



SCHEME OF STUDIES & EXAMINATIONS

Department: Aeronautical Engineering – 6th Semester

S. No.	Course No.	Course Title	Teaching Schedule			Marks of Class work	Examination Marks		Total	Credit	Duration of Exam
			L	T	P		Theory	Practical			
1	AER-302B	AIRCRAFT PROPULSION-II	4	1		25	75	-	100	5	3
2	AER 304B	WIND TUNNEL TECHNIQUES	3	1		25	75	-	100	4	3
3	ME 312 B	INDUSTRIAL ENGINEERING (AER, ME)	4	-		25	75	-	100	4	3
4	AER-306B	AIRCRAFT STRUCTURE -II	4	1		25	75	-	100	5	3
5	AER-308B	NON DESTRUCTIVE EVALUATION	4	-		25	75	-	100	4	3
6	ME306B	HEAT TRANSFER (AER , ME)	4	1		25	75	-	100	5	3
7	AER-310B	AIRCRAFT PROPULSION LAB	-	-	3	20	-	30	50	1.5	3
8	ME316B	HEAT TRANSFER LAB (AER , ME)	-	-	2	20	-	30	50	1	3
9	HUM- 302 B	Report Writing SKILLS (Common for all branches)	1	-	-	25	50		75	1	2
10	HUM- 304 B	ORAL PRESENTATION SKILLS (Common for all branches)	-	-	2	20	-	30	50	1	2
11	GPAER302B	GENERAL PROFICIENCY & ETHICS	1	-	-	-	-	75	75	2	-
Total			25	4	7	235	500	165	900	33.5	

Note:

- 1 Every student has to participate in the sports activities. Minimum one hour is fixed for sports activities either in the morning or evening. Weightage of Sports is given in General Proficiency & Ethics Syllabus.
- 2 The students will be allowed to use non-programmable scientific calculator. However, sharing/exchange of calculator is prohibited in the examination.
- 3 Electronics gadgets including Cellular phones are not allowed in the examination
- 4 Each students has to undergo Professional Training of at least 4 weeks from the industry, institute, research lab, training center etc during summer vacation and its evaluation shall be carries out in the VII semester



SYLLABUS: B Tech (Aero)

Department: Aeronautical Engineering– 6th Semester

Subject: Aircraft Propulsion – II (Theory)

Subject Code: AER 302B

Detailed Content

UNIT NO 1: Steady 1-D Gas Dynamics:

- Topic No.1: Basics, Simple flows; Nozzle flow, nozzle design
- Topic No.2: Nozzle operating characteristics for isentropic flow
- Topic No.3: Nozzle flow and shock waves, Nozzle characteristics of some operational Engines
- Topic No.4: Rayleigh flow and Fanno flow
- Topic No.5: Inlet: design, sizing and performance for various flow regimes
- Topic No.6: Nozzle: C-D Nozzle performance - Effects of back pressure, exit area ratio and mass flow Combustion Systems
- Topic No.7: Basics of combustion chamber, Ignition system, Flame stability and after burners.

UNIT NO.2 Parametric Cycle Analysis of Ideal Engines:

- Topic No.8: Engine cycle analysis and basic assumptions
- Topic No.9: Applications to (i) Ramjet
- Topic No.10: (ii) Turbojet with and without after burner
- Topic No.11: (iii) Turbo fan Engine, optimum by pass ratio
- Topic No.12: (iv) Turbo-Prop Engine
- Topic No.13: Cycle analysis of real engines

UNIT NO.3 Axial Flow Compressor:

- Topic No.14: Euler's Turbo-machinery equations
- Topic No.15: Axial Flow analysis, cascade action, flow field
- Topic No.16: Velocity diagrams, flow annulus area stage parameters
- Topic No.17: Degree of reaction, Cascade airfoil nomenclature and loss coefficient
- Topic No.18: Diffusion factor, stage loading and flow coefficient
- Topic No.19: stage pressure ratio, Blade Mach no.
- Topic No.20: Repeating-stage, Repeating-row, Meanline design, Flow path dimensions, number of blades per stage
- Topic No.21: Radial variation, Design Process, Performance

