद्धान्तिक अवधारणा (१०) १.१ भाषिक परीक्षणको परिचय

▪ भाषिक परीक्षणका प्रयोजनहरू उल्लेख गर्न ▪ भाषिक परीक्षणका सिद्धान्तहरूको व्याख्या गर्न ▪ भाषिक परीक्षणको प्रकृति आकलन गर्न ▪ भाषिक परीक्षणका प्रकार विभाजन गर्न ▪ भाषिक परीक्षण भाषिक मूल्याङ्कनको अन्तर्सम्बन्ध देखाउन	१.२ भाषिक परीक्षणको प्रयोजन १.३ भाषिक परीक्षणका सिद्धान्त १.४ भाषिक परीक्षणको प्रकृति १.५ भाषिक परीक्षणका प्रकार १.६ भाषिक परीक्षण र भाषिक मूल्याङ्कन
▪ भाषिक परीक्षणको ऐतिहासिक सन्दर्भ पहिचान गर्न ▪ भाषिक परीक्षणका ऐतिहासिक मान्यता र धारहरूको व्याख्या गर्न ▪ भाषिक परीक्षणको वर्तमान स्थिति आकलन गर्न ▪ नेपाली शिक्षणका सन्दर्भमा भाषिक परीक्षण परिपाटीको चिरफार गर्न ▪ भाषिक परीक्षणका गुणहरूको शब्दचित्र उतार्न ▪ भाषिक परीक्षणमा पश्चमार्जन प्रभावको परिचय दिई फाइदाजनक पश्चमार्जन प्रभावका उपायहरू औंल्याउन ।	एकाइ दुई : भाषिक परीक्षणको नेपाली परिपाटी, भाषिक परीक्षणका गुण र पश्चमार्जन प्रभाव (९) २.१ नेपालमा भाषिक परीक्षणको इतिहास २.२भाषिक परीक्षणका मान्यता २.२.१ परम्परावादी पद्धति २.२.२ पृथकीकृत पद्धति २.२.३ एकीकृत पद्धति २.२.४मनोभाषा वैज्ञानिक पद्धति २.२.५ सामाजिक भाषा वैज्ञानिक पद्धति २.२.६ प्रकार्यात्मक पद्धति २.२.७ सम्प्रेषणात्मक पद्धति २.४ नेपाली शिक्षणका सन्दर्भमा भाषिक परीक्षण परम्परा र वर्तमान स्थिति २.५भाषिक परीक्षणका गुण २.५.१ वैधता : आकृतिगत, विषयगत, समवर्ती, रचनात्मक, अनुमानात्मक, मानदण्डात्मक २.५.२ विश्वसनीयता २.५.३ व्यावहारिकता

	२.५.४विभेदकारिता २.६भाषिक परीक्षणमा पश्चमार्जनको परिचय र प्रभाव
▪ भाषिक परीक्षणमा स्तरयुक्त परीक्षाको परिचय दिन ▪ शिक्षक निर्मित परीक्षण युक्तिको परिचय दिन ▪ भाषिक परीक्षणका विविध साधन, सन्दर्भ र स्रोत सामग्रीहरूको परिचयात्मक खाका तयार गर्न ।	एकाइ तिन : भाषिक परीक्षणका युक्ति र साधनहरु (१०) ३.१ स्तरयुक्त परीक्षा ३.२शिक्षक निर्मित परीक्षा ३.३ भाषिक परीक्षणका साधन, सन्दर्भ र स्रोत सामग्री हरू ३.३.१ मौखिक परीक्षा ३.३.२ लिखित परीक्षा ३.३.३ प्रयोगात्मक परीक्षा : श्रवण, मौखिक अभिव्यक्ति, पठन, लेखन र एकीकृत सिपका प्रयोगपरक सन्दर्भ र स्रोत सामग्री हरू पर्यवेक्षणका साधनहरू (जाँचसूची र श्रेणीमापन)
▪ भाषिक परीक्षण योजना तथा विशिष्टीकरण तालिकाको निर्माण प्रक्रिया उल्लेख गर्न ▪ परीक्षण साधन र सामग्रीहरुको निर्माण प्रक्रिया बताउन ▪ परीक्षण साधन र सामग्रीहरुको परिष्करण प्रक्रिया व्यक्त गर्न ▪ परीक्षण प्रशासन र सामग्री सङ्कलन प्रक्रिया उल्लेख गर्न ▪ परीक्षण अङ्कन वा मापन विधि र प्रविधिहरूको रूपरेखा निर्धारण गर्न ▪ अन्तिम मूल्याङ्कन र नतिजा निर्धारण प्रक्रिया औंल्याउन ▪ परीक्षणबाट प्राप्त मूल्याङ्कनीय सूचनाको शैक्षणिक उपयोगिता दर्साउन ▪ भाषिक परीक्षण र भाषा शिक्षणको सम्बन्ध	एकाइ चार : भाषिक परीक्षण योजना (१०) ४.१ भाषिक परीक्षण योजना र विशिष्टीकरण तालिकाको निर्माण ४.२ परीक्षण साधन तथा सामग्रीहरुको निर्माण ४.३ पूर्व परीक्षण, विश्लेषण तथा परीक्षण साधन र सामग्रीहरूको परिष्करण ४.४ परीक्षणका लागि सामग्री सङ्कलन ४.५ परीक्षण अङ्कन वा मापन विधि, प्रविधि र तिनको प्रयोग

देखाउन ।	४.५.१ बुँदागत अङ्क मापन ४.५.२ प्रश्नगत अङ्क मापन ४.५.३ समूहगत अङ्क मापन ४.५.४ बहु परीक्षकबाट अङ्क मापन ४.५.५ अक्षराङ्कन प्रविधिको प्रयोग ४.६ अन्तिम मूल्याङ्कन र नतिजा निर्धारण ४.७ परीक्षणबाट प्राप्त मूल्याङ्कनीय सूचनाको शैक्षणिक उपयोग ४.८ भाषिक परीक्षण र भाषा शिक्षण
▪ भाषिक प्रश्ननिर्माण र विश्लेषणको परिचय दिन ▪ भाषिक प्रश्नका प्रकार र प्रकृतिको रूपरेखा बताउन ▪ परीक्षण आधार र अङ्कन मापन विधिहरूको रूपरेखा वर्णन गर्न ▪ प्रश्न निर्माणका क्रमबद्ध चरणहरूको परिचयात्मक प्रस्तुति दिन ▪ परीक्षण प्रशासन र कार्यान्वयन प्रक्रिया उल्लेख गर्न ▪ भाषिक प्रश्ननिर्माण र विश्लेषणका आधारहरू स्पष्ट पार्न ▪ कुनै खास कक्षा/तहमा केन्द्रित भएर विशिष्टीकरण तालिकाका आधारमा विविध परीक्षण साधन तथा प्रश्ननिर्माण र विश्लेषण गर्न ।	एकाइ पाँच : भाषिक प्रश्ननिर्माण र विश्लेषण (९) ५.१ भाषिक प्रश्ननिर्माणको परिचय ५.२ भाषिक प्रश्नका प्रकार ५.२.१ विषयगत : निबन्धात्मक र संक्षिप्त उत्तरात्मक ५.२.२ वस्तुगत : बहुवैकल्पिक, खाली ठाउँ भर्ने, ठिक बेठिक छुट्टचाउने, जोडा मिलाउने ५.२.३ क्लोज र सी प्रश्न ५.३ परीक्षण आधार र अङ्कन विधि निर्माण ५.४ प्रश्न निर्माणका चरण : प्रश्नयोजना, प्रश्नलेखन, पूर्व परीक्षण, मानकीकरण ५.५ परीक्षण प्रशासन र कार्यान्वयन ५.६ भाषिक प्रश्ननिर्माण र विश्लेषणका आधार ५.६.१ तथ्याङ्क शास्त्रीय आधार ५.६.२ सैद्धान्तिक आधार

