



# G H RAISONI COLLEGE OF ENGINEERING NAGPUR

(An Autonomous Institute affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)

CRPF Gate No.3, Hingna Road, Digdoh Hills, Nagpur. Maharashtra-440016 (India)

## Course wise Teaching Plan for Session : Summer 2017

Course : Advanced Machine Design

Faculty : Dr. V N Bhiswar

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Unit 1: Introduction: Course objectives, course outcomes, outcome based education, mapping of CO's with PO's, Planning of CAE & TAE.	12/12/2016	CADL531	A
1	2	Elasticity and stress strain relations: Introduction	13/12/2016	CADL531	A
1	3	Fundamentals of stress and strain.	14/12/2016	CADL531	A
1	4	Hook's law.	16/12/2016	CADL531	A
1	5	Poisson's ratio.	19/12/2016	CADL531	A
1	6	Elastic constants.	20/12/2016	CADL531	A
1	7	Fundamentals of Plane stress	21/12/2016	CADL531	A
1	8	Fundamentals of Plane strain	23/12/2016	CADL531	A
1	9	Principal stresses.	02/01/2017	CADL531	A
1	10	Mohr's circle.	03/01/2017	CADL531	A
1	11	Principal stresses from Mohr's circle.	04/01/2017	CADL531	A
2	12	Unit II: Differential equations of equilibrium in two dimensional Cartesian coordinates.	06/01/2017	CADL531	A
2	13	Boundary conditions.	09/01/2017	CADL531	A
2	14	Compatibility equations.	10/01/2017	CADL531	A
2	15	Compatibility equations in Cartesian coordinates.	11/01/2017	CADL531	A
2	16	Stress function.	13/01/2017	CADL531	A
2	17	Numerical based on differential equations.	16/01/2017	CADL531	A
2	18	Numerical based on compatibility equations.	17/01/2017	CADL531	A
2	19	Numerical based on stress function.	18/01/2017	CADL531	A
3	20	Unit III: Theories of failure: Introduction	23/01/2017	CADL531	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Advanced Machine Design

Faculty : Dr. V N Bhiswar

Unit	Topic Code	Topic Covered	Date	Course	Section
3	21	Maximum normal stress theory.	24/01/2017	CADL531	A
3	22	Maximum shear stress theory.	25/01/2017	CADL531	A
3	23	Maximum normal strain theory.	27/01/2017	CADL531	A
3	24	Distortion energy theory.	30/01/2017	CADL531	A
3	25	Mohr's theory.	31/01/2017	CADL531	A
3	26	Significance of theories of failure.	01/02/2017	CADL531	A
3	27	Use of factor of safety in design.	03/02/2017	CADL531	A
3	28	Selection of materials for engineering applications.	06/02/2017	CADL531	A
4	29	Unit IV: Introduction about various energy methods.	07/02/2017	CADL531	A
4	30	Elastic strain energy.	08/02/2017	CADL531	A
4	31	Maxwell-Betti-Raleigh's reciprocal theorem.	10/02/2017	CADL531	A
4	32	Castigliano's theorem.	13/02/2017	CADL531	A
4	33	Strain energy due to axial force.	14/02/2017	CADL531	A
4	34	Strain energy due to shear force.	15/02/2017	CADL531	A
4	35	Strain energy due to torsion.	17/02/2017	CADL531	A
4	36	Strain energy due to bending moment.	20/02/2017	CADL531	A
5	37	Unit V: Design against fluctuating load: Introduction.	21/02/2017	CADL531	A
5	38	Stress concentration	22/02/2017	CADL531	A
5	39	Fluctuating stresses.	27/02/2017	CADL531	A
5	40	Fatigue failure	28/02/2017	CADL531	A
5	41	Endurance Limit	01/03/2017	CADL531	A
5	42	S-N Curve	03/03/2017	CADL531	A



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Course : Advanced Machine Design

