

BS Aviation Management Program

Road Map

| Program | No of Semesters | Course Category | No of Courses | Credit Hr |
|---------------------|-----------------|------------------|---------------|-----------|
| Aviation Management | 8 | Major | 24 | 72 |
| | | General | 10 | 30 |
| | | Elective | 04 | 12 |
| | | Internship | 01 | 03 |
| | | Inter Disp | 04 | 12 |
| | | Capstone Project | 01 | 03 |
| | | Total | 44 | 132 |

Semester wise Course Plan

SEMESTER ONE

| S.NO | SUBJECTS | Credit Hours | Course code | New Names | Majors/Generals |
|------|--|--------------|-------------|-----------|---------------------------|
| 1 | History of Flight | 3 | AVM1000 | | Major |
| 2 | ICAO Aviation English | 3 | AVM1002 | | Major |
| 3 | Intro to Computing (New Name) Application of Information & Communication Technology | 3 | AVM1003 | | General |
| 4 | Elementary Physics (New Name) Applied Physics | 3 | AVM 1004 | | General (Natural Science) |
| 5 | Principles of Management | 3 | AVM 1005 | | Major |
| 6 | English Composition (New Name) Functional English | 3 | AVM 1006 | | General |

SEMESTER TWO

| | | | | | |
|---|------------------------------|---|---------|--|-------|
| 7 | Navigation & Flight Planning | 3 | AVM1007 | | Major |
| 8 | Meteorology | 3 | AVM1008 | | Major |

| | | | | | |
|----|-------------------------|---|---------|---------------------------|---------|
| 9 | Mathematics | 3 | AVM1009 | Quantitative Reasoning –I | General |
| 10 | Communication Skills | 3 | AVM1010 | Expository Writing | General |
| 11 | Islamic Studies | 2 | AVM1011 | | General |
| 12 | Principles of Marketing | 3 | AVM1012 | | Major |

SEMESTER THREE

| | | | | | |
|----|---|---|---------|--|-------------------------------|
| 13 | Aero-Engines | 3 | AVM2013 | | Major |
| 14 | (New Subject) – Professional Ethics | 2 | AVM2014 | | General (Arts and Humanities) |
| 14 | Organizational Behavior | 3 | AVM2015 | | Major |
| 15 | Aircraft communication | 3 | AVM2016 | | Major |
| 16 | Pak Studies New Name (Ideology & Constitution of Pakistan) | 2 | AVM2017 | | General |
| 17 | Business Communication (New name) Civics and Community Engagement | 2 | AVM2018 | | General |
| 18 | (New Subject) Entrepreneurship | 2 | AVM2019 | | General |

SEMESTER FOUR

| | | | | | |
|----|--------------------------------------|---|---------|---------------------------|--------------------------|
| 19 | Safety Management System In Aviation | 3 | AVM2020 | | Major |
| 20 | Aircraft General Knowledge | 3 | AVM2021 | | Major |
| 21 | Risk Management in Aviation | 3 | AVM2022 | | Major |
| 22 | Management Information System | 3 | AVM2023 | | Major |
| 23 | Statistics | 3 | AVM2024 | Quantitative Reasoning-II | General |
| 24 | (New Subject) - Psychology | 2 | AVM2025 | | General (Social Science) |

| | | | | | |
|--|--|--|--|---------|----|
| | | | | | |
| | | | | General | 30 |

SEMESTER FIVE

| | | | | | |
|----|---|---|---------|--|-------------|
| 25 | Essentials of aviation Management | 3 | AVM3026 | | Major |
| 26 | Airport Planning & Designing | 3 | AVM3027 | | Major |
| 27 | Health and Safety Environment in aviation | 3 | AVM3028 | | Major |
| 28 | Logistic Management | 3 | AVM3029 | | Inter Discp |
| 29 | micro economics | 3 | AVM3030 | | Inter Discp |
| 30 | Human Resource Management | 3 | AVM3031 | | Major |

SEMESTER SIX

| | | | | | |
|----|---|-----|---------|--|-------------|
| 31 | Airspace Management In Pakistan | 3 | AVM3032 | | Major |
| 32 | Business and Corporate Aviation | 3 | AVM3033 | | Major |
| 33 | (New Subject) leadership And Management Skills | 2+1 | AVM3034 | | Minor |
| 34 | Research Methodology | 3 | AVM3035 | | Major |
| 35 | Accounting & Finance | 3 | AVM3037 | | Inter Discp |

SEMESTER SEVEN

| | | | | | |
|----|-----------------------------|---|---------|--|-------------|
| 36 | Managing Airline | 3 | AVM4038 | | Major |
| 37 | Aviation Project Management | 3 | AVM4039 | | Minor |
| 38 | Total Quality Management | 3 | AVM4040 | | Major |
| 39 | Managerial Leadership | 3 | AVM4041 | | Major |
| 40 | Macro Economics | 3 | AVM4042 | | Inter Discp |

SEMESTER EIGHT

| | | | | | |
|----|---|---|---------|--|-------|
| 41 | Human Factors & Performance In Aviation | 3 | AVM4043 | | Major |
| 42 | Airline and Airport Economics | 3 | AVM4044 | | Minor |
| 43 | Operation Management | 3 | AVM4045 | | Minor |
| 44 | Internship Report | 3 | AVM4046 | | |
| 45 | Capstone project | 3 | AVM4047 | | |

Course Title: Applied Physics

Course Descriptions:

This course is an accelerated introduction to the conceptual and mathematical foundations of modern theoretical physics, with a particular emphasis on basic introductory physics, analytical mechanics, kinetics, dynamics, fluid dynamics and various aspects of Aviation Industry related to these concepts. Examples are drawn from everyday life relating theory with practice effectively. Application of the learning materials will be encouraged through discussions and other experiential assignments.

Course Objectives:

| Classification | Learning Outcomes |
|-----------------------------|---|
| Knowledge and Comprehension | <p>Student will be able to understand different aspects of basic level of Physics.</p> <p>The presentations, assignments and quizzes will give them insight of industry knowledge and the practical applications of Physics.</p> <p>The curriculum is structured so that students attain both practical skills and theoretical knowledge.</p> |
| Application | <p>Student will be able to gain confidence in a technological world, with an informed interest in scientific matters</p> |

| | |
|------------------------|---|
| | <p>understand how scientific theories and methods have developed, and continue to develop, as a result of groups and individuals working together</p> <p>have an awareness that the application of science in everyday life may be both helpful and harmful to the individual, the community and the environment</p> <p>have excellent foundation for advanced study in pure sciences, in applied science or in science-dependent vocational courses.</p> |
| Analysis and Synthesis | <p>Students will be able to:</p> <p>Analysis and understand real life physics of Aviation Industry and relate this subject with their personal and career life and also with other technical subjects of BS Aviation Management.</p> |

Course Material:

Required Texts & Readings:

Elementary Physics (A course for O Level) by Charles Chew, Leong See Cheng, Chow Siew Foong (Second Edition)

Recommended Readings

Handouts provided in class or posted on the web.