	५.६.२.१ बाह्य आधार : निर्देशन, अङ्क विभाजन र समय निर्धारण, प्रस्तुति अनुक्रम/स्तरण, प्रश्नको स्वरूप र भाषा ५.६.२.२ आन्तरिक आधार : पाठ्यक्रमअनुरूपता, भाषिक पक्षहरूको संयोजन र सन्तुलन, प्रश्नमा हुनुपर्ने गुण, ५.७ निश्चित तह विशेषका परीक्षण योजना, प्रश्ननिर्माण र विश्लेषण अभ्यास

४. शिक्षण प्रविधि

यस पाठ्यांशको अध्ययन अध्यापनका क्रममा प्रयोग हुने शिक्षण प्रविधिलाई दुई भागमा वर्गीकरण गरिएको छ । अधिकांश पाठ्यवस्तुहरू अध्यापन गर्न प्रयोग गरिने शिक्षण प्रविधि साधारण शिक्षण प्रविधिमा राखिएका छन् भने कुनै निश्चित एकाइअन्तर्गतका पाठ्यवस्तु अध्यापन गर्न प्रयोग गरिने शिक्षण प्रविधिलाई विशिष्ट शिक्षण प्रविधि अन्तर्गत राखिएको छ ।

४.१ साधारण शिक्षणप्रविधि

प्रत्येक एकाइमा आवश्यकताअनुसार व्याख्यान, प्रश्नोत्तर, छलफल तथा प्रस्तुतीकरण विधिको उपयोग गरिने छ । एकाइको प्रकृतिअनुरूप पाठ्यपुस्तक, सहायक पुस्तक, सन्दर्भ पुस्तक, पाठपत्र, तालिका र आरेखहरूको उपयोग गरिने छ ।

४.२ विशिष्ट शिक्षणप्रविधि

- एकाइ एकमा सैद्धान्तिक सामग्रीको विश्लेषणका लागि व्याख्यान र छलफल विधिको उपयोग गरिने छ ।
- एकाइ दुईमा व्याख्यान, छलफल र प्रस्तुतीकरण विधिको उपयोग गरिनेछ ।
- एकाइ तिनमा व्याख्यान, छलफल र प्रस्तुतीकरण विधि अवलम्बन गरिनेछ साथै आवश्यकता अनुसार आरेख तथा तालिकाको उपयोग गरिनेछ ।
- एकाइ चारमा व्यक्तिगत र सामूहिक रूपमा कार्यपत्र लेखन र प्रस्तुति गर्न लगाइनेछ ।
- एकाइ पाँचमा विशिष्टीकरण तालिका निर्माण गरी प्रश्नपत्र तयार गर्न लगाइनेछ ।

५. मूल्याङ्कन प्रक्रिया

यस पाठ्यांशको मूल्याङ्कन प्रक्रिया दुई प्रकृतिको हुनेछ :

(१) आन्तरिक मूल्याङ्कन

(२) बाह्य मूल्याङ्कन

(१) आन्तरिक मूल्याङ्कन

आन्तरिक मूल्याङ्कनका लागि ४०% अङ्कभार छुट्याइएको छ । उक्त मूल्याङ्कनका लागि निर्दिष्ट प्रायोगिक कार्यअन्तर्गत रही विषय शिक्षकले निम्न आधारहरू अवलम्बन गर्नुपर्ने छ :

(क) उपस्थिति - ५ अङ्क

(ख) शिक्षण सिकाइमा सहभागिता - ५ अङ्क

(ग) पहिलो आन्तरिक परीक्षा - १० अङ्क

(घ) दोस्रो आन्तरिक परीक्षा - १० अङ्क

(ङ) तेस्रो आन्तरिक परीक्षा - १० अङ्क

पहिलो आन्तरिक परीक्षाका लागि विषय शिक्षकले निम्नलिखित कार्यहरू गर्न लगाउने छन्:

अध्ययनपत्र लेखन, पुस्तक समीक्षा, लेख पुनरावलोकन, कुनै विषय शीर्षक केन्द्रित अध्ययन पत्र तयारी, आन्तरिक परीक्षा, एकाइ परीक्षा, ज्ञान/प्रतिभा परीक्षण आदि ।

दोस्रो आन्तरिक परीक्षाका लागि विषय शिक्षकले निम्नलिखित कार्यहरू गर्न लगाउने छन् :

परियोजना कार्य, अवस्था/घटना अध्ययन, गोष्ठी, क्षेत्रकार्य, व्यक्तिगत वा समूहगत प्रतिवेदन लेखन, द्वितीय स्रोत सामग्रीमा आधारित अध्ययनपत्र लेखन, पूर्वाध्ययन, पुनरावलोकन र अभिलेखीकरण आदि ।

तेस्रो आन्तरिक परीक्षाका लागि आन्तरिक सुधार परीक्षाका रूपमा ६० पूर्णाङ्कको परीक्षा लिई त्यसलाई १० अङ्कमा रूपान्तर गरिनेछ ।

उपर्युक्त पहिलो, दोस्रो, तेस्रो आन्तरिक परीक्षा मध्ये दुईवटा लिखित परीक्षामा विद्यार्थीहरू अनिवार्य रूपमा समावेश हुनुपर्ने छ ।

२. बाह्य मूल्याङ्कन

बाह्य मूल्याङ्कनका लागि ६०% अङ्कभार छुट्याइएको छ । उक्त मूल्याङ्कनका लागि त्रि.वि. शिक्षाशास्त्र सङ्काय, डीनको कार्यालयद्वारा सत्रान्तमा परीक्षा लिइनेछ । सो परीक्षामा सोधिने प्रश्नको प्रकृति, ढाँचा र त्यसको अङ्कभार निम्नानुसार हुनेछ :

प्रश्नको प्रकृति	सोधिने प्रश्न सङ्ख्या	उत्तर दिनुपर्ने प्रश्न सङ्ख्या	प्रतिप्रश्न छुट्याइएको अङ्क	पूर्णाङ्क