UNIT NO.4 Axial Flow Turbine:

- Topic No.22: Introduction to turbine analysis, Mean-radius stage calculations
- Topic No.23: Stage parameters, stage loading and flow coefficients
- Topic No.24: Degree of reaction, Stage temperature ratio and pressure ratio
- Topic No.25: Blade spacing, Radial Variation, Velocity ratio
- Topic No.26: Axial Flow Turbine stage Flow path dimension, Stage analysis
- Topic No.27: Multistage design steps of design - single stage and two - stage.
- Topic No.28: Turbine Performance, Blade Cooling.

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
4	1	-	5	25	75	3 hours	100

Text Books:

1. J D Mattingly, Elements of Gas Turbine Propulsion, McGraw Hill, 1st Ed., 1997
2. H Cohen, G F C Rogers and H I H Sarvanmutto, Gas Turbine Theory, John Wiely
3. P G Hill & C R Peterson, Mechanics and Thermodynamics of Propulsion, Addison- Wesley, 1970

Reference Books:

1. Gorden C Oates, Aircraft Propulsion Systems Technology & Design, AIAA Publication
2. J L Kererbrock, Aircraft Engines and Gas Turbine, MIT Press, 1991



SYLLABUS: B Tech (Aero)

Department: Aeronautical Engineering– 6th Semester

Subject: Wind Tunnel Techniques (Theory)

Subject Code: AER 304B

Detailed Content

UNIT NO 1: Wind Tunnel Design:

- Topic No.1: Wind Tunnel as a Tool: Types of wind tunnels, special purpose wind tunnels
- Topic No.2: Test section, diffuser, fan section, fan design
- Topic No.3: Return passage, cooling, the breather- vibration
- Topic No.4: Test section flow quality, diffuser design
- Topic No.5: Wind tunnel construction
- Topic No.6: Energy ratio, final form.

UNIT NO.2 Instrumentation and Calibration of Test Section:

- Topic No.7: Measurement of pressure, velocity, turbulence, flow angularity
- Topic No.8: Hot wire anemometry
- Topic No.9: Laser velocimeter, data acquisition
- Topic No.10: Flow visualization techniques
- Topic No.11: Wind tunnel calibration.
- Topic No.12: Model Forces, Moment and Pressure Measurement
- Topic No.13: Wind tunnel balances- Internal & External balances design of wind tunnel balances
- Topic No.14: Wake survey method

UNIT NO.3 Wind Tunnel Correction:

- Topic No.15: Method of Images
- Topic No.16: Boundary corrections
- Topic No.17: Buoyancy corrections
- Topic No.18: Wake blockage
- Topic No.19: Solid blockage- (2D & 3D corrections)

UNIT NO.4 Non Aeronautical Uses of the Wind Tunnel:

- Topic No.20: Applications in wind engineering
- Topic No.21: Surface vehicle testing
- Topic No.22: Testing of buildings for wind forces
- Topic No.23: Pollution, other applications at low Reynolds numbers.

Study Scheme				Evaluation Scheme			Total Marks
L	T	P	Credits	Internal Assessment	External Assessment (Examination)		
				Max. Marks	Max. Marks	Exam Duration	
4	1	-	5	25	75	3 hours	100

Text Books:

1. Low speed wind tunnel testing, : W.E.Rae and A.Pope, John Wiley 1985.

References Book:

1. Measurement of Airflow - Pankhrust and Ower , Pergamon Press



SYLLABUS: B Tech (Aero)
Department: Aeronautical Engineering– 6th Semester

Subject: Industrial Engg. (Theory)

Subject Code: ME 312B

Detailed Contents

Unit No. 1_ Introduction, Production System And Productivity, Workforce Management, Work Study