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Unit	Topic Code	Topic Covered	Date	Course	Section
5	43	Notch Sensitivity	06/03/2017	CADL531	A
5	44	Reversed Stresses	07/03/2017	CADL531	A
5	45	Design for Finite life.	08/03/2017	CADL531	A
5	46	Design for Infinite life.	10/03/2017	CADL531	A
5	47	Soderberg line.	14/03/2017	CADL531	A
5	48	Goodman's line.	15/03/2017	CADL531	A
5	49	Advance Topic	17/03/2017	CADL531	A
5	50	Advance Topic	20/03/2017	CADL531	A
5	51	Advance Topic	21/03/2017	CADL531	A
5	52	Numerical on Unit 1	22/03/2017	CADL531	A
5	53	Numerical on Unit 2	24/03/2017	CADL531	A
5	54	Numerical on Unit 3	27/03/2017	CADL531	A
5	55	Numerical on Unit 4	29/03/2017	CADL531	A
5	56	Numerical on Unit 5	31/03/2017	CADL531	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Finite Element Analysis

Faculty : Mr. Vipin Suresh Rao Khangar

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Objective of Subject, Planning & Introduction of TAE parameters	12/12/2016	CADL532	A
1	2	(Unit-I) Historical background	13/12/2016	CADL532	A
1	3	Scope of FEM in Engineering. Applications	14/12/2016	CADL532	A
1	4	Fundamental concept of FEM-stresses & equilibrium	16/12/2016	CADL532	A
1	5	Fundamental concept of FEM-stresses & equilibrium	16/12/2016	CADL532	A
1	6	Stress-strain relations	19/12/2016	CADL532	A
1	7	Principle of minimum potential energy	20/12/2016	CADL532	A
1	8	Numerical on min PE	21/12/2016	CADL532	A
1	9	Numerical on min PE	23/12/2016	CADL532	A
1	10	TAE-I Presentation	23/12/2016	CADL532	A
1	11	TAE-I Presentation	02/01/2017	CADL532	A
1	12	Shape function in 1D	03/01/2017	CADL532	A
1	15	Introduction to different numerical method	04/01/2017	CADL532	A
1	16	Raleigh – Ritz method	06/01/2017	CADL532	A
1	17	Problems on 1D springs elements	06/01/2017	CADL532	A
1	18	Problems on 1D springs elements	09/01/2017	CADL532	A
1	19	Numerical on Raleigh – Ritz method	10/01/2017	CADL532	A
1	20	Saint Venants principle	11/01/2017	CADL532	A
2	21	(Unit-II) FEM analysis procedure	13/01/2017	CADL532	A
2	22	Linear and Quadratic shape function	13/01/2017	CADL532	A
2	23	Numerical on Shape function	16/01/2017	CADL532	A
2	24	Finite element modeling and analysis using Bar and Beam element	17/01/2017	CADL532	A



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Course : Finite Element Analysis

Faculty : Mr. Vipin Suresh Rao Khangar

Unit	Topic Code	Topic Covered	Date	Course	Section
2	25	TAE-II CHAPTER REVIEW PRESENTATION	18/01/2017	CADL532	A
2	26	TAE-II CHAPTER REVIEW PRESENTATION	23/01/2017	CADL532	A
2	27	Numerical on Bar and Beam element	24/01/2017	CADL532	A
2	28	Numerical on Bar and Beam element	25/01/2017	CADL532	A
2	29	Numerical on Bar and Beam element	27/01/2017	CADL532	A
2	30	Gaussian Elimination	27/01/2017	CADL532	A
2	31	One dimensional problems –Element division,	30/01/2017	CADL532	A
2	32	1D- numbering scheme	31/01/2017	CADL532	A
2	33	Stiffness matrix assembly, boundary conditions,	01/02/2017	CADL532	A
2	34	Load vector, temperature effects	03/02/2017	CADL532	A
2	35	Element stiffness matrix & Assembly of global stiffness matrix,	03/02/2017	CADL532	A
2	36	Boundary conditions, Elimination approach	06/02/2017	CADL532	A
2	37	Numerical on Gaussian Elimination approach	07/02/2017	CADL532	A
2	38	Numerical on Gaussian Elimination approach	08/02/2017	CADL532	A
2	39	1 D quadratic shape function	10/02/2017	CADL532	A
2	40	Introduction to theory of elasticity	10/02/2017	CADL532	A
3	41	(Unit-III) Plane stress, plain strain	13/02/2017	CADL532	A
3	42	Axisymmetric loading formulation	14/02/2017	CADL532	A
3	43	Numerical on Axisymmetric loading	15/02/2017	CADL532	A
3	44	Numerical on Axisymmetric loading	17/02/2017	CADL532	A
3	45	Basic boundary value problem in 2 Dimensions	17/02/2017	CADL532	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Finite Element Analysis

