COURSE STRUCTURE FOR
MASTER OF ARTS IN ECONOMICS

2024

Tribhuvan University

Faculty of Humanities and Social Sciences

Economics Subject Committee

Tribhuvan University
Faculty of Humanities and Social Sciences
Masters of Arts in Economics- Syllabus
2024

MA in Economics under semester system is a two-year programme consisting of four semesters. The students will have to go through the various compulsory papers pertaining to core courses and can choose the specialized courses from wide variety of optional papers (See: course details below). The first two semesters consist compulsory papers whereas students will have opportunity to choose among specialized courses during third and fourth semester.

Objective of the Course of Study

The MA Economics programme at Tribhuvan University is designed to provide students with a comprehensive theoretical and practical knowledge of economic theories, methodologies, and policies. The curriculum intends to equip students with skills of comprehending core and contemporary knowledge of economics, including microeconomics, macroeconomics, economic development and planning, public economics, monetary economics, financial economics, Nepalese economics and various specialized areas. Moreover, it emphasizes the development of quantitative skills—particularly in mathematics, statistics, research methodology and econometrics—enabling applications of analytical techniques to real-world economic research and policy analysis through the study of microeconomics, macroeconomics, development economics, public economics, monetary economics, etc. Thus at the end of the course, students will be able to understand analytical tools of economics and apply them in formulating and analyzing economic models, theories, and policies. They also will be able to do research in economics.

Admission Criteria

Students holding a Bachelor Degree in Economics or any subjects recognized by the Tribhuvan University having at least 150 marks or eight credits in economics, mathematics, statistics, econometrics either in any one of these subjects or mixed of them will be eligible for entrance examination. Only passed students in entrance examination will be eligible for admission in MA in Economics.

Duration of the Course

Studying the provided courses lasts for two years divided into four semesters. Over the course of six months, there is an examination at the end of the semester.

Semester System

In the semester system, annual academic programmes are typically divided into two semesters. Each semester lasting around 16 weeks. During these weeks, students attend classes and engage in study-related activities designed to facilitate learning and academic progress.

Evaluation Criteria

Examination Scheme		Total
Internal Assessment (40 Marks)	External Assessment (60 Marks)	100

Internal evaluation includes written examination, term paper writing, presentation / participation, and Attendance etc. Marks allocation for internal evaluation is as follows:

Pre-Board Examination	20 Marks
Term paper / Case Study	10 Marks
Presentation / Participation / Evaluation by Teacher	5 Marks
Attendance	5 Marks

The students should pass in all subjects in internal assessments to appear in final examination as per the rules of semester system of the Faculty of Humanities and Social Sciences, Tribhuvan University.

Pre-board examination will be conducted one month prior to the final examination. The students are required to submit their term papers / case study mid-way through the session. The class teachers will provide guidelines for writing the term papers.

The Dean's Office will conduct the 60 percent external evaluation based on the final written examination. However, the evaluation of the practicum courses will be carried out by the respective department and campus.

Model Questions for Final Examination

A total of eight questions will be asked in the final examination of each paper. Group A will consist of three long-answer questions, of which students will have to attain any two of them for 30 marks. In Group B, five questions will be asked and students are required to answer any three of them for 30 marks.