- Topic No.1: Definition and brief history of industrial engineering
- Topic No.2: Objectives and relevance of industrial engineering for achieving excellence in industry
- Topic No.3: Decisions in industrial engineering
- Topic No.4: Value addition, products and services
- Topic No.5: Conversion process
- Topic No.6: Production system
- Topic No.7: Types of production system
- Topic No.8: Productivity and its measurement
- Topic No.9: Factors effecting productivity and strategies for improving productivity
- Topic No.10: Teams, employee empowerment
- Topic No.11: Quality circles
- Topic No.12: Incentive plans
- Topic No.13: Job design, job specialization, job enlargement, job rotation, job enrichment
- Topic No.14: Method study, Principles of motion economy
- Topic No.15: Techniques of method study- various charts, therbligs
- Topic No.16: Work measurement- various methods
- Topic No.17: Time study
- Topic No.18: PMTS, determining time, work sampling, numericals

Unit No. 2.Manufacturing Cost Analysis, Materials Management

- Topic No.19: Elements of cost, overheads estimation
- Topic No.20: Types of cost, cost variance analysis, fixed & variable costs
- Topic No.21: Break even analysis, numericals
- Topic No.22: Strategic importance of materials in industries
- Topic No.23: Pressure for high and low inventory, relevant costs
- Topic No.24: Basic inventory control models-EOQ, EBQ with and without shortage, purchase discounts
- Topic No.25: Sensitivity analysis, inventory control systems- P, Q, systems, service level, stockout risk
- Topic No.26: Determination of order point and safety stock
- Topic No.27: Selective inventory control-ABC, FSN, SDE, VED. numericals

Unit No.3: Production Planning And Control(PPC)

- Topic No.28: Introduction to forecasting- Simple and weighted moving average methods
- Topic No.29: Objectives and variables of PPC
- Topic No.30: Aggregate planning- basic concept and its relation with other decision areas
- Topic No.31: Master Production Schedule
- Topic No.32: Scheduling operations, various methods for line and intermittent production systems
- Topic No.33: Gantt chart, Sequencing- Johnson algorithm for n jobs and 2 machines, n jobs & 3 machines, 2 jobs & n Machines, n jobs & m machines
- Topic No.34: Various means of measuring effectiveness of PPC

Unit No.4.Product Design And Development, Manufacturing Strategies

- Topic No.35: Various approaches
- Topic No.36: Product life cycle
- Topic No.37: Role of 3S's –Standardization, Simplification, Specialization
- Topic No.38: Introduction to value engineering
- Topic No.39: Role of ergonomics in product design
- Topic No.40: Intoduction to JIT
- Topic No.41: TPM, fundamentals of quality & TQM



PM

COLLEGE OF ENGINEERING

A Unit of Puran Murti Educational Society
Approved by AICTE, Ministry of HRD, Govt. of India,
Affiliated to Deenbandhu Chhotu Ram University of Science & Technology

- Topic No.42: Kaizan- elements, benefits and implementation aspects
Topic No.43: Supply Chain Management
Topic No.44: Management Information system (MIS) and its role in decision making

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
3	1	-	4	25	75	3 hours	

Text Books

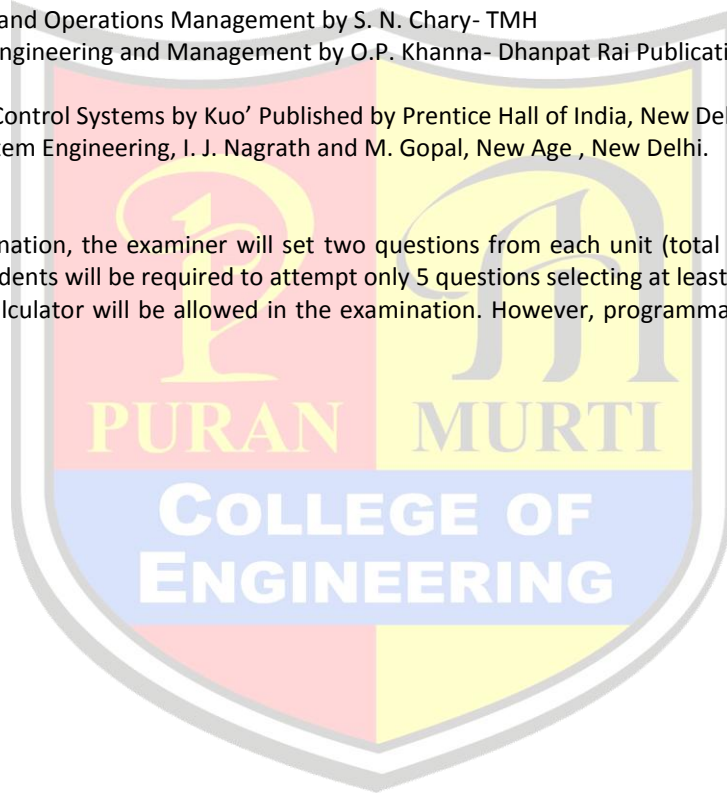
1. Production and Operations Management by S. N. Chary- TMH
2. Industrial Engineering and Management by O.P. Khanna- Dhanpat Rai Publications