Course Out Line

1. SI Units, Matter and its nature, atoms, molecules
2. States of matter, changes between states
3. Newton's laws of motion
4. Static forces, scalars and vectors
5. Moments and couples, center of gravity

6. Stress and strain, properties of matter, mechanical properties of matter
7. Pressure and buoyancy in liquid
8. Linear motion, speed, velocity, acceleration, equations of linear motion
9. Rotational motion, periodic motion, simple theory of vibration & Harmonics and resonance
10. Mass, weight, force, inertia, work, power
11. Energy (KE, PE), conservation of energy
12. Heat, momentum, conservation of momentum, gyroscopes Specific gravity, density
13. Wave motion, categories of waves, direction of movement, transverse waves, and longitudinal waves
14. Speed of light, reflection, plain and curved mirrors, concave and convex mirrors
15. Laws of thermodynamics, temperature, heat, heat capacity, heat transfer, conduction, convection, radiation, expansion and contraction
16. Volumetric expansion, expansion of solids, expansion of fluids, first and second law of thermodynamics, gases

Course Title: History of Flight

Course Descriptions:

This course is designed to give students a unique perspective on aviation history. This course explores the birth of aviation in 1783 with Annonay France, to the exhilarating worldwide aviation accomplishments of the late 1930s, and progress that led to the jet age and space travel. This course explores a journey of adventure, exploration and adventure. Students will discover how aviators have escaped the bonds of earth by achieving the freedom and power of flight. Aviation History will provide the framework for developing a greater understanding and appreciation of how aviators constructed the future as they built upon the knowledge of earlier pioneers.

The course has been designed based on the recommended outline provided by the US Department of Defense and a number of other sources.

Using historical images and text, videos, and documentaries, this course is designed to provide an immersive journey through the history and major milestones of aviation.

Course Objectives:

The “History of Aviation” course has the following objectives:

To allow students to understand how the basic principles of flight shaped aviation over the years;

To enable students to demonstrate the factors those were conducive to development of aviation;

To facilitate students in comprehending the implications aviation has had on human life;

To familiarize students with the timeline of aviation, and to shed light on important milestones;

To promote and understanding of basic systems, and to bring students up to date with the systems and controls in use today;

To nurture a basic understanding of the atmosphere, its layers, and properties affecting flight;

To accustom students with the different types of civil, military, and general aviation aircraft;

To acquaint students about the developments and purposes of space travel.

Course Material:

Hundred years of Aviation by RJ Grant

Recommended Readings

Course Out line

1. Introduction

- a. Early Attempts to Fly
- b. Lighter-than-Air Flight
- c. Engine Powered Flight
- d. The Flying Man
- e. Chanute’s Glider Flights

2.

3. The Wright Brothers – Doing it Right

- a. Wilbur and Orville Wright

- b. Initial Experiments
- c. Glider Testing
- d. First Powered Flight
- e. The Wright Flyer and other Earliest Aircraft

4. Flying in the Public Eye

- a. Challenges in Accepting “Flying Contraptions”
- b. Risks of Early Aviation
- c. Flying Across the Channel
- d. Air Races
- e. Pioneers

5. Development of Aviation for War

- a. Vital Role: Reconnaissance and Fighter Missions
- b. Development of Better Aircraft Structures, Engines, and Weaponry
- c. Air to Air Combat
- d. Early Fighter Aircraft
- e. Airships and Bombers

6. Post-War Development

- a. A New Start
- b. Barnstormers
- c. Atlantic Crossing
- d. Flying Around the World
- e. Pioneers : Lindbergh, Doolittle, and Earhart
- f. Airmail, Airways, and Long Distance Flights
- g. Working around Drag
- h. Autopilot Development
- i. The Lockheed Electra
- j. Regular Passenger Services

7. Transformation for Passenger Operations

- a. Pioneer Aircraft
- b. Europe, Australia, and USA
- c. Night Flying
- d. Ford Trimotor
- e. Revolution in Air Travel: DC-3
- f. Other Airlines
- g. Flying Boats
- h. Airships

8. Second World War

- a. Developments in Germany and America
- b. Aircraft Carriers
- c. Military Aircraft
- d. Developments in Aerial Combat, Artillery, and Bombing

- e. Development of the First Jet and Pioneer Jet Aircraft
- f. The Junkers JU-52
- g. Aircraft Use Against Ships
- h. The Use of Radars and Navigational Aids

9. Jet Age

- a. Military Aircraft Development
- b. F-86 and B-52 Bomber
- c. Passenger Applications
- d. Cold War
- e. Early Helicopters

10. Helicopters & Fighter Jets of the 20th Century

- a. Development of Helicopters
- b. Advanced Avionics Systems
- c. Fighter Jet Development

11. Passenger Jets

- a. Boeing Stratocruiser
- b. Boeing 707: Ushering in the Jet Age of Air Travel
- c. Boeing 727 and Boeing 737: Air Travel for Everyone
- d. Boeing 747 Jumbo Jet
- e. Concorde
- f. The A300
- g. The A320

12. Modern Developments

- a. The A380
- b. Non-stop Around the World
- c. Popular Propliners
- d. Space Ship One
- e. Boeing 787

13. Ventures into Space

- a. Initial Flights
- b. Landing on the Moon
- c. Space Shuttle
- d. International Space Station
- e. Today's Space Vehicles

Course Title: ICAO Aviation English

Course Descriptions:

This module is designed to provide study of English course for pilots and controllers.

Course Objectives:

Course objective is to increase confidence of students in communication and develop their skills to a operational level as described in ICAO level 4. Course Contains reading and listening text. The purpose is to increase vocabulary & provide a context for exercise & language functions.

By the end of the program students will have attain ICAO operational level, level-4.

Course Material:

a. Required Texts & Readings:

- Aviation English for ICAO compliance

b. Recommended Readings

- Cd – ROM supports book with interactive language & pronunciation exercises, & simulation

Course out line

1. Avoiding Miscommunication
2. Airport Layout
3. Ground Operations
4. Language Development
5. Across the Pacific
6. Finding Flight N45AC
7. Lost
8. Language Development
9. Data Link
10. Flight Control Systems
11. Instrument Blackout
12. Language Development
13. Wild Life on the Ground
14. Animals on the loose
15. Bird Strike
16. Language Development
17. Ultralight
18. Air race
19. Hydraulic Loss
20. Language Development
21. Is there a doctor on board?
22. Stressed?
23. Medical Emergency
24. Language Development
25. Fire Risk
26. Smoke-Jumper
27. On-board Fire

28. Language Development
29. Microburst
30. Airport Disruption
31. Stormy Approach
32. Language Development
33. Touchdown
34. Letting down a VIP
35. Undercarriage
36. Language Development
37. Aviation and Global Warming
38. Gimli Glider
39. Fuel Icing
40. Language Development
41. Blast
42. Damage
43. Emergency Descent
44. Language Development
45. Air Rage
46. Suspicious Passengers
47. Unlawful Interference
48. Language Development

Course Title: Principles of Management

Course Description

The course of management is designed to discuss management theories, concepts, techniques, and practices in the context of complex, dynamic, changing and globalizing business world. Applying the functional or process approach to the study of management, the discussion will cover all main functions: planning, organizing, leading and controlling. This will not only equip students with the framework for understanding and analyzing the nature of managerial works and the determining factors of managerial success but will also provide a solid base for the succession subject, Organizational Behavior . Application of the learning materials will be encouraged through discussions and other experiential assignments.