समूह 'क' : बहुवैकल्पिक प्रश्न	१०	१०	१	१०
समूह 'ख' : छोटो उत्तर आउने प्रश्न	६ (कुनै दुईवटा प्रश्नमा अथवा)	६	५	३०
समूह 'ग' : लामो उत्तर आउने प्रश्न	२ (कुनै एउटा प्रश्नमा अथवा)	२	१०	१०

उपस्थिति र कक्षा सहभागिता

(क) सेमेस्टर प्रणालीमा ८० प्रतिशत उपस्थिति अनिवार्य हुनेछ । ९० प्रतिशतसम्म उपस्थिति हुने विद्यार्थीलाई ४ अङ्क र ९० भन्दा माथि उपस्थित हुने विद्यार्थीलाई ५ अङ्क प्रदान गरिनेछ ।

(ख) कक्षा सहभागिताको ५ अङ्कमध्ये सम्बन्धित विषय शिक्षकले विद्यार्थीको कक्षा कार्यकलापको मूल्याङ्कन गरी अङ्क प्रदान गर्नेछन् ।

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सेमेस्टर : दोस्रो	जम्मा पाठघन्टी : ४८

१. पाठ्यांश परिचय

यो पाठ्यांश शिक्षाशास्त्र सङ्कायअन्तर्गत सेमेस्टर प्रणालीमा आधारित नेपाली शिक्षा विषयमा स्नातकोत्तर (एम.एड.) विशिष्टीकरण गर्न चाहने विद्यार्थीहरूको लागि तयार गरिएको हो । यसमा दुई प्रकारका पाठ्यांशहरू रहेका छन् : आधुनिक नेपाली निबन्ध र नेपाली समालोचना । आधुनिक नेपाली निबन्धअन्तर्गत निबन्धको परिभाषा र स्वरूप, निबन्धका प्रकार, निबन्धका तŒव, निबन्धको अन्य विधासँगको सम्बन्ध, नेपाली निबन्धको विकासका प्रमुख मोड तथा प्रवृत्तिहरू, प्रमुख निबन्धकार र तिनका प्रतिनिधि निबन्धको जानकारी, प्रमुख नेपाली नियात्राकार र तिनका प्रतिनिधि निबन्धको अध्ययन तथा हास्यव्यङ्ग्यको सैद्धान्तिक परिचय एवम् प्रतिनिधि हास्यव्यङ्ग्य निबन्धकारका निबन्धहरू समावेश गरिएका छन् । त्यसैगरी नेपाली समालोचनाअन्तर्गत समालोचनाको परिभाषा र स्वरूप, नेपाली समालोचनाको विकासक्रम, प्रतिनिधि नेपाली समालोचनाका प्रमुख प्रवृत्ति र उत्तरवर्ती नेपाली समालोचनासँग सम्बन्धित सामग्री राखिएको छ ।

२. साधारण उद्देश्य

यस पाठ्यांशको अध्ययनपछि विद्यार्थीहरू निम्नानुसारका साधारण उद्देश्य हासिल गर्न सक्षम हुनेछन् :

- निबन्धको सैद्धान्तिक परिचय दिन
- प्रमुख आधुनिक निबन्धकारका निबन्धगत प्रवृत्ति र तिनका प्रतिनिधि निबन्धको विभिन्न कोणबाट विश्लेषण गर्न
- प्रमुख नेपाली नियात्राकारका विशेषता तथा तिनका निबन्धबारे विविध कोणबाट विवेचना गर्न,
- नेपाली हास्यव्यङ्ग्यात्मक निबन्धको परिचय दिई प्रमुख हास्यव्यङ्ग्यकारका प्रवृत्ति र निबन्धहरुको समीक्षा गर्न,
- नेपाली समालोचनाको विकासक्रम र प्रवृत्ति निर्धारण गर्न
- प्रमुख नेपाली समालोचक र तिनका समालोचनात्मक प्रवृत्तिहरूको निरूपण गर्न ।

३. विशिष्ट उद्देश्य तथा पाठ्यविषय

विशिष्ट उद्देश्य	पाठ्यविषय
• निबन्धको स्वरूपबारे चर्चा गर्न	एकाइ एक : निबन्ध सिद्धान्त (६)
• निबन्धको परिभाषा दिन	**१.१ निबन्धको स्वरूप**
निबन्धका प्रकारहरू उल्लेख गर्न	**१.२ निबन्धको परिभाषा**
• निबन्धका तŒवहरू बताउन	**१.३ निबन्धका प्रकार +**
• निबन्धको अन्य विधासँग तुलना गर्न,	**१.४ निबन्धका तŒवहरू +**
• आधुनिक नेपाली निबन्धको विकासक्रम, मोड र धारागत प्रवृत्ति, विशेषता र उपलब्धिको मूल्याङ्कन गर्न,	**१.५ निबन्ध र साहित्यका अन्य विधा (कथा, जीवनी र एकाङ्की)+** **१.६ आधुनिक नेपाली निबन्धको विकासक्रम,प्रमुख मोड र धारागत प्रवृत्ति,**
• उत्तरवर्ती आधुनिक नेपाली निबन्धको प्रयोग र प्रवृत्ति उल्लेख गर्न	**१.७ उत्तरवर्ती आधुनिक नेपाली निबन्धको प्रयोग र प्रवृत्ति**