REFERENCE BOOKS:

1. Automatic Control Systems by Kuo' Published by Prentice Hall of India, New Delhi.
2. Control System Engineering, I. J. Nagrath and M. Gopal, New Age , New Delhi.

Note:

1. In the semester examination, the examiner will set two questions from each unit (total 08 questions in all), covering the entire syllabus. The students will be required to attempt only 5 questions selecting at least one question from each unit.
2. The use of scientific calculator will be allowed in the examination. However, programmable calculator and cellular phone will not be allowed.





SYLLABUS: B Tech (Aero)

Department: Aeronautical Engineering– 6th Semester

Subject: Aircraft Structures – II (Theory)

Subject Code: AER 306B

Detailed Content

UNIT NO 1: Bending Of Thin Plates:

- Topic No.29: Pure bending
- Topic No.30: Plate subjected to bending and twisting
- Topic No.31: plates subjected to distributed load
- Topic No.32: combined bending and in-plane loading of a thin rectangular plate
- Topic No.33: Energy method for bending of thin plates.

UNIT NO.2 Structural Stability:

- Topic No.34: Euler buckling of columns
- Topic No.35: Inelastic stability of columns
- Topic No.36: Effect of initial imperfections
- Topic No.37: Energy method for the calculation of buckling loads in columns
- Topic No.38: Flexural and torsional buckling of the thin walled columns
- Topic No.39: Buckling of stiffened plates, local instability

UNIT NO.3 Stress Analysis Of Aircraft Components:

- Topic No.40: Tapered beams
- Topic No.41: Fuselages, wings, fuselage frames, wing ribs
- Topic No.42: Shear lag.
- Topic No.43: Matrix methods of structural analysis
- Topic No.44: Stiffness matrix for an elastic springs
- Topic No.45: Pin jointed frame work
- Topic No.46: Application to statically indeterminate frame works, matrix analysis of space frames,
- Topic No.47: Stiffness matrix for a beam
- Topic No.48: Concept and introduction to finite element methods

UNIT NO.4 Introduction To Vibration:

- Topic No.49: Free and forced vibration of single
- Topic No.50: Two and multiple degrees of freedom systems
- Topic No.51: Principal modes
- Topic No.52: Normal modes
- Topic No.53: Static coupling and dynamic coupling.

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
4	1	-	5	25	75	3 hours	100

Text Books:

1. T H G Megson, Aircraft Structures for Engineering Students, Edward Arnold, U.K.
2. R M Rivello, Theory and Analysis of Flight Structure, McGraw Hill Book Co.

Reference Books:

1. W T Thomson, Vibration Theory and Application
2. Perry, D.E Azar, Aircraft Structures, McGraw Hill

Note:

1. In the semester examination, the examiner will set two questions from each unit (total 08 questions in all), covering the entire syllabus. The students will be required to attempt only 5 questions selecting at least one question from each unit.
2. The use of scientific calculator will be allowed in the examination. However, programmable calculator and cellular phone will not be allowed.