Course Objectives:

Student will be able to understand different aspects of basic level of management issues like planning, organizing, controlling and leading. The presentations, assignments and case studies will give them insight of market knowledge and the practical applications of management.

Student will also be able to understand the managerial practices being used by the organizations.

Student will be able to develop plans and strategies used at different managerial levels, make appropriate decisions, design the structure relative to the nature of the organizations, exercise right motivation technique and leadership style, practice change by understanding its different phases and implement right Control procedure in the organization.

Students will be able to analyze and understand case studies of different industries and related to this subject with their personal and career life and also with other related subjects.

Course Material:

Required Texts & Readings:

Principles of Management by Stephen P. Robbins & Mary Coulter (Latest Edition)

Recommended Readings

Hand outs given to the class for study.

Course Out line

1. Overview of Management
2. Managers, their basic roles and Organization as a System
3. Management's Major Approaches, Managing Diversity
4. Managing Social Responsibility and Ethics
5. Managing Change and Innovation
6. Managers as Decision Makers
7. Fundamentals of Planning
8. MBO and Goal Setting
9. Understanding Strategic Management

10. Levels of organizations and types of strategies

11. Introduction to HRM

12. Understanding Groups and group formation process, Understanding teams and its formation and importance

13. Understanding Behaviors, Communication

14. Leading and Motivating Employees

15. Introduction to Controlling

16. Managing Operations

Course Title: Functional English

Course Description

This course provides individualized and small group instruction in basic reading and writing

skills. The course focuses on foundational phonics skills, functional vocabulary, and comprehension, as well as writing personal information, creating lists and basic computer

skills. The course will ensure that candidates will communicate effectively in English language.

Course Objectives

On the successful completion of the course candidates will be able to:

- Use vocabulary correctly.
- Construct sentences using correct grammar.
- Write meaningful essays and précis and comprehend written English.

Recommended books:

1. Howe, D.H, Kirpatrick,TA., & Kirpartrick, D.L. (2004). Oxford English for

undergraduates, Karachi: Oxford University Press.

2. I. A. Richards & Christine Gibson, Learning Basic English: A Practical Handbook for English-Speaking People, New York: W. W. Norton & Co. (1945)

Course Out line

- English for Social interaction
- English for Academic success
- Grammatical Structure
- Word/phrase and sentence level
- Sentence patterns
- Developing paragraphs
- Letter writing
- Application Writing
- Professional writing
- Comprehension & Analysis

Course Title: Application of Information and Technologies

Course Description

This course is designed for students having little background knowledge of Computer and its accessories. The basic aim of the course is to enhance their knowledge of Computer & specifically their Applications & Programming. Class discussions and project reports are some of the tools used to share knowledge with the participants.

Course Objective

This course offers a broad overview of computing designed to provide students with an appreciation for and an understanding of the many different aspects of computing. It will acquaint the students with the structure, operation, programming and applications of computers. Introduction to various computer languages, coding, executing and debugging simple programs would be discussed in detail. Furthermore, it provides a foundation for subsequent study in Object Oriented Programming and Data Structures.

Recommended Books:

- Introduction to Computer, Essential Concepts, Peter Norton's, Sixth Edition, December 2004
- New Inside the PC, Peter Norton, Scott Clark, 2002
- Information and Communication Technology: Introduction to the internet components-World Wide Web and Email, T.Gaboitsiwe, 2013

Course Out line

Exploring Computers and their uses: Types of Computers, Computers for individuals, Computers for Organizations.

Looking inside the Computer System, Hardware, Software, data, User. The Information process Cycle, Essential Computer Hardware, Memory Devices.

Looking inside the Computer System, Input Output Devices, Storage Devices, System Software, Application Software, User's Role, User-less Computers.

Interacting with Computer: The Keyboard and Mouse, Ergonomics,

Optical and Audiovisual Input Devices.

Processing data: Number Systems and Conversions, Text Codes.

Computer Video and Sound; How Computer Process Data: CU, ALU, Machine Cycles

Memory: Nonvolatile, Volatile, Flash Memory; Factors Affecting Processing Speed.L6A

Modern Processing Units: Intel, AMD, Free scale, IBM, RISC, Parallel processing, Standard Ports.L6B

Midterm Exam

Types of Storage Devices: Magnetic Disc, Diskettes, Hard Disks, Tape Drives, CD ROM, DVD ROM, Flash Memory, Smart Cards, Solid State Disks.

Measuring and Improving Drive Performance: Average Access Time, Data transfer Rate, Optimizing Disk performance, Disk Defragmentation, File Compression, Drive Interface Standards.

Operating System Basics, Types, Managing Hardware, Enhancing OS with utility software

Windows NT, Windows 9x, Windows 2000, Windows XP, Macintosh Operating System, UNIX, LINUX, Windows Server, LINUX for servers, UNIX for servers, Embedded Operating Systems

Networks: LANs, WANs, CANs, MANs, HANs, Intranet and Extranet, Server based Network, Peer to Peer and Client Server Networks

Network topologies and protocols

Presenting the internet: Internet and Worldwide Web, Understanding the Internet, Searching the Web, Search Techniques

Database Management Systems: The database, Working with Databases, Introduction to Programming

Course Title: Navigation and Flight Planning

Course Descriptions:

This module provides an introduction to the basic knowledge of the things which are required for general navigation, cross-country flying under visual flight rules (VFR). It contains practical information for planning and executing cross-country flights for the beginning pilot. Air navigation is the process of piloting an aircraft from one geographic position to another while monitoring one's position as the flight progresses. It introduces the need for planning, which includes plotting the course on an aeronautical chart, selecting checkpoints, measuring distances, obtaining pertinent weather information, and computing flight time, headings, and fuel requirements. The methods used in this chapter include pilotage—navigating by reference to visible landmarks, dead reckoning—computations of direction and distance from a known position, and radio navigation—by use of radio aids.

Course Objectives:

To provide an opportunity for experienced personnel, and students who have recently obtained a first degree in the relevant fields, to study the general navigation. The viewpoints taken in the course will allow graduates to play a significant role in those air-transportation development fields in the future, where aviation operators requirements are a significant issue.