• निर्दिष्ट निबन्धकार (लक्ष्मीप्रसाद देवकोटा, शङ्कर लामिछाने, कृष्णचन्द्र सिंह प्रधान, मोदनाथ प्रश्रित, माधवप्रसाद पोखरेल र शारदा शर्मा) को परिचय दिन • निर्दिष्ट निबन्धकारका प्रमुख प्रवृत्ति र योगदानको चर्चा गर्न • निबन्ध तŒवका दृष्टिले निर्दिष्ट निबन्धहरूको विश्लेषणात्मक विवेचना गर्न • निर्दिष्ट निबन्धका विशिष्ट पङ्क्तिहरूको व्याख्या गर्न	एकाइ दुई : प्रमुख आधुनिक निबन्धकार र तिनका प्रतिनिधि निबन्ध (१०) **२.१ निर्दिष्ट निबन्धकारको परिचय** **२.२ निर्दिष्ट निबन्धकारका मुख्य प्रवृत्ति र तिनका निबन्धहरू** **२.२.१ लक्ष्मीप्रसाद देवकोटा : कल्पना +** **२.२.२ शङ्कर लामिछाने : एब्स्ट्रयाक्ट चिन्तन प्याज +** **२.२.३ कृष्णचन्द्र सिंह प्रधान : गौतम बुद्धको चिठी अशोकका नाममा** **२.२.४ मोदनाथ प्रश्रित : मृत्युलाई नजिकैबाट छाम्दा** **२.२.५ माधवप्रसाद पोखरेल : वरुणको रगत +** **२.२.६ शारदा शर्मा : मूल्यशून्यताको मूल्य** **२.३ निर्दिष्ट निबन्धका विशिष्ट पङ्क्तिहरूको व्याख्या**
• नियात्राको परिभाषा बताउन • नियात्राको स्वरूप उल्लेख गर्न • नियात्राका तत्वहरूको विवेचना गर्न • नियात्राका प्रकारहरू पहिचान गर्न • नियात्रामूलक नेपाली निबन्धको विकासप्रक्रिया, चरण विभाजन र तिनका मुख्य प्रवृत्तिहरू निरूपण गर्न • प्रमुख नियात्राकार(तारानाथ शर्मा र घनश्याम राजकर्णिकार) को सङ्क्षिप्त परिचय दिन, • निर्दिष्ट नियात्राकारका प्रवृत्तिगत मुख्य विशेषताहरू उल्लेख गर्न, • निर्दिष्ट नियात्राहरूको तत्त्वगत आधारमा विवेचना गर्न • निर्दिष्ट नियात्राका विशिष्ट पङ्क्तिहरूको व्याख्या गर्न	एकाइ तिन : प्रमुख नेपाली नियात्राकार र तिनका निबन्ध (९) **३.१ नियात्राको स्वरूप** **३.२ नियात्राको परिभाषा** **३.३ नियात्राका तŒवहरू** **३.४ नियात्राका प्रकारहरू** **३.५ नियात्रामूलक नेपाली निबन्धको विकास प्रक्रिया, चरण विभाजन र तिनका मुख्य प्रवृत्ति** **३.६ प्रमुख नियात्राकारको सङ्क्षिप्त परिचय** **३.७ नियात्राकारका प्रवृत्तिगत मुख्य विशेषता** **३.८ निर्दिष्ट नियात्राको तŒवगत आधारमा विवेचना** **३.९ निर्दिष्ट निबन्धकारका कृतिहरू** **३.९.१ तारानाथ शर्मा : पातालमा बिलाउने रोग** **३.९.२ घनश्याम राजकर्णिकार : हामी अरूका आँखामा +** **३.१० निर्दिष्ट नियात्राका विशिष्ट पङ्क्तिहरूको व्याख्या +**
• हास्यव्यङ्व्यको स्वरूप उल्लेख गर्न • हास्यव्यङ्व्यको परिभाषा बताउन • हास्यव्यङ्व्यका तŒवहरूको विवेचना गर्न • हास्यव्यङ्व्यका प्रकारहरू बताउन • हास्यव्यङ्व्य नेपाली निबन्धको विकास प्रक्रिया, चरण विभाजन र तिनका मुख्य प्रवृत्तिहरूको मूल्याङ्कन गर्न • निर्दिष्ट हास्यव्यङ्व्यकारका प्रवृत्तिगत विशेषताहरूको विवेचना गर्न • निर्दिष्ट हास्यव्यङ्व्य रचनाको तŒवगत आधारमा	एकाइ चार : नेपाली हास्यव्यङ्ग्य निबन्धका अध्ययन (९) **४.१ हास्यव्यङ्ग्यको स्वरूप** **४.२ हास्यव्यङ्ग्यको परिभाषा** **४.३ हास्यव्यङ्ग्यका तŒवहरू** **४.४ हास्यव्यङ्ग्यका प्रकारहरू** **४.५ हास्यव्यङ्ग्य नेपाली निबन्धको विकासप्रक्रिया, चरण विभाजन र तिनका मुख्य प्रवृत्ति** **४.६ निर्दिष्ट हास्यव्यङ्ग्यकारका प्रवृत्तिगत विशेषता र तिनका हास्यव्यङ्ग्य निबन्धको तŒवगत आधारमा विवेचना**

विवेचना गर्न • निर्दिष्ट हास्यव्यङ्व्य निबन्धका विशिष्ट विशिष्ट पङ्क्तिको व्याख्या गर्न ।	**४.६.१ केशवराज पिँडाली : यमपुरीको यात्रा** **४.६.२ भैरव अर्याल : असनको डबली** **४.६.३ मोहनराज शर्मा : सुनौलो बोली +** **४.७ निर्धारित हास्यव्यङ्ग्यात्मक निबन्धका विशिष्ट पङ्क्तिहरूको व्याख्या**
• आधुनिक नेपाली समालोचनाको विकासक्रम, प्रमुख चरण र तिनका प्रवृत्तिको रेखाङ्कन गर्न • सिद्धान्तपरक नेपाली समालोचना परम्परा, निर्धारित व्यक्तित्व र तिनका प्रवृत्ति केलाउन • प्रगतिवादी आधुनिक नेपाली समालोचनाको परम्परा, निर्धारित व्यक्तित्व र तिनका प्रवृत्ति केलाउन • खोज/अन्वेषणात्मक आधुनिक नेपाली समालोचनाको परम्परा, निर्धारित व्यक्तित्व र तिनका प्रवृत्तिको निरूपण गर्न • शैलीवैज्ञानिक आधुनिक नेपाली समालोचनाको परम्परा, निर्धारित व्यक्तित्व र तिनका उपलब्धि ठम्याउन • उत्तरवर्ती आधुनिक नेपाली समालोचनाका प्रमुख प्रवृत्तिको विवेचना गर्न ।	एकाइ पाँच : आधुनिक नेपाली समालोचना (१४) ५.१ आधुनिक नेपाली समालोचनाको पृष्ठभूमि, + ५.२ आधुनिक नेपाली समालोचनाको विकासक्रम, प्रमुख चरण र तिनका प्रवृत्ति + ५.३ सिद्धान्तपरक नेपाली समालोचना परम्परा, निर्धारित व्यक्तित्व र तिनका प्रवृत्ति यदुनाथ खनाल ५.४ प्रगतिवादी नेपाली समालोचना परम्परा, निर्धारित व्यक्तित्व र तिनका प्रवृत्ति + कृष्णचन्द्रसिंह प्रधान तारानाथ शर्मा ५.५ खोज/अन्वेषणात्मक नेपाली समालोचना परम्परा, निर्धारित व्यक्तित्व र तिनका प्रवृत्ति + ईश्वर बराल वासुदेव त्रिपाठी ५.६ शैलीवैज्ञानिक नेपाली समालोचना परम्परा, निर्धारित व्यक्तित्व र तिनका प्रवृत्ति मोहनराज शर्मा घनश्याम नेपाल ५.७ उत्तरवर्ती आधुनिक नेपाली समालोचनाका प्रमुख धारा, पक्ष र तिनका प्रवृत्तिको विवेचना +

४. शिक्षण प्रविधि

यस पाठ्यांशको अध्ययन अध्यापनका क्रममा प्रयोग हुने शिक्षण प्रविधिलाई दुई भागमा वर्गीकरण गरिएको छ । अधिकांश पाठ्यवस्तुहरू अध्यापन गर्न प्रयोग गरिने शिक्षण प्रविधि साधारण शिक्षण प्रविधिमा राखिएका छन् भने कुनै निश्चित एकाइअन्तर्गतका पाठ्यवस्तु अध्यापन गर्न प्रयोग गरिने शिक्षण प्रविधिलाई विशिष्ट शिक्षण प्रविधिअन्तर्गत राखिएको छ ।