SYLLABUS: B Tech (Aero)

Department: Aeronautical Engineering– 6th Semester

Subject: Non Destructive Evaluation (Theory)

Subject Code: AER 308B

Detailed Content

UNIT NO 1: Introduction To Non-Destructive Techniques:

- Topic No.54: Importance of NDT in quality assurance
- Topic No.55: Different types of non destructive techniques to obtain information regarding size
- Topic No.56: Location and orientation of damage or cracks
- Topic No.57: Visual inspection techniques
- Topic No.58: Coin tapping technique for composite structures and adhesive bonds.

UNIT NO.2 Ultrasonic Techniques:

- Topic No.59: Ultrasonic testing : Pulse echo technique;
- Topic No.60: Pitch-catch technique, through transmission technique;
- Topic No.61: A-scan, B-Scan, C-scan
- Topic No.62: Acoustic emission: Sources of acoustic emission in composites;
- Topic No.63: Peak amplitude, rise time during events, ring-down counts duration of events

UNIT NO.3 Radiographic Techniques:

- Topic No.64: X-ray radiography: Absorption spectra, short wave length
- Topic No.65: X-ray for detection of voids
- Topic No.66: Die penetration technique
- Topic No.67: Magnetic particle testing

UNIT NO.4 Non-Destructive Testing Process:

- Topic No.68: In each of the above techniques, (i) theory and basic principles,
- Topic No.69: (ii) Advantages/disadvantages,
- Topic No.70: (iii) Material of parts that can be inspected,
- Topic No.71: (iv) Physical size and shape limitation,
- Topic No.72: (v) Economics of process,
- Topic No.73: (vi) Types of defects that can be detected,
- Topic No.74: (vii) Environment limitation which are to be discussed along equipment used for each of the techniques.

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	100
4	-	-	4	25	75	3 hours	

Text Books:

1. Non destructive Testing, Edward Arnold U.K.

Reference Books:

1. Introduction of Nondestructive testing - A training guide, John Wiley & Sons.
2. Douglas C Lalia, NDT for Aircraft, Jeppesen
3. NDT and Ultrasonic Testing for Aircraft, FAA-AC 43-3

Note:

- a. In the semester examination, the examiner will set two questions from each unit (total 08 questions in all), covering the entire syllabus. The students will be required to attempt only 5 questions selecting at least one question from each unit.
- b. The use of scientific calculator will be allowed in the examination. However, programmable calculator and cellular phone will not be allowed.



SYLLABUS: B Tech (Aero)

Department: Aeronautical Engineering – 6th Semester

Subject: Heat Transfer (Theory)

Subject Code ME306B

Detailed Content

Unit No.1 Basics Concepts, Steady State Heat Conduction

- Topic No.1: Thermodynamics Vs Heat transfer
- Topic No.2: Define Heat Transfer, thermal conductivity Vs diffusivity
- Topic No.3: Basic modes of heat transfer
- Topic No.4: Combined heat transfer
- Topic No.5: Introduction, 1-D heat conduction through a plane wall
- Topic No.6: Long hollow cylinder
- Topic No.7: Hollow sphere
- Topic No.8: Conduction equation in Cartesian co-ordinate systems
- Topic No.9: Conduction equation in Polar co-ordinate systems
- Topic No.10: Conduction equation in spherical co-ordinate systems

Unit No.2 Steady State Conduction With Heat Generation, Transient Heat Conduction (1-D):

- Topic No.11: Introduction, 1-D heat conduction with heat sources
- Topic No.12: Extended surfaces (fins)
- Topic No.13: Fins with uniform cross-sectional area
- Topic No.14: Fin effectiveness
- Topic No.15: Brief introduction of 2-D heat conduction
- Topic No.16: Lumped capacitance
- Topic No.17: Semi-infinite and infinite solid conduction modes for walls
- Topic No.18: Cylinders, spheres
- Topic No.19: Chart solution, Relaxation Method, Numericals

