

AVIATION PROFESSIONAL PRACTICE

ENAS 415

Lecture : 2
Tutorial : 0
Practical : 0

Year : IV

Part : I

Course Objectives:

The objective of this course is to provide knowledge relevant to aviation professional engineering, applicable regulations and industry best practices. On completion, students will be able to understand the intricate technical details of the working of an airline and an aviation regulator and evaluate government and other industry regulations for regular functions.

1 Introduction (3 hours)

- 1.1 Profession: Definition and characteristics
- 1.2 Professional institutions
- 1.3 Ethics, code of ethics and engineering ethics
- 1.4 Moral dilemma and ethical decision making
- 1.5 Detailed duties of an engineer
- 1.6 Liability, tort and negligence
- 1.7 Annex 13, liability and legal aspects of aviation profession

2 Professional Culture (2 hours)

- 2.1 Cherishing the job devotionally and value to company culture in aviation
- 2.2 Honesty in reporting
- 2.3 Justness in evaluation
- 2.4 Cooperation with peers and departments and task delegation

3 Engineering Ethic (4 hours)

- 3.1 Engineering ethics as a field of applied ethics
- 3.2 Engineers' obligations to the public
- 3.3 Obligations to clients and employers
- 3.4 Obligations to the profession
- 3.5 Codes of conduct for engineers

4 Science Ethic (4 hours)

- 4.1 Basic goal of science: Cognizing the world and discovering new truths

- 4.2 Ethical principles of scientific research
- 4.3 Ethical principles of scientific discussion
- 4.4 Integrity and responsibility in scientific cognition

5 Procurement and contract management (10 hours)

- 5.1 Public procurement act and regulation
- 5.2 Types, method and tools of procurement of Goods, works and services (Direct, sealed quotation, tender)
- 5.3 Force account, users' committee
- 5.4 Expression of interest, request for proposal
- 5.5 Preparation of detailed cost estimate
- 5.6 Technical sanction and budget approval
- 5.7 Procurement condition, steps and provisions
- 5.8 Tender, standard bidding documents, tender notice, submission
- 5.9 Methods of selection and evaluation of proposals
- 5.10 Types of contract: Based on payment; Build own operate transfer; Design and built; Turnkey; Engineering procurement construction
- 5.11 Negotiations, contract award and agreement

6 Professional Practices (5 hours)

- 6.1 Public sector practices
- 6.2 Private sector practices
- 6.3 Occupational health and safety
- 6.4 Decision making: Minute, memo (Tippani) and approval

7 Regulatory Environment (2 hours)

- 7.1 Nepal engineering council acts and regulations
- 7.2 Labor law
- 7.3 Intellectual property rights

Final Exam

The questions will cover all the chapters in the syllabus. The evaluation scheme will be as indicated in the table below:

Chapters	Hours	Marks distribution*
1, 2	5	5
3, 4	8	8
5	10	10
6	5	5
7	2	2
Total	30	30

* There may be minor deviation in marks distribution.

References

1. International Civil Aviation Organization. (2025). Annex 19 to the Convention on International Civil Aviation: Safety management. International Civil Aviation Organization.
2. International Civil Aviation Organization. (2024). Annex 13 to the Convention on International Civil Aviation: Aircraft accident and incident investigation. International Civil Aviation Organization.
3. Project Management Institute. (2025). A guide to the project management body of knowledge (PMBOK® guide). Project Management Institute.
4. Smith, N. J. (2002). Engineering project management. Blackwell Science.