Course Structure

Semester I			Semester II		
Code	Subject	Cr	Code	Subject	Cr
Econ 501	Micro Economics I	3	Econ 551	Micro Economics II	3
Econ 502	Macro Economics I	3	Econ 552	Macro Economics II	3
Econ 503	Mathematics for Economics	3	Econ 553	Statistics for Economics	3
Econ 504	Economic Development and Planning I	3	Econ 554	Economic Development and Planning II	3
Econ 505	History of Economic Thought	3	Econ 555	General Equilibrium and Welfare Economics	3
	Total Credit	15		Total Credit	15
Semester III			Semester IV		
Econ 601	Monetary Economics	3	Econ 651	Financial Economics	3
Econ 602	Public Economics I	3	Econ 652	Public Economics II	3
Econ 603	Basic Econometrics	3	Econ 653	Nepalese Economy	3
Econ 604	Research Methodology	3	Econ 654	Thesis	6
Option (Any One)			Optional (Any One)		
Econ 605-1	Mathematical Economics	3	Econ 655-1	Advanced Econometrics	3
Econ 605-2	Environmental Economics	3	Econ 655-2	Natural Resource Economics	3
Econ 605-3	Managerial Economics	3	Econ 655-3	International Trade and Finance	3
Econ 605-4	Energy Economics	3	Econ 655-4	Energy Policy and Financing	3
Econ 605-5	Demography and Health Economics	3	Econ 655-5	Economics of Human Resource Development	3
Econ 605-6	Economics of Agriculture Development	3	Econ 655-6	Economics of Tourism	3
	Total Credit	15		Total Credit	18
				Grand Total	63

Note. Cr = Credit

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Master of Arts in Economics	**Full Marks: 100**
Course Title: Microeconomics I	**Pass Marks: 50**
Course Code: Econ 501	**Credit Hours: 3**
First Semester	**Lecture Hours: 48**

Course Objective:
This course is designed to provide students with a foundation in the core concepts and methods of microeconomics, strengthening their research skills and overall understanding of microeconomic problems. At the end of the course, students should be able to understand microeconomic theories and issues, develop microeconomic models, and analyze them with appropriate techniques.

Course Contents:

Unit I: Methodology in Economics **6 Hours**
Definition and significance of methodology in economics; Philosophical Foundation of Economic Methodology: Positivism, Rationalism, Empiricism, Constructivism; Methods of Economic Analysis: Deductive, Inductive and Hypothetico-deductive, Static, Comparative Static and Dynamic.

Unit II: Scientific Approach in Economics **6 Hours**
Concept, Principles & Relevance of Scientific Method in Economics, Economics as science, Role of assumptions in economics and relevance of assumption in scientific study; Falsifiability in Economics; Models in economics: definition, importance, types (economic and econometric), and choice between models; General features of economic models.

Unit III: Consumer Behaviour and Theory of Demand **12 Hours**
Consumer preferences, Utility function and its types; Budget Constraints, Consumer's equilibrium, Price effect, Income effect and substitution effect; derivation of ordinary and compensated demand curves; Indirect utility function; Expenditure function; Consumption duality; Revealed preference theory; Lancaster's Theory of Demand; Linear expenditure system (LES).

Unit IV: Theory of Production **12 Hours**
Concept of Production function; Production technology and their properties (Homogeneous, Homothetic, Linear, Cobb-Douglas, CES, Leontief) Producer's equilibrium (Least cost combination of input, output maximization, profit maximization); Derivation of cost function from production function; Cost curves; Empirical estimation of cost.

Unit V: Market Theories **12 Hours**
Price and Output Determination in Perfectly Competitive Market, Monopoly; Price discrimination under monopoly, Multi-plant monopolist; Monopolistic competition in short-run and long-run; Chamberlin's model of monopolistic competition, Peak load Pricing, Transfer Pricing, Dumping; Policy implication in the market: tax, subsidy, price and quantity rationing.

References

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Gravell, H. & Rees, R. (2004). *Microeconomics* (3rd ed.). Pearson.

Koutsoyiannis, A. (1979). *Modern microeconomics* (2nd ed.). Macmillan.

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Salvatore, D. (2009). *Principle of microeconomics* (5th ed.). Oxford University Press.

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Master of Arts in Economics	**Full Marks: 100**
Course Title: Macroeconomics I	**Pass Marks: 50**
Course Code: Econ 502	**Credit Hours: 3**
First Semester	**Lecture Hours: 48**

Course Objective:
The objective of this course is to provide advanced knowledge on macroeconomic analysis. Upon the completion of this course, students will be able to understand analytical tools and apply them in formulating and analyzing economic models, theories and policies.