By the end of the program students will have:

- Developed knowledge of the issues, theories and methods appropriate to the General Navigation.
- A critical awareness of relevant research findings in order to identify and foster best practices.
- Specialized knowledge in particular areas and/or aspects of business planning and/or management and an appreciation of the implications for best practice.

Course Material:

- Required Texts & Readings:** ACAA GENERAL NAVIGATION MANUAL
- Recommended Readings:** Will be advised from time to time.
- Course Out line:**
 - The Form of the Earth
 - Position on the Earth
 - Distance
 - Conversion Factors
 - Direction
 - Introduction
 - Definitions
 - True Direction
 - Magnetic Direction
 - Variation - East

- **Direction Example Answers**
- **Position Error**
- **Pilot Navigation Technique**
- **Correction for Track Error**

Course Title: Islamic Studies

Course Descriptions:

The course of Islamic studies is designed to make better understanding of the religion being practiced in Islamic republic of Pakistan. Islam as a complete code of life and understanding the basics of Islam and some of the mandatory practices and beliefs that Muslims are obliged to perform.

Course Objectives:

The basic aim is to enable Muslims to know well the basics of Islam and how to pray and fast and perform the things that are obligatory as Muslims. Students will be able to develop a sense of how to behave in their practical life and the basic information to live an honorable life under the teachings of Islam. Islam taught us to maintain a balance between the spiritual and social life and how to keep moving in a healthy state of mind and live a balanced life.

One of the aims of this is to keep the brotherhood and sincerity alive so that Muslims can live a harmonious life. Respecting elders, maintaining positive and healthy gesture, keeping the manners and moral conduct alive makes life better and a society less in harm.

Students will be able to analyze and understand the historical, behavioral and social aspect of Islam.

Course Material:

a. Required Texts & Readings:

- Handouts would be given to the class for study

b. Recommended Readings

- Quran translation by Abdullah Yusuf Ali.
- Islamic studies by Dr Bilal Philips.

Course Out line

BASIC PRINCIPLES OF FAITH

CONCEPT OF TAQWA (PIETY)

LIFE OF PROPHET MUHAMMED(PBUH)

THE FOUR RIGHTLY GUIDED CALIPHS

SINCERITY

MORALITY IN ISLAM(EXEMPLIFY BY PROPHET PBUH)

PRACTICAL LAW (IBADAH)

THE WOMEN IN ISLAM

KNOWLEDGE AND ITS CONCEPT IN ISLAM

OBEDIENCE IN ISLAM AND ITS PRACTICE

THE ISLAMIC SOCIAL SYSTEM

MANNERS AND ETIQUETTES IN ISLAM

RESPECT OF PARENTS

BROTHERHOOD IN ISLAM

HONESTY AND OBLIGATION

FORGIVENESS

Course Descriptions:

The curriculum is structured so that students attain both practical skills and theoretical knowledge. This course is an accelerated introduction to the conceptual and mathematical foundations, with a particular emphasis on the further development of mathematical concepts and principles, the extension of mathematical skills and their use in practical applications, an ability to solve problems, present solutions logically and interpret results, various aspects of Aviation Industry related to these concepts and a solid foundation for further study. Examples are drawn from everyday life relating theory with practice effectively. Application of the learning materials will be encouraged through discussions and other experiential assignments.

Course Objectives:

The aims of the syllabus listed below are not in order of priority. The aims are to enable candidates to:

- consolidate and extend their elementary mathematical skills, and use these in the context of more practical applications
- further develop their knowledge of mathematical concepts and principles, and use this knowledge for problem solving
- appreciate the interconnectedness of mathematical knowledge
- acquire a suitable foundation in mathematics for further study in the subject or in mathematics related subjects
- devise mathematical arguments and use and present them precisely and logically
- develop the confidence to apply their mathematical skills and knowledge in appropriate situations
- develop creativity and perseverance in the approach to problem solving
- derive enjoyment and satisfaction from engaging in mathematical pursuits, and gain an appreciation of the beauty, power and usefulness of mathematics.

Course Material:

c. Required Texts & Readings:

- Mathematics (A course for O Level) by Dr. Yeap Ban Har, Teh Keng Seng, Loh Cheng Yee (Latest Edition) New Syllabus Book 3

d. Recommended Readings

- Hand outs given to the class for study.

Course Out line:

Direct and Inverse Proportions
Solutions to Quadratic Equations
Indices and Standard Form
Linear Inequalities
Coordinate Geometry
Matrices
Applications of Mathematics in Practical Situations
Linear Graphs and Their Applications
Congruent and Similar Triangles
Area and Volume of Similar Figures and Solids
Pythagoras Theorem
Trigonometrical Ratios
Trigonometrical Ratios
Mensuration – Arc Length, Sector Area, Radian Measure
Geometrical Properties of Circles
Statistics and Probability

Course Title: Aero Engines

Course Description

This module is designed to provide study of the basics of air-breathing aircraft engines with the view of providing detail information on the theory behind aircraft power plant working for the students of aviation. This course is designed to help the student understand and predict the characteristics of aircraft engine components and various types of engine and power gas turbines. This course covers the basic operating principles of piston and jet engine in use now a days to power aircrafts around the world.

Course Objective

To provide the basic understanding of the working of aircraft engines so that after completing there course, aviation students can fully understand the fundamental principles behind its working and to utilize their knowledge to the full potential in the aviation field.

By the end of the program students will have:

- Developed knowledge of the theory and fundamental principles behind aircraft propulsion systems.
- General understanding of the aircraft engines, including classification, basic structure and components, working principle, operation procedures and other essential knowledge.

Recommended Book

Oxford CPL Aero-engine book

4. Course Coverage:

Essentials of Aero Engines

Outline

• Introduction

- Defining the essentials of aircraft powerplant

• Piston Engine

- Introduction
- Reciprocating Engines
- Two Stroke
- Four Stroke
- Ignition System
- Carburetion
- Fuel Injection
- Detonation

• Super Charging

- Purpose
- Construction
- Supercharger Losses
- Two Speed Superchargers
- Two Stage Superchargers
- Controls
- Accessories

• Fuel Injection

• Oil Systems

• Propeller Theory

- Introduction
- Pitch
- Propeller Efficiency
- Constant Speed Propeller
- Slipstream
- Counter Rotating Propellers
- Braking Propeller
- Feathering Propellers
- Unfeathering in flight

- **Engine Handling**

- **Gas Turbine Engines**

- **Components**

- Diffuser

- Compressor

- Fan

- Turbine

- Propeller

- Shaft

- Combustor

- Nozzle

- Afterburner

- **Turbo Prop Engines**

- Introduction
 - Types of Turbo Prop
 - Shaft H.P
 - Advantages of Turbo Prop
 - Turbine assembly

- **Turbo Jet Engines**

- **Turbofan Engines**

- Introduction
 - Working
 - Advantages

- **Turbo shaft Engines**

- Introduction
 - Working
 - Advantages

- **Turbine Engine Instruments**
- Introduction
- Working
- Advantages
-
- **Turbine Engine Operation**
- Introduction
- Working
- Advantages
- **Aero Engine Accessories**
- **Rocket Engines**