४.१ साधारण शिक्षणप्रविधि

प्रत्येक एकाइमा आवश्यकताअनुसार व्याख्यान, प्रश्नोत्तर, छलफल तथा प्रस्तुतीकरण विधिको उपयोग गरिने छ । एकाइको प्रकृतिअनुरूप पाठ्यपुस्तक, सहायक पुस्तक, सन्दर्भ पुस्तक, पाठपत्र, तालिका र आरेखहरूको उपयोग गरिने छ ।

४.२ विशिष्ट शिक्षणप्रविधि

- एकाइ एकमा कक्षा प्रस्तुति र व्याख्यान विधिको प्रयोग गरिनेछ ।
- एकाइ दुईमा व्याख्यान, छलफल र प्रस्तुतीकरण विधिको उपयोग गरिनेछ ।
- एकाइ तिनमा व्याख्यान, छलफल र प्रस्तुतीकरण विधि अवलम्बन गरिनेछ ।
- एकाइ चारमा व्यक्तिगत र सामूहिक रूपमा कार्यपत्र लेखन र प्रस्तुति गर्न लगाइनेछ ।
- एकाइ पाँचमा सैद्धान्तिक प्रस्तुति र कक्षागत अभ्यास गराइनेछ ।

एकाइ एक • **निबन्धका प्रकार** • **निबन्धका तत्त्वहरू** • **निबन्ध र साहित्यका अन्य विधा (कथा, जीवनी र एकाङ्की)**	• प्रायोगिक कार्यकलाप • व्यक्तिगत कक्षा प्रस्तुति • व्यक्तिगत कक्षा प्रस्तुति • सामूहिक अध्ययन पत्र लेखन र कक्षा प्रस्तुति
एकाइ दुई • **लक्ष्मीप्रसाद देवकोटा : कल्पना** • **माधवप्रसाद पोखरेल : वरुणको रगत** • **निर्दिष्ट निबन्धका विशिष्ट पङ्क्तिहरूको व्याख्या**	• व्यक्तिगत कक्षा प्रस्तुति • सामूहिक अध्ययनपत्र लेखन • सामूहिक अध्ययन पत्र लेखन
एकाइ चार • **हास्यव्यङ्ग्यका तत्त्वहरू** • **हास्यव्यङ्ग्यका प्रकारहरू** • **मोहनराज शर्मा : सुनौलो बिहानी**	• व्यक्तिगत कक्षा प्रस्तुति • व्यक्तिगत कक्षा प्रस्तुति • परियोजना कार्य

एकाइ पाँच • नेपाली समालोचनाको विकासक्रम, प्रमुख मोड र प्रवृत्ति • खोजपरक नेपाली समालोचना, प्रारम्भ, विकास, प्रमुख व्यक्तित्व र तिनका उपलिब्ध • प्रगतिवादी नेपाली समालोचनाको उठान, विस्तार र प्रमुख व्यक्तित्व एवम् मूल प्रवृत्ति • उत्तरवर्ती नेपाली समालोचनाका प्रमुख धारा, पक्ष र प्रवृत्ति	• व्यक्तिगत कक्षा प्रस्तुति • व्यक्तिगत कक्षा प्रस्तुति • सामूहिक अध्ययन पत्र लेखन र प्रस्तुति • सामूहिक अध्ययन पत्र लेखन र प्रस्तुति

प्रायोगिक कार्यकलाप अन्तर्गत माथि विभिन्न एकाइका उपशीर्षकमा तारा (+) चिन्ह दिई संकेत गरिएका सामग्रीका साथसाथै पाठ्यक्रम भित्र समावेश भएका अरु सामग्रीहरुलाई पनि शिक्षकले आवश्यकताअनुसार व्यक्तिगत तथा सामूहिक कक्षाकार्य एवम् परियोजना कार्य, गोष्ठीपत्र लेखन, प्रस्तुति र टिप्पणी जस्ता कार्यकलापहरु गराउनु आवश्यक ठानिएको छ ।

५. मूल्याङ्कन प्रक्रिया

यस पाठ्यांशको मूल्याङ्कन प्रक्रिया दुई प्रकृतिको हुनेछ :

(१) आन्तरिक मूल्याङ्कन

(२) बाह्य मूल्याङ्कन

(१) आन्तरिक मूल्याङ्कन

आन्तरिक मूल्याङ्कनका लागि ४०% अङ्कभार छुट्याइएको छ । उक्त मूल्याङ्कनका लागि निर्दिष्ट प्रायोगिक कार्यअन्तर्गत रही विषय शिक्षकले निम्न आधारहरू अवलम्बन गर्नुपर्ने छ :

(क) उपस्थिति - ५ अङ्क

(ख) शिक्षण सिकाइमा सहभागिता - ५ अङ्क

(ग) पहिलो आन्तरिक परीक्षा - १० अङ्क

(घ) दोस्रो आन्तरिक परीक्षा - १० अङ्क

(ङ) तेस्रो आन्तरिक परीक्षा - १० अङ्क

पहिलो आन्तरिक परीक्षाका लागि विषय शिक्षकले निम्नलिखित कार्यहरू गर्न लगाउने छन्:

अध्ययनपत्र लेखन, पुस्तक समीक्षा, लेख पुनरावलोकन, कुनै विषय शीर्षक केन्द्रित अध्ययन पत्र तयारी, आन्तरिक परीक्षा, एकाइ परीक्षा, ज्ञान/प्रतिभा परीक्षण आदि ।

दोस्रो आन्तरिक परीक्षाका लागि विषय शिक्षकले निम्नलिखित कार्यहरू गर्न लगाउने छन् :

परियोजना कार्य, अवस्था/घटना अध्ययन, गोष्ठी, क्षेत्रकार्य, व्यक्तिगत वा समूहगत प्रतिवेदन लेखन, द्वितीय स्रोत सामग्रीमा आधारित अध्ययनपत्र लेखन, पूर्वाध्ययन, पुनरावलोकन र अभिलेखीकरण आदि ।

तेस्रो आन्तरिक परीक्षाका लागि आन्तरिक सुधार परीक्षाका रुपमा ६० पूर्णाङ्कको परीक्षा लिई त्यसलाई १० अङ्कमा रूपान्तर गरिनेछ ।

उपर्युक्त पहिलो, दोस्रो, तेस्रो आन्तरिक परीक्षा मध्ये दुईवटा लिखित परीक्षामा विद्यार्थीहरु अनिवार्य रुपमा समावेश हुनुपर्ने छ ।

२. बाह्य मूल्याङ्कन

बाह्य मूल्याङ्कनका लागि ६०% अङ्कभार छुट्याइएको छ । उक्त मूल्याङ्कनका लागि त्रि.वि. शिक्षाशास्त्र सङ्काय, डीनको कार्यालयद्वारा सत्रान्तमा परीक्षा लिइने छ । सो परीक्षामा सोधिने प्रश्नको प्रकृति, ढाँचा र त्यसको अङ्कभार निम्नानुसार हुने छ :