Course Contents:

Unit I: Introduction **4 Hours**
Introduction of macroeconomics; Economic Performance –Output, Output Gap, Unemployment, Inflation, Exchange rate, Budget Deficit, Trade Deficit, Interest rate, Instability of output, Stock and Flow variables, Macroeconomic Policy Goals.

Unit II: National Income Accounting **10 Hours**
Key Concepts of National Income Accounting; Measurement of National Income: Expenditure Approach, Income Approach and Value-Added Approach; Sector Accounting- Household Sector, Business Sector, Government sector and Rest of World sector and Consolidated National Account; National Income Accounting Practices in Nepal, Limitations.

Unit III: Classical Macroeconomics: Money, Price and Interest **6 Hours**
Classical Theory of Employment and Output. Says Law of Market; Quantity Theory; Theory of Interest, Complete Classical System; Applicability and Limitation.

Unit IV: Basic Keynesian Model **6 Hours**
Basic Keynesian Model of Two, Three and Four Sector Economy; Multiplier Analysis in Two, Three and Four Sector Economy (Derivation, Interpretation and Application).

Unit V: Keynesian System with Money, Income, and Interest **8 Hours**
Money in Keynesian System; Goods Market Equilibrium - The IS Curve, Factor affecting the slope and position of IS Curve; Money Market Equilibrium – The LM Curve, Factor affecting the slope and position of LM Curve; System Equilibrium with IS and LM Curves, Policy Effects.

Unit VI: Keynesian System with Aggregate Demand and Aggregate Supply **8 Hours**
Derivation Aggregate Demand Curve, Derivation of Aggregate Supply Curve, Effect of change in Money supply and Government Expenditure on Interest Rate, Price, Output and Employment Under Rigid Money Wage; Effects of Shifts in Aggregate Supply Curve.

Unit VII: Consumption Demand **6 Hours**
Short-run and Long-run Consumption Function; Relative income Hypothesis, Permanent Income Hypothesis and Lifecycle hypotheses.

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References

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Dornbush, R. & Fischer S. (1987.). *Macroeconomics* (4th ed.). McGraw Hill Book Company.

Dornbush, R., Fischer, S., & Startz, R. (2012). *Macroeconomics* (10th ed.). McGraw Hill Book Company.

Froyen, R. T. (2003). *Macroeconomics: Theories and policies* (7th ed.). Pearson Education.

Froyen, R. T. (2016). *Macroeconomics: Theories and policies* (10th ed.). Pearson Education

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

Ott, D. J., Ott, F. A., & Yoo, J. G. (1975). *Macroeconomic theory*. Kogakusa, McGraw Hill.

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Faculty of Humanities & Social Sciences Dean's Office

K.H. Gyawaly

Tribhuvan University
Faculty of Humanities and Social Sciences

Master of Arts in Economics	**Full Marks: 100**
Course Title: Mathematics for Economics	**Pass Marks: 50**
Course Code: Econ 503	**Credit Hours: 3**
First Semester	**Lecture Hours: 48**

Course Objectives:
This course aims to equip students with foundational mathematical tools for economic analysis, including real analysis, optimization, linear programming, optimal control theory, and differential and difference equations. By integrating theoretical concepts with practical applications, students will gain the skills necessary to understand number systems, sequences, and series; formulate and solve optimization problems using constrained and unconstrained techniques; develop and solve linear programming problems; analyze continuous-time and discrete-time economic models using differential and difference equations; and conduct stability analysis for dynamic systems. This preparation enables students to engage effectively in quantitative research and policy modeling in economics.

Course Contents:

Unit I: Real Analysis **4 Hours**
Sets and Functions; Number Systems and Properties of R^n; Sequences and Series; Limits and Continuity

Unit II: Optimization **12 Hours**
Concepts of Differentiation and Integration; Unconstrained Optimization; Constrained Optimization using Lagrange Multipliers; Convexity and Optimization; Kuhn-Tucker Conditions; Economic Applications: maximization of profit functions, utility maximization, cost minimization

Unit III: Differential Equations **9 Hours**
First-order differential equations with constant coefficient and constant term; First-order differential equations with variable coefficient and variable term; Second-Order Differential Equations with constant coefficient and constant term; Second-Order Differential Equations with constant coefficient and Variable term; Stability analysis of dynamic systems; Economic Applications: Economic growth models, differential models for investment and savings.