Course Title: Air craft Communications

Course Descriptions:

Communication is essential for organizational and managerial performance and success in any endeavor, including in the aviation environment. The course of aircraft communications is designed to give ab-initio students an orientation of the standardized set of terms and jargons used while flying in the civil aviation sector. The course will enable students to effectively communicate both inside the cockpit and outside of it with other aviation agencies such as ATC, air defence and surveillance radars, other aircraft etc. Applying a practical approach to the subject, the discussion will cover standard terminology, concepts and techniques of effective radio communication in time compressed environments, and class room practices. This will equip students with the necessary knowledge and skills to convey as well as clearly understand complex aviation information in the clearest and most concise way while adhering to international standards thus increasing safety and efficiency. Application of the learning materials will be encouraged through discussions and other experiential assignments

Course Objectives:

- Student will be able to understand standard terminologies and jargons used in commercial flying sector.
- Student will be able to develop skills to smoothly convey and clearly understand critically important aviation information while flying or on ground.
- Students will be able to analyze and understand different case studies where effective communications (or the lack of it) played a vital role in the history of civil aviation.

Course Material:

- e. Required Texts & Readings:
 - ATPL Ground Training Series – Communications by Oxford Aviation Academy (2008)

- f. Recommended Readings
 - Safety Regulation Group – CAP 413 – Radiotelephony Manual 20th Edition
 - Handouts given to the class for study

Course Out line

VFR

1. DEFINITIONS.

- **INTRODUCTION**
- **TRANSMISSION OF LETTERS AND NUMBERS**
- **DEFINITIONS**
- **SOME PRINCIPAL TERMS USED IN THE MANUAL**
- **ABBREVIATIONS**
- **CATEGORIES OF MESSAGES**
- **VHF RANGE**

2. GENERAL OPERATING PROCEDURES

- **INTRODUCTION**
- **TECHNIQUE**
- **TRANSMISSION OF TIME**
- **STANDARD WORDS AND PHRASES**
- **CALL SIGNS**
- **DIRECTION FINDING (DF)**
- **RADIO TEST PROCEDURES**
- **TRANSFER OF COMMUNICATIONS**
- **READBACK**
- **RADAR PROCEDURES**
- **CONDITIONAL CLEARANCES**

3. PHRASEOLOGY

- **INTRODUCTION**
- **GENERAL PHRASEOLOGY**

- **AREA CONTROL SERVICES**
- **APPROACH CONTROL SERVICES**
- **CO-ORDINATION BETWEEN ATS UNITS**
- **RADAR IN APPROACH CONTROL SERVICE**
- **SURVEILLANCE RADAR APPROACH**
- **SSR PHRASEOLOGY**
- **8.33 kHz PHRASEOLOGY**
- **INITIAL MESSAGE**

4. WEATHER INFORMATION

- **INTRODUCTION**
- **SOURCES OF WEATHER INFORMATION**
- **SUPPLEMENTARY INFORMATION**

5. FAILURES AND EMERGENCIES

- **INTRODUCTION**
- **COMMUNICATIONS FAILURE**
- **EMERGENCIES**
- **DISTRESS PROCEDURES**
- **URGENCY PROCEDURES**
- **MEDICAL TRANSPORTS**
- **COMMUNICATIONS RELATED TO ACTS OF UNLAWFUL INTERFERENCE**

IFR

6. IFR PROPAGATION

- **INTRODUCTION**
- **CALLSIGNS**
- **LEVEL REPORTING**
- **POSITION REPORTING**

- **MET REPORTS**
- **COMMUNICATION FAILURE UNDER IFR**
- **NDB APPROACH PROFILES**

7. VHF PROPAGATION

- **INTRODUCTION**
- **RADIO FREQUENCY BANDS**
- **VHF FREQUENCY SPREAD**
- **VHF FREQUENCY SEPARATION**
- **VHF PROPAGATION CHARACTERISTICS**
- **FACTORS AFFECTING VHF PROPAGATION**
- **EFFECTIVE RANGE OF VHF**
- **FREAK PROPAGATION**

Course Title: Pakistan Studies

Course Descriptions:

The course will deal with political background of Pakistan in its historical perspectives throwing lights on the country's national movement process and the formation of the new nation in the subcontinent. It will also examine the political dynamics and institutes of Pakistan with a developmental approach of its political system.

This Pakistan Studies course provides a background of Pakistan Movement and political development after its inception. It will also particularly cover the salient features of Pakistan i.e. land, economy, human development and domestic and international current issues.

Course Objectives:

Broadly speaking, the Curriculum of Pakistan Studies is designed to:

1. Inculcate a sense of gratitude to Almighty Allah for blessing us with an independent and sovereign state.
2. Underscore the importance of national integration and patriotism.
3. Encourage traits of observation, creativity, analysis and reflection in students.
4. Promote an understanding of the ideology of Pakistan, the Muslim struggle for independence and endeavors for establishing a modern welfare Islamic state.
5. Acquaint the students with various phases of Pakistan's historical, political and constitutional developments.

6. Inculcate awareness about the multi-cultural heritage of Pakistan so as to enable the students to better appreciate the sociocultural diversity of Pakistani society and get used to the idea of unity in diversity in our national context.
7. Enhance understanding of the physical features and human resources of Pakistan.
8. Impart awareness about various aspects of socio-economic activities at national level and the role played by Pakistanis in the development of their society.

Students will be able to analyze and understand the historical and social aspect of Pakistan.

Course Material:

- g. Required Texts & Readings:
 - Handouts would be given to the class for study.
- h. Recommended Readings
 - Pak Studies by Prof Ikram-ul-Haq Raja

Course Out line

Ideology of Pakistan

Sir Syed Ahmed Khan and his contributions

Hazrat Mujaddid Alf Sani

Khilafat movement

Creation of Pakistan

Initial problems at the time of creation of Pakistan

Quaid-e-Azam as first Governor general

Kashmir dispute

Features of Cultures of Pakistan

Reasons of delay in constitution making

Constitution making and Islamic clauses

Education system of Pakistan

Location and geography

Quality and problems of village life of Pakistan

Industrial and agricultural development

Basic principles of foreign policy of Pakistan

Course Title: Human Resource Management

Course Descriptions:

As things change in the world and in business, some unethical and ineffective management practices will continue – but good people will continue also, managing well and making things better, as they always have.

In this course, you will read about many managers, some doing things brilliantly, others making mistakes. Management is all about people, and HRM is the part of management dealing directly with people, whereas management includes marketing, management information systems, production, research and development, and accounting and finance. Because the purpose of HRM is to improve the productive contribution of people and the management of organization's human resources is primarily a line or an operating management responsibility.