प्रश्नको प्रकृति	सोधिने प्रश्न सङ्ख्या	उत्तर दिनुपर्ने प्रश्न सङ्ख्या	प्रतिप्रश्न छुट्याइएको अङ्क	पूर्णाङ्क
समूह 'क' : बहुवैकल्पिक प्रश्न	१०	१०	१	१०
समूह 'ख' : छोटो उत्तर आउने प्रश्न८	६ (कुनै दुईवटा प्रश्नमा अथवा)	६	५	३०
समूह 'ग' : लामो उत्तर आउने प्रश्न	२ (कुनै एउटा प्रश्नमा अथवा)	२	१०	२०

८ *सप्रसङ्ग व्याख्या गर्न दिइने प्रश्नमा स्रोत सन्दर्भ समावेश गरिने छ ।*

उपस्थिति र कक्षा सहभागिता

(क) सेमेस्टर प्रणालीमा ८० प्रतिशत उपस्थिति अनिवार्य हुनेछ । ९० प्रतिशतसम्म उपस्थिति हुने विद्यार्थीलाई ४ अङ्क र ९० भन्दा माथि उपस्थित हुने विद्यार्थीलाई ५ अङ्क प्रदान गरिनेछ ।

(ख) कक्षा सहभागिताको ५ अङ्क मध्ये सम्बन्धित विषय शिक्षकले विद्यार्थीको कक्षा कार्यकलापको मूल्याङ्कन गरी अङ्क प्रदान गर्नेछन् ।

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पाठ्यांश प्रकृति : सैद्धान्तिक | जम्मा पाठघन्टी : ४८

तह : एम.एड.

सेमेस्टर : दोस्रो

१. पाठयांश परिचय

प्रस्तुत पाठ्यांश त्रिभुवन विश्वविद्यालय शिक्षाशास्त्र सङ्कायअन्तर्गत सेमेस्टर प्रणालीमा आधारित तिन बर्से स्नातकोत्तर (एम.एड.) तहमा अध्ययन गर्ने विद्यार्थीहरूका लागि तयार पारिएको हो । यस पाठ्यांशमा सामाजिक भाषाविज्ञान र मनोभाषाविज्ञानसित सम्बद्ध सैद्धान्तिक कुराहरू स्पष्ट पार्ने अपेक्षा राखिएको छ । यो पाठ्यांश खण्ड 'क' र खण्ड 'ख' गरी दुई भागमा विभाजित छ । खण्ड 'क' अन्तर्गत सामाजिक भाषाविज्ञानसित सम्बद्ध पाठ्यवस्तु र खण्ड 'ख' अन्तर्गत मनोभाषाविज्ञानसित सम्बद्ध पाठ्यवस्तु रहेका छन् ।

२. साधारण उद्देश्य

यस पाठ्यांशका साधारण उद्देश्यहरू निम्नानुसार रहेका छन् :

- सामाजिक भाषाविज्ञानको परिचय दिन
- भाषिक भेदको वर्गीकरण गर्न सक्ने क्षमताको विकास गर्न
- भाषानीति र योजनाविषयक विविध पक्षको बयान गर्न सक्ने क्षमता अभिवृद्धि गर्न
- नेपाली भाषाको भौगोलिक र सामाजिक स्थितिको चर्चा गर्न
- सामाजिक भाषाविज्ञान र भाषाशिक्षणका बिचको सम्बन्ध स्पष्ट पार्न
- मनोभाषाविज्ञानको अवधारणा स्पष्ट पार्न सक्ने क्षमताको ज्ञान र सिप आर्जन गर्न
- बालभाषा विकासका सिद्धान्तका सापेक्षतामा चम्स्की र पियाजेका सिद्धान्तको उपयोग गर्न
- बालभाषा विकासका चरण र पक्षको वैशिष्ट्य केलाउन
- भाषा आर्जनका प्राक्कल्पनाको वर्णन गर्न सक्षम बनाउन
- भाषा सिकाइका प्रमुख सिद्धान्तहरूका बारेमा स्पष्ट धारणा बनाउन सक्ने क्षमता अभिवृद्धि गर्न

३. विशिष्ट उद्देश्य तथा पाठ्यविषय

विशिष्ट उद्देश्य	पाठ्यविषय
खण्ड क : सामाजिक भाषाविज्ञान	
• सामाजिक भाषाविज्ञानको परिचय दिई क्षेत्र निर्धारण गर्न, • भाषाविज्ञान र सामाजिक भाषाविज्ञानको सम्बन्ध स्पष्ट पार्न, • भाषिक समुदाय निर्धारणका आधारहरू छुट्याउन, • भाषा र समाजको अवधारणा स्पष्ट पार्न, • सपिर होर्पको अनुकल्पनासम्बन्धी धारणा प्रस्तुत गर्न, • भाषिक अवलम्बन, स्वीकरण र अपक्षमलाई चिनाउन, • भाषाको सम्प्रेषणात्मक सामर्थ्य र सम्प्रेषणात्मक सम्पादनको अवधारणा प्रस्तुत गर्न,	**एकाइ एक : सामाजिक भाषाविज्ञान (७)** १.१ सामाजिक भाषाविज्ञानको परिचय र क्षेत्र १.२ भाषाविज्ञान र सामाजिक भाषाविज्ञान १.३ वक्ता र भाषिक समुदाय

विशिष्ट उद्देश्य	पाठ्यविषय
खण्ड क : सामाजिक भाषाविज्ञान	
• भाषिक सर्वेक्षण पद्धतिको परिचय दिन ।	१.४ भाषिक समुदाय निर्धारणका आधारहरू १.५ भाषा र समाज १.६ सफिर होर्फको अनुकल्पना १.७ भाषिक अवलम्बन, स्वीकरण र अपक्षय १.८ भाषाको सम्प्रेषणात्मक सामर्थ्य र सम्पादन १.९ भाषा सर्वेक्षण पद्धति

• भाषिक भेदको परिचय दिई वर्गीकरण गर्ने आधारहरू ठम्याउन • भाषा, भाषिका र व्यक्ति भाषाको भिन्नता पहिचान गर्न, • भाषिक निर्धारणका आधारहरू छुट्याउन, • भाषाका क्षेत्रीय र सामाजिक भेद पहिचानका आधारहरू केलाउन • भाषाका काल, विषय, प्रसङ्ग, माध्यम जस्ता भेदहरूको चर्चा गर्न • राष्ट्रभाषा, स्थानीय भाषा र विदेशी भाषा बिचको अन्तर केलाउन, • द्विभाषिकता /बहुभाषिकताको परिचय दिई यसको प्रकृति र प्रकार छुट्याउन • भाषाद्वैत, कोडमिश्रण र कोड परिवर्तनको अवधारणा स्पष्ट पार्न, • पिजिन र क्रेओलको परिचय दिई तिनको अन्तर छुट्याउन ।	**एकाइ दुई : भाषिक भेद (६)** २.१ भाषिक भेद र वर्गीकरणका आधारहरू २.२ भाषा, भाषिका र व्यक्ति भाषा २.३ भाषिका निर्धारणका आधारहरू २.४ भाषाका क्षेत्रीय र सामाजिक भेद २.५ भाषाका अन्य भेद २.५.१ काल २.५.२ विषय २.५.३ प्रसङ्ग २.५.४ माध्यम २.६ राष्ट्रभाषा,मातृभाषा, स्थानीय भाषा र विदेशी भाषा