Unit IV: Difference Equations **9 Hours**
First-order difference equation with constant coefficient and constant term; First-order difference equation with constant coefficient and variable term; Second-Order Difference Equations with Constant Coefficient and constant term; Second-Order Difference Equations with Constant Coefficient and variable term; Stability Analysis of dynamic system; Economic Applications: Analyzing business cycle models, models of population growth, economic stability.

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Unit V: Optimal Control Theory **6 Hours**

Introduction to Control Theory; The Hamiltonian and Pontryagin's Maximum Principle; Economic Applications: Optimal investment, consumption, and production planning in a dynamic context.

Unit VI: Linear Programming **8 Hours**

Formulation of Linear Programming Problems; The Simplex Method; Duality Theory and Economic Applications; Economic Applications: Resource allocation, Optimization in production and distribution models.

References

Chiang, A. C., (1967). *Fundamental methods of mathematical economics.* McGraw-Hill. (Now (2005) in 4th ed. with Wainwright, Kevin)

Chiang, A. C. (1992). *Elements of dynamic optimization.* McGraw-Hill. (Now, published by Waveland Press Inc., Illinois).

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Luenberger, D. G., & Ye, Y. (2015). *Linear and nonlinear programming* (4th ed.). Springer.

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Tribhuvan University
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Master of Arts in Economics	**Full Marks: 100**
Course Title: Economic Development and Planning I	**Pass Marks: 50**
Course Code: Econ 504	**Credit Hours: 3**
First Semester	**Lecture Hours: 48**

Course Objective:
This course offers advanced studies with application perspective on development and planning with special focus on perspective on development, theories of development, poverty, inequality, unemployment, current development issues, and planning. After completion of this course students will be able to understand development process and apply analytical tools to formulate economic development models and policies.

Course Contents:

Unit I: Perspectives on Development **10 Hours**

Meaning of Economic Growth and development; Alternative Concepts of Development; Income-based and Capability-based Approach of Development; New Development Paradigm. Sustainable Development; New Structural Economics: A Framework for Rethinking Development; Thinking Big and Thinking Small.

Unit II: Theories and Strategies of Development **10 Hours**

Classical Theory, Structural Change Model: Lewis Two Sector Model, Harris-Todaro Model, Balanced and Unbalanced Growth Models; Dependency and World System Theory, Schultz Approach of Agricultural Growth and Development and Critical Minimum Effort Theory.

Unit III: Contemporary Development Issues **10 Hours**

Climate Change and Environmental Sustainability; Technological Change and Digital Divide; Gender and Development; Demographic Shift and Dividend; Conflict, Peace and Development; Black Economy; Impacts of Liberalization, Globalization and Privatization.

Unit IV: Poverty, Inequality and Unemployment **8 Hours**

Poverty and Inequality: Measurement (monetary and nonmonetary); Types, Measurement and Consequences of Unemployment; Assessment of Policies Geared towards Poverty Reduction, Unemployment and Inequality; Role of State in Policy Reform.

Unit V: Development Planning **10 Hours**

Concept and Rationale of Planning; Planning in Socialist, Capitalist and Mixed Economies; Periodic and Perspective Plans; Local Development Planning; Regional Development Planning; Project Planning; Growth Pole and Growth Center in Planning, Planning in Federal System.

References

Alkire, S., Roche, J. M., Ballon, P., Foster, J., Santos, M. E., & Seth, S. (2015). *Multidimensional poverty measurement and analysis*. Oxford University Press, USA.