Course Objectives:

- To understand reflect and critically evaluate basic ground work of General HRM and its contribution in achieving strategic goals.
- Understand basic dynamics of effective and efficient HRM.
- Comprehensively and critically evaluate the importance and practical efficacy of newly emerging HRM issues, as a complete business philosophy.
- When and how to use the structured HR management system approach & tools for optimum utilization of human capital opportunities and developing them as a key competitiveness for emerging competition in global market.
- Finally, practically implement the learned concepts in the development of industry wide best Human Resource Management practices.
- Adaptability to an increasing corporate HRM orientation for respective functional activities not just to people working in but for giant MNEs / SMEs.

Course Material:

i. Required Texts & Readings:

- Human Resource Management, 12th Edition by Gary Dessler and Biju Varkkey, Published by PEARSON

Course Out line:

An Over view of the basics of General Management + Orientation to the subject.

- What is management, organization, structure, planning, organizing, leading and controlling

Chapter 1:

Introduction to Human Resource Planning– Evolution of modern HRM + HRM and Law.

- What is HRM?
- Functions of HRM
- Human Resource Duties
- New Approaches to Organizing HR

Chapter 2:

Job – Analysis and quality of work life

- Discuss the nature of job analysis, including what it is and how it's used.
- Use at least three methods of collecting job analysis information, including interviews, questionnaires, and observation.
- Write job descriptions, including summaries and job functions, using the Internet and traditional methods.
- Write job specifications using the Internet as well as your judgment.

Chapter 3:

Recruitment

- Explain the main techniques used in employment planning and forecasting.
- List and discuss the main outside sources of candidates.
- Effectively recruit job candidates.
- Name and describe the main internal sources of candidates.
- Develop a help wanted ad.
- Explain how to recruit a more diverse workforce.

Chapter 4:

Employee Testing and Selection

- Explain what is meant by reliability and validity.
- Explain how you would go about validating a test.
- Cite and illustrate our testing guidelines.
- Give examples of some of the ethical and legal considerations in testing.

- List eight tests you could use for employee selection, and how you would use them.
- Explain the key points to remember in conducting background investigations.

Revision and Mid Term

- Case Study:

Self-made

Chapter 5:

Interviewing Candidate

- List the main types of selection interviews.
- Explain and illustrate at least six factors that affect the usefulness of interviews.
- Explain and illustrate each guideline for being a more effective interviewer.
- Effectively interview a job candidate.

Chapter 6:

Training and Developing Employees

- Describe the basic training process.
- Describe and illustrate how you would go about identifying training requirements.
- Explain how to distinguish between problems you can fix with training and those you can't.
- Explain how to use five training techniques.

Chapter 7:

Performance Appraisal

- Describe the appraisal process.
- Develop, evaluate, and administer at least four performance appraisal tools.
- Explain and illustrate the problems to avoid in appraising performance.
- List and discuss the pros and cons of six appraisal methods.
- Perform an effective appraisal interview.
- Discuss the pros and cons of using different raters to appraise a person's performance.

Chapter 8:

Pay for performance and financial incentives

- Role of motivation theories in formulating an incentive plan
- Main incentives for individual employees
- Pros and cons of commission vs. straight pay incentive

Course Title: Air Craft General Knowledge

Course Description:

Aircraft general knowledge encompasses fundamental information about aircraft, including their types, components, systems, and principles of flight. It involves understanding various aircraft types, such as airplanes and helicopters, as well as the major components like airframes, wings, and engines.

Course Objectives

To learn about aircraft in detail

To learn and apply knowledge in the practical field

Recommended Book

Oxford CPL/ATPL Book

Course Out line

FUSELAGE, WINGS AND STABILISING SURFACES

BASIC HYDRAULICS

LANDING GEAR

AIRCRAFT WHEELS

AIRCRAFT TYRES

AIRCRAFT BRAKES

FLIGHT CONTROL SYSTEMS

FLIGHT CONTROLS

AIRCRAFT PNEUMATIC SYSTEMS

PRESSURISATION SYSTEMS

ICE AND RAIN PROTECTION

ICE & SNOW - RECOMMENDED PRACTICES

EMERGENCY EQUIPMENT

AIRCRAFT OXYGEN EQUIPMENT

SMOKE DETECTION

FIRE DETECTION AND PROTECTION

Course Title: Management Information Systems

Course Descriptions:

This course explores current Information Systems concepts and technologies. Students learn how information systems give a business or organization a competitive edge by providing technologies that help managers plan, control, and make decisions. Includes topics such as hardware and software components of an information system, e-business concepts and implementation, and a survey of common information systems used today.

Course Objectives:

Students will be able to:

- Explain why information systems are so important today for business and management.
- Evaluate the role of the major types of information systems in a business environment and their relationship to each other.
- Assess the impact of the Internet and Internet technology on business electronic commerce and electronic business.
- Identify the major management challenges to building and using information systems and learn how to find appropriate solutions to those challenges
- Define an IT infrastructure and describe its components
- Learn the core activities in the systems development process.
- Cultivate skills and experience in the development and implementation of information systems projects.

Course Material:

j. Required Texts & Readings:

- Management Information Systems by Laudon & Laudon (Latest Edition)

k. Recommended Readings

- Handouts given to the class for study.

Course Out line:

- Why Information Systems Matter
- Information Systems Components
- What is MIS?
- Levels of the Organization

- Need of Information System
- Functions of Information system
- Types of MIS Reports
- Competitive Advantage
- Business Perspectives of IS
- Business Information Value Chain
- Complementary Assets
- Strategic Business Objectives Types of E-Commerce
- B2B, B2C, C2C
- Mobile Commerce
- Virtual & Hybrid Sales
- Application of MIS in E-Commerce TPS, MIS, ESS
- Business Process
- Cross Functional Process
- MIS and Enterprise Systems
- Supply Chain Management
- Activities of SCM
- Enterprise Systems
- Enterprise Resource Planning
- Evolution of ERP
- ERP Vendors
- Feasibilities of ERP
- Implementation of ERP
- Web ERP
- Introduction to SAP
- SAP Industry Solution
- What is SDLC?
- Data Flow Diagrams
- Shapes of DFDs
- Examples of DFDs
- DFD of TPS
- Databases
- Access 2013 – Introduction
- Data types in Access 2013
- Choosing Data types
- Creating Tables
- Identifying Fields
- Setup Primary Keys
- Types of Relationship
- Application of Relationship
- Define Query
- Query Criteria
- Saving Queries
- Edit Query
- Forms
- Application of Forms
- Forms Creation
- Reports
- Types of Reports
- Printing Setting

Course Title: Risk Management in Aviation

Course Description:

Risk is inherent in projects of all scale. This course provides students with the knowledge required to identify, manage, and monitor project risks using ISO 31000 and principles of systems thinking. Through local and international real world examples, students will consolidate the principles of risk management as applied during the various phases of large projects, programs, and mega projects. Students will gain the ability to act on early warning signs, using a systematic methodology to ensure that they are able to maintain project control in accordance with schedule, budget, and quality. Students will also consider methods for researching, identifying, managing, and communicating project risks to equip them with the competence required to lead or participate in project risk management teams.