	२.७ द्विभाषिकता/बहुभाषिकताका प्रकृति र प्रकार २.८ भाषाद्वैत, कोडमिश्रण र कोड परिवर्तन २.९ पिजिन र क्रेओल
• भाषानीति र योजनाको परिचय दिन • भाषा योजनाका आवश्यकताको वर्णन गर्न • प्रयोजनका आधारमा भाषाहरूको प्रकृति निर्धारण गर्न • भाषायोजनाका प्रमुख समस्या स्पष्ट पार्न, • भाषायोजनाका स्तरगत र स्वरूपगत प्रकारको चर्चा गर्न • भाषायोजनाका प्रमुख पक्षको वर्णन गर्न • नेपाली भाषाको मानकीकरण प्रक्रिया औंल्याउन • भाषाको आधुनिकीकरण प्रक्रियाको चर्चा गरी त्यसमा समस्या केलाउन • नेपाली भाषाको आधुनिकीकरण प्रक्रिया उल्लेख गर्न • नेपाली भाषाको भौगोलिक र सामाजिक स्थितिको वर्णन गर्न, • नेपालको विगत र वर्तमानको भाषानीति सम्बन्धी दृष्टिकोण प्रस्तुत गर्न • सम्पर्क, माध्यम, शिक्षा, सञ्चार-प्रविधि एवम् प्रशासनिक क्षेत्रमा नेपाली भाषाको भूमिका औंल्याउन • भाषा आयोगको भूमिका मूल्याङ्न गर्न	**एकाइ तिन : भाषानीति, योजना र नेपालको भाषिक स्थिति (९)** ३.१ भाषानीति र योजना ३.२ भाषायोजनाको आवश्यकता ३.३ प्रयोजनका आधारमा भाषाहरू ३.३.१ प्रधान ३.३.२ सम्पूरक ३.३.३ सहायक ३.३.४ समतुल्य ३.३.५ परिपूरक ३.४ भाषायोजनाका प्रमुख समस्या ३.५ भाषायोजनाका प्रमुख प्रकार ३.५.१ स्तरगत ३.५.२ स्वरूपगत ३.६ भाषायोजनाका प्रमुख पक्ष ३.६.१ छनोट ३.६.२ कोडीकरण

	३.६.३ मानकीकरण ३.६.४ विस्तरण ३.७ नेपाली भाषाको मानकीकरण ३.९ नेपाली भाषाको आधुनिकीकरण ३.१० नेपाली भाषाको भौगोलिक र सामाजिक स्थिति ३.११ नेपालको भाषानीति : विगत र वर्तमान ३.१३ भाषिक नीति निर्माणमा भाषाआयोगको भूमिका
खण्ड ख : मनोभाषाविज्ञान	
• मनोभाषाविज्ञानको परिचय दिई यसको क्षेत्र पहिल्याउन, • मनोभाषाविज्ञानको विकासक्रमको चर्चा गर्न • भाषा र मस्तिष्क बिचको अवधारणाको अन्तर्सम्बनध केलाउन ।	**एकाइ चार : मनोभाषाविज्ञान (६)** ४.१ मनोभाषाविज्ञानको परिचय र क्षेत्र ४.२ मनोभाषाविज्ञानको विकासक्रम ४.३ भाषा र मस्तिष्कको अन्तर्सम्बन्ध ४.३.१ श्रव्यदृश्यात्मक प्रक्रिया ४.३.२ उच्चार्य लेख्यात्मक प्रक्रिया ४.३ कोडीकरण र विकोडीकरण
• बालभाषाविकासका सन्दर्भमा चम्स्कीका सिद्धान्तसम्बन्धी दृष्टिकोणसँग परिति हुन, • बालभाषा विकासमा पियाजेका सिद्धान्तको चर्चा गर्न, • भाषाविकास र संज्ञानात्मक विकासको उल्लेख गर्न, • चम्स्की र पियाजेका भाषाविकाससम्बन्धी सिद्धान्तको तुलना गर्न, • बालभाषा विकासका चरणहरू र तिनका विशेषताहरूको वर्णन गर्न, • बालभाषा विकासका विभिन्न पक्षको विकासका	**एकाइ पाँच : बालभाषा विकासका सिद्धान्त (१०)** ५.१ बालभाषा विकासमा चम्स्कीको सिद्धान्त ५.१.१ भाषाप्राप्ति प्रक्रिया

सम्बन्धमा परिचित हुन,	५.१.२ भाषाप्राप्ति संयन्त्र ५.१.३ सामर्थ्य र सृजनशीलता ५.२ बालभाषा विकासमा पियाजेको सिद्धान्त ५.२.१ आत्मकेन्द्री बोली ५.२.२ भाषाबारे पियाजेको दृष्टिकोण ५.३ भाषाविकास र संज्ञानात्मक विकास ५.४ चम्स्की र पियाजेका भाषा विकाससम्बन्धी सिद्धान्तको तुलना ५.५ बालभाषाविकासका चरणहरू र तिनका विशेषता ५.५.१ प्रारम्भिक चरण ५.५.२ उत्तरवर्ती चरण ५.६ बालभाषा विकासका पक्षहरू ५.६.१ ध्वन्यात्मक ५.६.२ आदानात्मक र प्रदानात्मक ५.६.३ शब्दार्थ र शब्दभण्डार ५.६.४ व्याकरणात्मक र सङ्कथनात्मक
• भाषाप्राप्ति र आर्जनमा भिन्नता छुट्याउन • भाषा आर्जनका विभिन्न प्राक्कल्पनाको उल्लेख गर्न • क्रयासनका अनुकल्पनाको अध्यापन शास्त्रीय उपयोगिता दर्साउन	**एकाइ छ : भाषा आर्जनका प्राक्कल्पनाहरू (५)** ६.१ भाषाप्राप्ति र आर्जन ६.२ सर्गिक अनुक्रम प्राक्कल्पना ६.३ मनिटर प्राक्कल्पना

	६.४ अनुप्रविष्टि प्राक्कल्पना ६.५ प्रभावी फिल्टर प्राक्कल्पना ६.६ क्र्यासनका अनुकल्पनाको अध्यापन र शास्त्रीय उपयोगिता
• भाषासिकाइका व्यवहारवादी र मनोवादी सिद्धान्तको परिचय दिन, • व्यवहारवादी र मनोवादी सिद्धान्तबिच भिन्नता औंल्याउन • मनोभाषाविज्ञान र भाषाशिक्षणबिचको उपयोगिता औंल्याउन	**एकाइ सात : भाषासिकाइका प्रमुख सिद्धान्त (५)** ७.१ व्यवहारवादी सिद्धान्त ७.२ मनोवादी सिद्धान्त ७.५ भाषाशिक्षणमा मनोभाषाविज्ञानको उपयोगिता