Unit No.3 Convection, Thermal Radiation

- Topic No.20: Forced convection
- Topic No.21: Thermal and hydro-dynamic boundary layers
- Topic No.22: Equation of continuity
- Topic No.23: Momentum and Energy equation
- Topic no.24: Internal flow through circular tube
- Topic No.25: External flow over a flat plate
- Topic No.26: Fluid friction and heat transfer (Colburn analogy
- Topic NO.27: Free convection from a vertical flat plate
- Topic No.28: Empirical relations for free convection from vertical and horizontal planes & cylinders, Numericals
- Topic No.29: Basic laws, Black body radiation
- Topic No.30: intensity and emissive power, diffuse and gray surfaces
- Topic No.31: Shape factors and network analogy
- Topic No.32: Radiation shields, applications to two and three surfaces

Unit No.4 Heat Exchangers, Heat Transfer With Change Of Phase

- Topic No.33: Classification, Performance variables
- Topic No.34: Analysis of a parallel/counter flow heat exchange
- Topic No.35: Heat exchanger effectiveness, pressure drop
- Topic No.36: Laminar film condensation on a vertical plate
- Topic No.37: Drop-wise condensation, Pool boiling regimes
- Topic No.38: Nucleate boiling and critical heat flux
- Topic No.39: Film boiling and minimum heat flux, Flow boiling



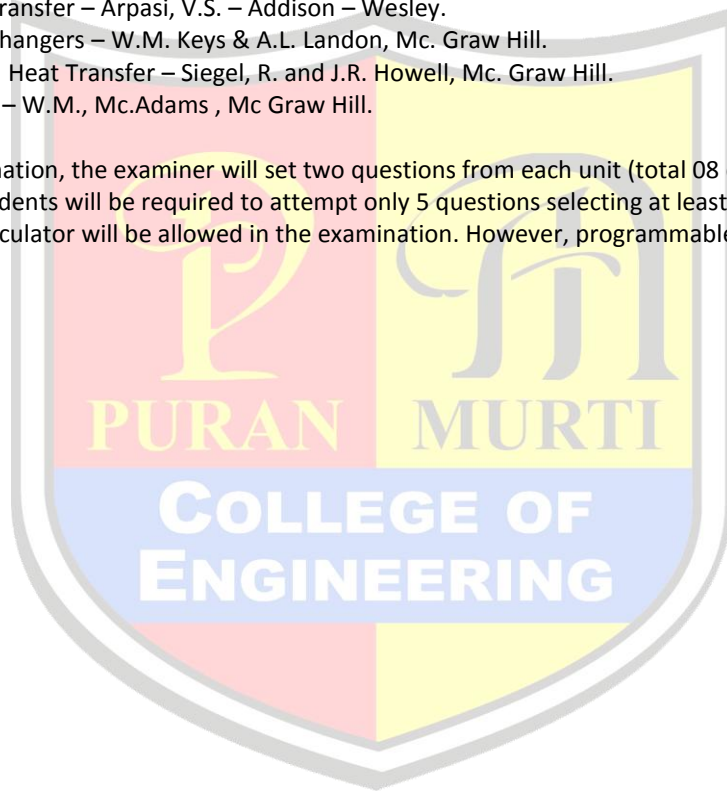
Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
3	1	-	4	25	75	3 hours	100

Reference Books :

1. Heat Transfer – A. Bejan, John Wiley & Sons, Inc.
2. Conduction of Heat in Solids – Carslow, H.S. and J.C. Jaeger – Oxford Univ. Press.
3. Conduction Heat Transfer – Arpasi, V.S. – Addison – Wesley.
4. Compact Heat Exchangers – W.M. Keys & A.L. Landon, Mc. Graw Hill.
5. Thermal Radiation Heat Transfer – Siegel, R. and J.R. Howell, Mc. Graw Hill.
6. Heat Transmission – W.M., Mc.Adams , Mc Graw Hill.

Note:

3. In the semester examination, the examiner will set two questions from each unit (total 08 questions in all), covering the entire syllabus. The students will be required to attempt only 5 questions selecting at least one question from each unit.
4. The use of scientific calculator will be allowed in the examination. However, programmable calculator and cellular phone will not be allowed.