Course Objectives

To find out the areas of risk at job place

To prevent the risks at the job place

Recommended Book:

Aviation Risk and Safety Management by Andreas Wittmer

Course Out line:

Defining Elements of Risk Management

- Introduction
- Hazard
- Risk
- Managing Risks

Human Behavior

- Introduction

Identifying and Mitigating Risk

- Introduction
- P = Pilot in command
- The Pilot's Health
- Stress Management
- A = Aircraft

- V = Environment
- Weather
- Terrain

Identifying and Mitigating Risk (Cont'd)

- Airport
- Airspace
- Nighttime
- Visual Illusions
- E = External Pressures

Assessing Risk

- Introduction
- Quantifying Risk Using a Risk Matrix
- Likelihood of an Event
- Severity of an Event
- Mitigating Risk

Aeronautical Decision-Making:

- A Basic Staple
- Introduction
- History of ADM
- Analytical Decision-Making
- Automatic Decision-Making
- Operational Pitfalls
- Scud Running
- Get-There-Itis
- Continuing VFR into IMC

Aeronautical Decision-Making (Cont'd)

- Loss of Situational Awareness
- Flying Outside the Envelope

- 3P Model
- Rate of Turn
- Radius of Turn
- Perceive
- Process
- Perform

Single-Pilot

- Resource Management
- Introduction
- Recognition of Hazards
- Use of Resources
- Internal Resources
- External Resources

Single-Pilot (Cont'd)

- SRM and the 5P Check
- Plan
- Plane
- Pilot
- Passengers
- Programming
- Chapter Summary

Automation

- Introduction
- Cockpit Automation Study
- Realities of Automation
- Enhanced Situational Awareness

Automation (Cont'd)

- Autopilot Systems

- Familiarity
- Respect for Onboard Systems
- Reinforcement of Onboard Suites
- Getting Beyond Rote Workmanship
- Understand the Platform

Automation (Cont'd)

- Flight Management Skills
- Automation Management
- Information Management
- Risk Management
- Chapter Summary

Risk Management Training

- Introduction
- System Safety Flight Training
- Setting Personal Minimums
- Step 1—Review Weather Minimums
- Step 2—Assess Experience and Comfort Level

Risk Management Training (Cont'd)

- Step 3—Consider Other Conditions
- Step 4—Assemble and Evaluate
- Step 5—Adjust for Specific Conditions
- Step 6—Stick to the Plan!

Risk Management in Aviation Industry (A Case Study)

Defining Elements of Risk Management

- Introduction
- Hazard
- Risk
- Managing Risks

Course Title: Statistics

Course Descriptions:

Statistical ideas and methods are essential tools in virtually all areas that rely on data to make decisions and reach conclusions. This includes diverse fields such as medicine, science, technology, government, commerce and manufacturing. In broad terms, statistics is about getting information from data. This includes both the important question of how to obtain suitable data for a given purpose and also how best to extract the information, often in the presence of random variability. This course provides an introduction to the contemporary application of statistics to a wide range of real world situations. Topics covered are: organization, description and presentation of data; basic statistics and its types; normal distribution; statistical inference, tests of significance, confidence intervals; inference for means and proportions, descriptive statistics, mean media & mode ,analysis of variance; Sampling concept, its types and techniques simple regression; linear regression, multiple regression .

Course Objectives:

At the end of the course, you should be able to understand:

- Different meanings of statistics and data types
- A variety of methods for collecting, presenting and summarizing data
- Methodologies for regression and correlation analysis for future perditions
- Sampling concept, its types and techniques
- Fundamental level of skills for basic statistical computing using Calculator / Excel / Math type etc.
- How to communicate to others the importance and relevance of statistics in the modern world
- How to be an independent learner, able to acquire further knowledge with little guidance or support.

Course Material:

I. Required Texts & Readings:

- P.S. Mann, Introductory Statistics, John Wiley & Sons, 8th edition

m. Recommended Readings

- Handouts given to the class for study.

Course Out line

Introduction and Key Statistical Concepts

- Types of statistics
- Types Of Variables
- Data collection sources

Mathematical relationship with one /two variable

- Organizing and Graphing Qualitative Data
- Organizing and Graphing Quantitative Data

Descriptive Measures:-basic introduction

- Measure of central tendency for ungrouped data

Descriptive Measures:-

Measure of central tendency for grouped data

- Mean
- Median

Descriptive Measures:-

Measure of central tendency for grouped data

- Mode
- Relationships among the Mean, Median, and Mode

Measures of Dispersion for Ungrouped Data

- Range

Measures of Dispersion for Ungrouped Data

- Variance and Standard Deviation

Population Parameters and Sample Statistics Mean, Variance and Standard Deviation for Grouped Data:-an introduction

- Mean for Grouped Data
- Variance and Standard Deviation for Grouped Data

Estimation and Sampling Distributions:-basic concept

- Population and Sampling Distributions
- Sampling and Non-Sampling Errors
- Mean and Standard Deviation of X
- Mean, Standard Deviation, and Shape of the Sampling Distribution of \hat{p}

Simple Linear Regression Model

- Simple Regression
- Linear Regression
- Multiple regression

Course Title: Safety Management Systems

Course Description

A Safety Management System (SMS) is a systematic and proactive approach to managing safety risks. Risk management activities are at the heart of SMS, including the identification of safety issues, risk assessments and risk mitigation.

Objectives

The objective of a Safety Management System is to

provide a structured management approach to control safety risks in operations. Effective safety management must take into account the organisation's specific structures and processes related to safety of operations.

Recommended Book

SMS in Aviation by Alan J Stolzer

Course Out Line

Introduction to SMS

History and Evolution of Safety

Principles of Quality Management

Principles of Quality Management (Cont'd)

Hazards
Hazards (Cont'd)
Risks
Risks (Cont'd)
Controls
Controls (Cont'd)
Taxonomies
Taxonomies (Cont'd)
Process-based Safety Risk Management/ Safety Assurance
Process-based Safety Risk Management/ Safety Assurance (Cont'd)
Managing the SMS
Tools and Analysis Methods

Course Title: Airport Planning and Designing

Course Descriptions:

The purpose of this module is to help students learn the basic ingredients in the process of planning and managing an airport and also to provide a reference for those currently in the business of airport management. The module has been arranged into four sections: Airports and Airport Systems, The Components of the Airport, Airport Operations and Financial Management, and Airport Public Administration and Planning. Each section is designed to address airport planning and management from specific perspectives.

Course Objectives:

The objective is to guide the students with the issue and problems, which are faced during the airport designing and airport planning. The students will be able to define the parameters that are used during an Airport Operation, Financial Management or Airport Public Administration and Planning.