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World Development Reports of Various Years

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Master of Arts in Economics	**Full Marks: 100**
Course Title: History of Economic Thought	**Pass Marks: 50**
Course Code: Econ 505	**Credit Hours: 3**
First Semester	**Lecture Hours: 48**

Course Objectives:
The objectives of this course are to make students familiar with the evolution of economic ideas, schools of thought, factors influencing the development of economic ideas, and their relevance in respective eras.

Course Contents:

Unit I: Introduction to Oriental and Occidental Economic Thought **10 Hours**

Concept of Oriental economic thought: Buddhism-Right to live, help and cooperation, consumption and well-being, optimum use of earning, Moderation, critical evaluation; Hinduism- Wealth creation, social capital, trusteeship and cooperation, critical evaluation, Koutilya Arthasastra-Saptanga Theory, economic power (agriculture and trade), state governance, the happiness of people, economic diplomacy, and Critical Evaluation; Confucianism-Seeking Continuity, Resources, Source of Economic Motivation, Importance of Work, Principal Economic Institution Wealth Distribution, critical evaluation.

Hebrew economic thought: Price, Interest, wages, agriculture, property, trade, taxes, labor, and Sabbath (holidays/Leisure); Roman Economic Thought: Agriculture, the life of people, investment, price; Greek economic thought: Plato-Division of labor, Social classes, the value of money, interests; Aristotle- slavery system, value in use and value in exchange, money, private property; Xenophon: division of labor; management of the domestic economy, development of nation, population, and prosperity.

Unit II: Pre-classical Economic Ideas **5 Hours**

Physiocrats: Principles; Economic ideas: Natural order, Net products, circular flow of wealth, taxation, trade.

Mercantilism: Principles; Economic ideas: Plenty or power, foreign trade, money, price and interest, wages and employment, Critical evaluation.

Unit III: Classical Economic Ideas **8 Hours**

Adam Smith: Division of Labour, theory of value and distribution; theory of value; economic growth and international trade, public debt and taxation.

David Ricardo: The theory of distribution; theory of growth; theory of value; theory of international trade; J.S. Mill: philosophy and economic policy, The principle of political economy, Theory of growth.

Unit IV: Socialistic Economic Thought **8 Hours**

Review of socialist ideas before Karl Marx: Contribution of Saint Simon, Sismondi, Robert Owen, Charles Fourier, Louis Blanc, Pierre Joseph Proudhon.

Karl Marx: philosophy, Labour theory of value, theory of price, Theory of development, business cycle; Critical evaluation of Marxist economic idea.

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Unit V: Post-classical Economic Thought **10 Hours**

Neo-classical economics: Overview, Jevons, Walras, Menger, Wickseed, Marshall, Clark; Institutional economics -Thorsten Veblen: Economic ideas, The theory of leisure class, Critical evaluation; Welfare economics- John A. Hobson: Ideas of economic welfare; Arthur Cecil Pigou: Pigou idea of economic welfare.

New Economics - J. M. Keynes: Theory of income and employment, Theory of economic development.

Unit VI: Economic Thought of Nepal **7 Hours**

Ancient economic thought: Kirat and Lichhavi period Agriculture as an economic foundation, cooperation, Medieval economic thought: Malla period Agriculture and trade.

Modern economic thought: Dibya Upades of P.N. Shah, Close economy of Rana rule, planned economy in the Panchayat Period, Planned and liberal economy in the present context.

References

Ghosh, B. N. & Ghosh, R. (2010). *Concise history of economic thought.* Himalaya Publishing House.

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Tribhuvan University
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Master of Arts in Economics	**Full Marks: 100**
Course Title: Microeconomics II	**Pass Marks: 50**
Course Code: Econ 551	**Credit Hours: 3**
Second Semester	**Lecture Hours: 48**

Course Objective:
This course is designed to provide students with a foundation in the core concepts and methods of microeconomics, strengthening their research skills and overall understanding of microeconomic problems. At the end of the course, students should be able to understand microeconomic theories and issues, develop microeconomio models, and analyze them with appropriate techniques.