SYLLABUS: B Tech (AERO)

Department: Aeronautical Engineering – 6th Semester

Subject: Aircraft Propulsion Lab

Subject Code: AER-310B

Detailed Content

List of Experiments:

1. Study the constructional details of axial flow compressor
2. Study the constructional details of centrifugal compressor
3. Study of accessory gear box and its construction
4. Study the constructional details of main fuel pump
5. Study the constructional details of combustion chamber
6. Study the constructional details of after burning system
7. Study the constructional details of piston engines
8. Study the functioning of complete jet engine
9. Study the constructional details of propellers

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
		3	1.5	20	30	3 hours	50

NOTE

- 1 At least eight experiments are to be performed in the semester
- 2 At least six experiments are to be performed from above list. Remaining two experiments may either be performed from above list or designed and set by concerned institute as per the scope of the syllabus
- 3 Students will be taken to HAL/ Air Force Station to witness Aero-engine run on test bed



SYLLABUS: B Tech (AERO)

Department: Aeronautical Engineering – 6th Semester

Subject: Heat Transfer Lab

Subject Code: ME316B

Detailed Content

List of Experiments:

1. To determine the thermal conductivity of a metallic rod.
2. To determine the thermal conductivity of an insulating power.
3. To determine the thermal conductivity of a solid by the guarded hot plate method.
4. To find the effectiveness of a pin fin in a rectangular duct natural convective condition and plot temperature distribution along its length.
5. To find the effectiveness of a pin fin in a rectangular duct under forced convective and plot temperature distribution along its length.
6. To determine the surface heat transfer coefficient for a heated vertical tube under natural convection and plot the variation of local heat transfer coefficient along the length of the tube. Also compare the results with those of the correlation.
7. To determine average heat transfer coefficient for a externally heated horizontal pipe under forced convection & plot Reynolds and Nusselt numbers along the length of pipe. Also compare the results with those of the correlations.
8. To measure the emissivity of the gray body (plate) at different temperature and plot the variation of emissivity with surface temperature.
9. To find overall heat transfer coefficient and effectiveness of a heat exchange under parallel and counter flow conditions. Also plot the temperature distribution in both the cases along the length of heat of heat exchanger.
10. To verify the Stefan-Boltzmann constant for thermal radiation.
11. To demonstrate the super thermal conducting heat pipe and compare its working with that of the best conductor i.e. copper pipe. Also plot temperature variation along the length with time or three pipes.
12. To determine the critical heat flux using two phase heat transfer apparatus.
13. To determine the water side overall heat transfer coefficient on a U-tube heat exchanger.
14. Design of Heat exchanger using CAD and verification using thermal analysis package eg. ANSYS software etc.

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
		2	1	20	30	3 hours	50

Note:

1. Ten experiments are to be performed in the Semester.
2. At least seven experiments should be performed from the above list. Remaining three experiments should be performed as designed & set by the department as per the scope of the syllabus (ME306B).



SYLLABUS: B Tech (Automobile Engineering)
Department: Automobile Engineering – 6th Semester

Subject: Report Writing Skills

Subject Code: HUM 302 B

Detailed Content

UNIT NO.1 Report Writing

- Topic No.1: Reports: meaning I
- Topic No.2: Importance and types
- Topic No.3: Structure of reports
- Topic No.4: Formats of reports
- Topic No.5: Use of illustrations

UNIT NO.2 Writing Of Business & Technical Reports

- Topic No.6: Preliminary steps and procedure of writing report
- Topic No.7: Writing various types of reports on technical, business related topics

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
3	1	-	4	25	75	3 hours	100

RECOMMENDED READING:

1. Borowick, Jerome. N. *Technical Communication and its Applications*. New Delhi: PHI, 2000
2. Guffey, Mary Ellen. *Business Communication: Process & Product*. USA: South western College Publishing, 2000.
3. Kumar, Sanjay and Pushp Lata. *Communication Skills*. Delhi: OUP, 2011

SCHEME OF END SEMESTER EXAMINATION (MAJOR TEST) AND INSTRUCTIONS FOR THE EXAMINER:

1. The duration of the exam will be 2 hours.
2. The Question Paper for this theory course shall have three questions in all covering both the units. All will be compulsory with internal choice.
3. Question no. 1 will be of 10 marks. The question may have two/three parts with enough internal choice, covering various components of both the Units.
4. Question no 2 with internal choice will be of 10 marks covering contents of the Unit I. It will be theoretical in nature.
5. Question no 3 will have two parts of 15 marks each. The student will be asked to write reports on business and technical subject/ issue covering contents of Unit II. The emphasis would be on testing the actual report writing on a given business and technical situation/ subject in letter format.