Course Material:

n. Required Texts & Readings:

- Airport Planning and Management-II By Alexander T. Wells, Ed.D. Seth B. Young, Ph.D.

o. Recommended Readings

- Handouts in class.

Course Out line:

Airports and Airports systems - An introduction

- Airports in the United States / Pakistan —an overview
- Ownership of Airports
- Measures of Activities at Airports
- The national administrative structure of airports

Airports and Airports systems - An introduction

- The rules that govern airport management
- PAKISTAN AS ICAO CONTRACTING STATE:
- Civil Aviation Authority
- Civil Aviation Legislation

Organization and administration
Airport ownership and operation

- Airport privatization
- The airport organization chart
- Job descriptions
- Airport management as a career

Organization and administration

- Duties of an airport manager
- The airport manager and public relations
- Public relations objectives
- The airport and its public

A historical and legislative perspective

- The rules that govern airport management
- PAKISTAN AS ICAO CONTRACTING STATE:
- Civil Aviation Authority
- Civil Aviation Legislation

Airfield-1

- Component of airport
- Traffic Flow at airport
- Runways
- Runway Orientation
- Crosswind Runways
- Parralel runways
- Runway lenth & width
- Runway marking

Airfield-1

- Runway lighting
- Approach lighting system
- Visual glide slope indicators
- Runway end identifiers
- Runway edge lighting systems
- Taxiways

Mid-Term Exam

Airfield-II

- Taxiway Markings
- Surface guidance control system (SMGCS)
- Runway Lightings
- Other airfield marking
- Other airfield areas
- Other airfield lightings

Airfield-II

- Airfield Signage
- NAVAIDS on airport
- ATC Surveillance facilities at airport
- Wind indicators

Airspace and air traffic control

- Present day ATC Management & Ops infrastructure
- Flight information region

(Cont.)

(Cont.)

Airspace and air traffic control

- Enroute air traffic control
- Terminal air traffic control
- Airspace classes

Airspace and air traffic control

- Victor airways & jet ways
- Special use airspace
- Future enhancements to ATC

Airport terminals and ground access

- Historical development of airport terminals
- Airside landside concept
- Present day airport terminals
- Components of airport terminals
- Passenger handling system
- Ticketing
- Baggage handling

Airport operations management under FAR Part 139

- Airfield pavement mgt
- Air rescue & fire fighting
- Snow & ice control
- Safety inspections
- Airport emergency plans
- Wild life hazards mgt

Course Title: Organizational Behaviour

Course Descriptions:

This course is designed to introduce students to the theories of individual behavior in organizations. In order to be effective, organizations must successfully understand the behavior of their employees. I will provide a basic overview of the behavioral science research pertaining to individual and group behavior including: motivation, perception, communication, individual and group decision making, power and influence, group behavior, and leadership.

Course Objectives:

- To help students understand the basic principles of individual behavior in organizations so that they can become more effective managers and employees,
- To assist students in becoming better critical thinkers.
- To assist students in their verbal and written communication skills through course assignments and group work.

Course Material:

Required Texts & Readings:

- Organizational Behavior by Stephen P. Robbins
- Organizational Behavior by Fred Luthans
- Management of Organizational Behavior by Paul Hersey, Kenneth H. Blanchard and Dewey E. Johnson

- Understanding Organizational Behavior by Udai Pareek
 - Organizational Behavior on the specific firm by Steven Mc Shane and Tony Travaglione
 - Organizational behavior by Debra L. Nelson
- Recommended Readings

Course Outline:

PART I

Introduction

- What is OB?
- Historical Perspective
- Challenges and Opportunities for OB

PART II

Individual Behavior

Personality

- What is personality?
- Personality Theories
- Psychometric Approach
- MBTI
- Freudian and Jungian Approach
- Lifestyle Approach
- Personal Effectiveness

The Perceptual process

- The process of Receiving stimuli
- The process of Selecting stimuli
- The process of Organizing process
- The process of Interpreting
- The process of Checking
- The process of Reacting

Attitudes, Values and Ethics

- Work Attitudes (job satisfaction and organizational commitment)
- What are values?
- Types of Values (Social values, organizational and work values)
- Instrumental Values
- Terminal Values
- Ethical

Motivation

- Defining motivation
- Early Theories (Maslow and theory x and theory y)
- Contemporary theories (ERG, Goal setting and equity theory)
- The Asian Perspective
- Motivating through work by Job Enrichment and Job Design
- 1. Principles of job enrichment
- 2. The job enrichment procedure
- 3. Characteristics of successful job enrichment programs
- 4. Some concerns in Job design
- Managing Motivation

PART III

Organizational Processes

Organizational Culture

- What is culture?
 - How is culture created and maintained?
 - Functional and dysfunctional culture
- Organizational Process (Cont'd)
- Cultural Change
 - Organizational Climate
 - Organizational Ethos
 - Over view and revision of the topics covered
 - Movie

Part IV

Interpersonal Behavior

Conflict and Negotiations

- What is conflict?
- Types of Conflict
- Conflict Management\
- Conflict Prevention

Power and Politics

- Forms and sources of Power
- Symbols of Power
- Political Behavior in Organizations

Frustration, Stress and Burnout

- What is Frustration?
- Coping Behavior
- Stress
- Burnout

Coping with stress

Decision Making

- Model of behavioral decision making
- Identifying problems and opportunities
- Evaluating and choosing solutions
- Evaluating decision outcomes

Employee Involvement

- Forms of employee involvement
- Levels of employee involvement

Leadership

- Leadership Trait theories
- Behavioral Theories
- Contingency Theories

Leadership for Tomorrow

- New Approaches to Leadership
- Leaders of Tomorrow

Course Title: Essentials of Aviation Management

Course Descriptions:

This course will include study about aviation management system and its reviews. It will include business planning, marketing, financial strategy, availability of Human resource, Administration and Information systems. In the course, we'll also explore the areas of general aviation centre activity, i.e Flight Line, Front Desk, Flight Operations, Aviation maintenance and services.

Course Objectives:

To familiarize students with the aviation services businesses and strings attached to it. To Review, from an aviation standpoint, current small business practice and theory in areas such as business planning, marketing, financial strategy, Human resources, Administration and information systems. To give the students an idea of general aviation center activity namely flight line and front desk, flight operations, and aviation maintenance.

Course Material:

Required Texts & Readings: Essentials Of Aviation Management By J.F.Rodwell, Adam K Coulby, Thomas Q. Carney, John H. Mott.

Recommended Readings: Will be advised from time to time.

Course Out line

(The Detailed study of selected topics will enhance managerial skills of operators for productive aviation management.)

1. The Role General Aviation Service Centre or “Fixed Base Operator”
2. Management Functions.
3. Marketing.
4. Profit Cash Flow and Financing.
5. Human Resources.
6. Organization and Administration.
7. Management Information System.
8. Operations: Flight line and Front Desk.
9. Flight Operations.
10. Aviation Maintenances.
11. Safety, Security and Liability,
12. Physical Facilities.