Course Contents:

Unit I: Game Theory **8 Hours**
Concept of Game theory; Elements of Game: Player, Strategies, Payoffs, Rule of game: Simultaneous move, Sequential Move; Types of Game: Zero-Sum Game, Non-Zero Sum Game, Dominant Strategy and Nash equilibrium, Mixed Strategies and Equilibrium; the Prisoner's Dilemma; Application of Game Theory in Economics.

Unit II: Oligopoly Market **10 Hours**
Non-collusive and Collusive; Non-collusive models: Cournot, Bertrand, Stackelberg, Chamberlin, Edgeworth, Sweezy or Kinked Demand Curve Model; Collusive: Cartel and Price Leadership; Policy implications in oligopoly markets.

Unit III: Managerial Theories of the Firm **10 Hours**
Baumol's theory of sales revenue maximization; Williamson's model of managerial discretion; Marris model of growth rate maximization, Behavioral model of Cyert and March, Bain's Limit pricing model

Unit IV: Pricing of Factor of Production **10 Hours**
Marginal productivity theory; Product exhaustion theorem; Factor pricing in imperfect: Monopoly factor market, Monopsony factor market, Bilateral monopoly in factor market, Monopolistic product and Perfectly Elastic Supply of Factor, Provision of trade union in labor market; Subsistence and standard of living theories of wage rate; Pricing of Fixed factor: Determination of rent and quasi-rent

Unit V: Economics of Information and Uncertainty **10 Hours**
Properties of information; The value of information; Moral Hazard; Adverse Selection; Information and insurance; principal-agent model; Risk and uncertainty in consumption: expected value, the von Neumann-Morgenstern theorem, risk aversion, The Allais paradox and the Ellsberg paradox; Gambling and insurance; The Friedman–Savage hypothesis.

References

Cowell, F. (2006). *Microeconomics: Principles and analysis.* Oxford.

Gravell, H., & Rees, R. (2004). *Microeconomics* (3rd ed.). Pearson.

Henderson, J. M., & Quandt, R. E. (2003). *Microeconomic theory: A mathematical approach,* third edition. Tata McGraw-Hill Publishing Company Limited.

Koutsoyiannis, A. (1979): *Modern microeconomics* (2nd ed.). Macmillan.

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Note. The instructor(s) may suggest additional references in the class.

Tribhuvan University

Faculty of Humanities and Social Sciences

Master of Arts in Economics	**Full Marks: 100**
Course Title: Macroeconomics II	**Pass Marks: 50**
Course Code: Econ 552	**Credit Hours: 3**
Second Semester	**Lecture Hours: 48**

Course Objective:

The objective of this course is to provide advanced knowledge on macroeconomic analysis of various schools. Upon the completion of this course, students will be able to understand analytical tools and apply them in formulating and analyzing economic models, theories, and Policies.

Course Contents:

Unit I: Investment Demand **5 Hours**

Basic concepts, Accelerator theory, Jorgensen' theory, Factor Affecting the Investment Demand.

Unit II: Open Economy Mundell - Fleming Model **6 Hours**

Derivation of Balance of Payment Curve (BP), Open economy equilibrium, Monetary Policy Under Fixed Exchange Rate Regime, Fiscal Policy under fixed rate regime; Monetary Policy Under Flexible Exchange Rate Regime, Fiscal Policy under Flexible exchange rate regime; (IS, LM and BP Approach).

Unit III: Monetarist Approach **6 Hours**

Monetarist Proposition; Monetarist diversion from Keynesian position; Price and output determination; Monetary and Fiscal Policy.

Unit IV: Recent Development in Macroeconomics **8 Hours**

New Classical Macroeconomics- Rational Expectation, Price Output and Employment determination; Real Business Cycle Theory and New Keynesian Macroeconomics.

Unit V: Growth Theories **11 Hours**

Basic Concepts; Harrod Model; Domar Model; Comparison of Harrod and Domar Model; Solow Growth Model- Steady Sate Equilibrium, Stability of Equilibrium, Golden Rule of Capital Accumulation, Transitional Dynamics, Convergence Proposition; Policy Implications; Endogenous Growth Models- Basic Features, Implication of endogenous technological change.