SYLLABUS: B Tech (Aero)

Department: Aeronautical Engineering– 6th Semester

Subject: Oral Presentation Skills

Subject Code: HUM- 304 B

Detailed Content

OBJECTIVE

To enable students to develop their speaking skills with professional proficiency

COURSE CONTENT

Oral Presentations:
Group Discussion; Mock interviews

Note for the Teacher:

The teacher concerned, by devising her/his method, must preview and review the student's spoken proficiency at the beginning and end of the semester respectively to find the efficacy of the course and degree of improvement in the student.

RECOMMENDED READING

1. Konar, Nira. *English Language Laboratories: A Comprehensive Manual*. Delhi: PHI, 2011
2. Kumar, Sanjay and Pushp Lata. *Communication Skills*. Delhi: OUP, 2011

Scheme of End Semester Examination (Practical)

An external Practical exam of 30 marks of 2 hour duration for the course will be conducted by an external examiner appointed by the competent authority of the University's.

NOTE:

Students will be tested for their oral communication competence making them participate in Group discussion, mock situations for interview. Students may also be evaluated through a viva conducted by an external examiner.

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
-	-	2	1	20	30	2Hrs	50



SYLLABUS: B Tech (Aero)

Department: Aeronautical Engineering– 6th Semester

Subject: General Fitness For The Profession

Subject Code: GPAER- 302B

Detailed Content

The purpose of this course is to inculcate a sense of professionalism in a student along with personality development in terms of quality such as receiving, responding, temperament, attitude and outlook. The student efforts will be evaluated on the basis of his/ her performance / achievements in different walks of life. A Faculty Counselor will be attached to a group of students which will remain associated with him /her during the entire period of the degree program in the University. Each faculty member will serve as a faculty counselor. They will act like a local guardian for the students associated with him / her and will help them in terms of career guidance, personal difficulties.

A. The student will present a written report before the committee with following in view:

The student will present before the committee his/her achievements during the current academic session in the form of a written report highlighting followings:

- I. Academic Performance II. Extra Curricular Activities / Community Service, Hostel Activities **(8 Marks)**
- III Technical Activities / Industrial, Educational tour **(8 Marks)**
- IV Sports/games **(14 Marks)**
- V Moral values & Ethics **(15 Marks)**

NOTE: Report submitted by the students should be typed on both sides of the paper.

B. A student will support his/her achievement and verbal & communicative skill through presentation before the committee. **(30 Marks)**

C. Moral values & Ethics

Syllabus - A few topics from the below mentioned books

1. R.R.Gaur, R. Sangal and G.P. Bagaria, " Bagaria, " A foundation course in Human Values and Professional Ethics", Pub: Excel Books, New Delhi-110028.
2. M. Govindrajan, S Natrajan & V.S. Senthil Kumar, " Engineering Ethics (including Human Values)" Eastern Economy Edition, Prentics Hall of India Ltd.

A minor test/Quiz will be conducted during the semester and it will be the duty of the concerned teacher assigned to teach Moral values & Ethics to submit the awards to respective chairman of the department / Director/Principal.

The evaluation of this course will be made by the following Committee.

University Departments:

- | | | |
|---|-------------------------------|----------|
| 1 | Chairperson of the Department | Chairman |
| 2 | Senior Most Faculty Counselor | Member |
| 3 | Vice- Chancellor's Nominee | Member |

Affiliated Colleges:

- | | | |
|---|---|----------|
| 1 | Director/Principal | Chairman |
| 2 | Head of the Department/Sr. Faculty | Member |
| 3 | External Examiner to be appointed by the University | Member |

Note: Remuneration will be paid to the external examiner only (at par with the other practical examinations).

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
-	-	-	2	75	-	-	75