४. शिक्षण प्रविधि

यस पाठ्यांशको अध्ययन अध्यापनका क्रममा प्रयोग हुने शिक्षण प्रविधिलाई दुई भागमा वर्गीकरण गरिएको छ । अधिकांश पाठ्यवस्तुहरू अध्यापन गर्न प्रयोग गरिने शिक्षण प्रविधि साधारण शिक्षण प्रविधिमा राखिएका छन् भने कुनै निश्चित एकाइअन्तर्गतका पाठ्यवस्तु अध्यापन गर्न प्रयोग गरिने शिक्षण प्रविधिलाई विशिष्ट शिक्षण प्रविधि अन्तर्गत राखिएको छ ।

४.१ साधारण शिक्षणप्रविधि

प्रत्येक एकाइमा आवश्यकताअनुसार व्याख्यान, प्रश्नोत्तर, छलफल तथा प्रस्तुतीकरण विधिको उपयोग गरिनेछ । एकाइको प्रकृतिअनुरूप पाठ्यपुस्तक, सहायक पुस्तक, सन्दर्भ पुस्तक, पाठपत्र, तालिका र आरेखहरूको उपयोग गरिनेछ ।

४.२ विशिष्ट शिक्षण प्रविधि

एकाइ एकमा कक्षामा छलफल गर्ने र व्यक्तिगत तथा सामूहिक प्रस्तुति गर्न लगाउने ।

एकाइ दुईमा भाषिका निर्धारणका आधारहरू , राष्ट्रभाषा ,मातृभाषा र विदेशी भाषा शीर्षकमा परियोजना कार्य दिई कक्षामा प्रस्तुत गर्न लगाउने ।

एकाइ तीनमा नेपाली भाषाको मानकीकरण र नेपाली भाषाको आधुनिकीकरण विषयमा कक्षा कार्य , व्यक्तिगत कार्य तथा सामूहिक कार्य दिई कक्षामा प्रस्तुत गर्न लगाउने ।

एकाइ चारमा मनोभाषाविज्ञानको विकासक्रम शीर्षकमा गृहकार्य दिई कक्षामा टिप्पणी गरिदिने ।

एकाइ पाँचमा बालभाषाविकासका चरणहरू र तिनका विशेषता शीर्षकमा अध्ययनपत्र तयार गर्न लगाउने ।

एकाइ छमा विभिन्न भाषाआर्जनका प्राक्कल्पनामा कक्षा प्रस्तुति गर्न लगाउने ।

एकाइ सातमा व्यवहारवादी सिद्धान्त र मनोवादी सिद्धान्तमा पाइने भिन्नताका सम्बन्धमा कक्षामा छलफल गर्न लगाउने ।

५. मूल्याङ्कन प्रक्रिया

यस पाठ्यांशको मूल्याङ्कन प्रक्रिया दुई प्रकृतिको हुनेछ :

(१) आन्तरिक मूल्याङ्कन

(२) बाह्य मूल्याङ्कन

(१) आन्तरिक मूल्याङ्कन

आन्तरिक मूल्याङ्कनका लागि ४०% अङ्कभार छुट्याइएको छ । उक्त मूल्याङ्कनका लागि निर्दिष्ट प्रायोगिक कार्यअन्तर्गत रही विषय शिक्षकले निम्न आधारहरू अवलम्बन गर्नुपर्ने छ :

(क) उपस्थिति - ५ अङ्क

(ख) शिक्षण सिकाइमा सहभागिता - ५ अङ्क

(ग) पहिलो आन्तरिक परीक्षा - १० अङ्क

(घ) दोस्रो आन्तरिक परीक्षा - १० अङ्क

(ङ) तेस्रो आन्तरिक परीक्षा - १० अङ्क

पहिलो आन्तरिक परीक्षाका लागि विषय शिक्षकले निम्नलिखित कार्यहरू गर्न लगाउने छन्:

अध्ययनपत्र लेखन, पुस्तक समीक्षा, लेख पुनरावलोकन, कुनै विषय शीर्षक केन्द्रित अध्ययन पत्र तयारी, आन्तरिक परीक्षा, एकाइ परीक्षा, ज्ञान/प्रतिभा परीक्षण आदि ।

दोस्रो आन्तरिक परीक्षाका लागि विषय शिक्षकले निम्नलिखित कार्यहरू गर्न लगाउने छन् :

परियोजना कार्य, अवस्था/घटना अध्ययन, गोष्ठी, क्षेत्रकार्य, व्यक्तिगत वा समूहगत प्रतिवेदन लेखन, द्वितीय स्रोत सामग्रीमा आधारित अध्ययनपत्र लेखन, पूर्वाध्ययन, पुनरावलोकन र अभिलेखीकरण आदि ।

तेस्रो आन्तरिक परीक्षाका लागि आन्तरिक सुधार परीक्षाका रुपमा ६० पूर्णाङ्कको परीक्षा लिई त्यसलाई १० अङ्कमा रूपान्तर गरिनेछ ।

उपर्युक्त पहिलो, दोस्रो, तेस्रो आन्तरिक परीक्षा मध्ये दुईवटा लिखित परीक्षामा विद्यार्थीहरु अनिवार्य रुपमा समावेश हुनुपर्ने छ ।

२. बाह्य मूल्याङ्कन

बाह्य मूल्याङ्कनका लागि ६०% अङ्कभार छुट्याइएको छ । उक्त मूल्याङ्कनका लागि त्रि.वि. शिक्षाशास्त्र सङ्काय, डीनको कार्यालयद्वारा सत्रान्तमा परीक्षा लिइने छ । सो परीक्षामा सोधिने प्रश्नको प्रकृति, ढाँचा र त्यसको अङ्कभार निम्नानुसार हुने छ :

प्रश्नको प्रकृति	सोधिने प्रश्न सङ्ख्या	उत्तर दिनुपर्ने प्रश्न सङ्ख्या	प्रतिप्रश्न छुट्याइएको अङ्क	पूर्णाङ्क
समूह 'क' : बहुवैकल्पिक प्रश्न	१०	१०	१	१०
समूह 'ख' : छोटो उत्तर आउने प्रश्न	६ कुनै दुईवटा प्रश्नमा अथवा	६	५	३०
समूह 'ग' : लामो उत्तर आउने प्रश्न	२ कुनै एउटा प्रश्नमा अथवा	२	२०	२०

उपस्थिति र कक्षा सहभागिता

(क) सेमेस्टर प्रणालीमा ८० प्रतिशत उपस्थिति अनिवार्य हुनेछ । ९० प्रतिशतसम्म उपस्थिति हुने विद्यार्थीलाई ४ अङ्क र ९० भन्दा माथि उपस्थित हुने विद्यार्थीलाई ५ अङ्क प्रदान गरिनेछ ।

(ख) कक्षा सहभागिताको ५ अङ्क मध्ये सम्बन्धित विषय शिक्षकले विद्यार्थीको कक्षा कार्यकलापको मूल्याङ्कन गरी अङ्क प्रदान गर्नेछन् ।

६. सिफारिस गरिएका पुस्तकहरू तथा सन्दर्भ सामग्रीहरू

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