Unit VI: Business Cycles Theories **6 Hours**

Kaldor Model, Samuelson Model and Hicks Model.

Unit VII: Macroeconomic Stabilization **6 Hours**

Concepts, Economic Disturbances, Econometric Models for Policy Making, Lags in the Effects of Monetary and Fiscal Policies, Activist Policy, Rules vs. Discretions, Financial Crisis of 2007.

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References

Barro, R. J., & Martin, X. J. (2004). *Economic growth.* MIT Press.

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Note. The instructor(s) may suggest additional references in the class.

Tribhuvan University

Faculty of Humanities and Social Sciences

Master of Arts in Economics	**Full Marks: 100**
Course Title: Statistics for Economics	**Pass Marks: 50**
Course Code: Econ 553	**Credit Hours: 3**
Second Semester	**Lecture Hours: 48**

Course Objectives:

This course is designed to equip students with advanced statistical tools and techniques necessary for economic analysis and research. Upon successful completion, students will be able to understand and apply statistical methods relevant to economics, interpret and analyze economic data using statistical tools, and conduct hypothesis testing and regression analysis for economic research. Additionally, students will learn to utilize statistical software to analyze and present data effectively, enabling them to solve real-world economic problems with precision and confidence.

Course Contents:

Unit I: Probability Theory and Distributions **8 Hours**

Fundamental concepts: Definitions, rules, conditional probability, and Bayes' theorem; Random variables: types and mathematical expectations; Discrete probability distributions: Binomial, Poisson, and applications in economics; Continuous probability distributions: Normal, exponential, and their economic applications.

Unit II: Sampling **8 Hours**

Concept of Population and Sample; Importance of sampling in economic research; Types of sampling methods: Probability Sampling: Simple random sampling, stratified sampling, systematic sampling, cluster sampling, and multi-stage sampling; Non-Probability Sampling: Convenience sampling, judgment sampling, quota sampling, and snowball sampling. Sampling distribution: Mean, proportion, and the Central Limit Theorem; Concepts of standard error; Determination of sample size: Factors affecting sample size and its calculation; Application of sampling in economic surveys and data collection.

Unit III: Estimation **8 Hours**

Concepts of Population parameter and sample statistic; Types of Estimation: Point estimation and Interval estimation: Confidence intervals for population mean, proportion, and variance; Methods of Estimation: Method of moments, Ordinary least square method, Maximum likelihood method; Properties of Estimator for small and large samples; Applications of estimation in economics.

Unit IV: Hypothesis Testing **8 Hours**

Fundamentals of hypothesis formulation; Errors in testing: Type I and Type II errors, power of the test; Parametric tests: Z-test, t-test, and F-test; Non-parametric tests: Chi-square test and applications.

Unit V: Correlation Analysis **6 Hours**

Concept and Types of correlation and scatter plots; Pearson's and Spearman's correlation coefficients; Significant test of correlation coefficient; Partial and multiple correlation analysis and their calculation; Application of correlation in economic data.

Unit VI: Regression Analysis **10 Hours**

Introduction to regression analysis: Simple and multiple regression models; Assumptions of the Classical Linear Regression Model (CLRM); Estimation of regression parameters using the Ordinary Least Squares (OLS) method; Interpretation of regression coefficients; Measure of goodness of fit of the model (R^2 and adjusted R^2) and ANOVA Table.

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Tribhuvan University
Faculty of Humanities and Social Sciences

Master of Arts in Economics	**Full Marks: 100**
Course Title: Economic Development and Planning II	**Pass Marks: 50**
Course Code: Econ 554	**Credit Hours: 3**
Second Semester	**Lecture Hours: 48**

Course Objectives:

This course offers advanced studies with application perspective on development and planning with special focus on factor affecting development, tools and technique of planning, reshaping the economy, development financing and economic cooperation. After the completion of this course students will be able to understand development process and apply analytical tools to formulate economic development models and policies.

Course Contents:

Unit I: Factors Affecting Development **10 Hours**

Capital Formation, Human Resource Development; Natural Resources, Technology and Development; Values, Institutions and Civil Society; Experience, Constraints and Prospects of Development in Asian Context.

Unit II: Tools and Technique of Planning **12 Hours**

Estimation and Use of Capital Output Ratio, Stages and Components of Project Appraisal, Cost Benefit Analysis; Closed and Open Input Output Model: Introduction, Structure, Components and Solution; SAM and SAM Multiplier.

Unit III: Reshaping the Economy **10 Hours**

Implications of Global Trading System on the Developing Countries; Governance and Globalization in the Context of LDCs; Safety Nets; Corporate Social Responsibility; Special Economic Zone and its impact; Fiscal Federalism.

Unit IV: Financing Development **8 Hours**

Private Sector and NGOs, Government Revenue, Foreign Aid, Foreign Investment, Remittance, Green Finance and Climate Bond, Blended Finance, Public Debt and Debt Crisis.

Unit V: Regional Economic Cooperation and International Organization **8 Hours**

SAARC, ASEAN, BIMSTEC, Concept, Structure and Working Modality, WTO, SAFTA, World Bank (WB) , IMF, ADB, Structure and Function .

References

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Tribhuvan University
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Master of Arts in Economics	**Full Marks: 100**
Course Title: General Equilibrium and Welfare Economics	**Pass Marks: 50**
Course Code: Econ 555	**Credit Hours: 3**
Second Semester	**Lecture Hours: 48**

Course Objectives:
This course is designed to provide foundation in economics, focusing on general equilibrium and welfare context, strengthening their research skills and overall understanding of economic problems. At the end of the course, students will be able to understand microeconomic theories and problem, develop microeconomic models, and analyze them with appropriate techniques.

Course Contents:

Unit I: Introduction to General Equilibrium **5 Hours**
Concept of circular flow and Interdependence of the Economy; Partial vs. General Equilibrium: Scope and Limitations; Existence, Uniqueness, and Stability of Equilibria; Excess Demand Approach to General Equilibrium Analysis.

Unit II: General Equilibrium of Production and Exchange **12 Hours**
Concept of Edgeworth Box, Pareto Efficiency and Improvement; Efficiency in Production, Consumption and Product-Mix; Graphical Treatment of 2×2×2 Model of General Equilibrium: Pure Exchange, Two-Commodity Exchange, Production & Exchange; Walrasian General Equilibrium Model; General Equilibrium and Allocation of Resources; Prices of Commodities and Factors in the General Equilibrium Model Under Perfect Competition.

Unit III: Welfare Economics **15 Hours**
Concept of Welfare economics; Criteria for social welfare: GNP Criterion, Cardinalist criterion, Bentham's criterion; Pareto optimality: Efficiency of distribution of commodities among consumers, efficiency of allocation of factors among firms and efficiency of composition of output, Kaldor-Hicks compensation principle; Scitovsky paradox, Bergson criterion: Social welfare function—properties and limitations; Maximization of Social Welfare; Determination of the Social Welfare Maximizing Output-Mix, Commodity Distribution and Resource Allocation; Welfare Maximization and Perfect Competition; Theory of the second best; Arrow's impossibility theorem; Rawl's theory of social justice.

Unit IV: Externalities and Public Goods **8 Hours**
Concept of Externalities: Production and Consumption Externalities; Externalities and Allocative Inefficiencies; Partial Equilibrium Model of Externalities; Solution to Negative Externalities: Pigovian Tax, Coase Theorem; Attributes of Public Goods; Optimum Provision of Public Goods; Private Provision of Public Goods and Inefficiency.

Unit V: Theories of Distribution and Welfare Implications **8 Hours**

Relationship between the Distribution and Social Welfare; Distribution Theories: Ricardo's Theory, Kalecki's Theory, Kaldor's Theory, Marxian Theory; Policy Implication of the Distribution Theories.

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