Faculty : Mr. Vipin Suresh Rao Khangar

Unit	Topic Code	Topic Covered	Date	Course	Section
3	46	TAE-V	20/02/2017	CADL532	A
3	47	Triangular, quadrilateral, higher order element.	21/02/2017	CADL532	A
3	48	Formulation of CST and LST elements	22/02/2017	CADL532	A
3	49	2 Dimensional problems using CST	27/02/2017	CADL532	A
3	50	2 Dimensional problems using CST	28/02/2017	CADL532	A
3	51	Heat transfer in Truss element	01/03/2017	CADL532	A
3	52	Heat transfer in Truss element	03/03/2017	CADL532	A
4	53	(Unit-IV) Pre processing,	03/03/2017	CADL532	A
4	54	Mesh generation- Region & block representation	06/03/2017	CADL532	A
4	55	Mesh plotting, Data handling & editing	07/03/2017	CADL532	A
4	56	Generation of node no, coordinates	08/03/2017	CADL532	A
4	57	Element connectivity	10/03/2017	CADL532	A
4	58	Boundary conditions	10/03/2017	CADL532	A
4	59	Input of material	13/03/2017	CADL532	A
4	60	Processing- Mode shape, contour plotting	14/03/2017	CADL532	A
4	61	Solution and post processing	15/03/2017	CADL532	A
5	62	(Unit-V) Dynamic analysis,	17/03/2017	CADL532	A
5	63	Equation of motion	17/03/2017	CADL532	A
5	64	Free vibrational analysis	20/03/2017	CADL532	A
5	65	Dynamic analysis using finite element method	21/03/2017	CADL532	A
5	66	Direct integration methods	22/03/2017	CADL532	A
5	67	Longitudinal vibration of bars	24/03/2017	CADL532	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Finite Element Analysis

Faculty : Mr. Vipin Suresh Rao Khangar

Unit	Topic Code	Topic Covered	Date	Course	Section
5	68	Advance Topic	24/03/2017	CADL532	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Modeling and Simulations

Faculty : Dr. Santosh B. Jaju

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	CO, PO, Syllabus, TAE, Course delivery methods, assessment methods	12/12/2016	CADL533	A
1	2	Unit1: Introduction to simulation as a tool, Areas of application	13/12/2016	CADL533	A
1	3	System model, Components of system, System environment	15/12/2016	CADL533	A
1	4	Types of system model, Steps in a simulation study	16/12/2016	CADL533	A
1	5	Discrete event system simulation	19/12/2016	CADL533	A
1	6	Event scheduling, Time advance mechanism	20/12/2016	CADL533	A
1	7	List processing - basic properties and operations	22/12/2016	CADL533	A
1	8	Dynamic allocation, linked lists	23/12/2016	CADL533	A
2	9	Unit II: Characteristics of queuing systems	02/01/2017	CADL533	A
2	10	Transient and steady-state behavior	03/01/2017	CADL533	A
2	11	Long-run performance measures	05/01/2017	CADL533	A
2	12	Infinite-population steady-state models	06/01/2017	CADL533	A
2	13	Infinite-population steady-state models	12/01/2017	CADL533	A
2	14	Finite-population models	13/01/2017	CADL533	A
2	15	Finite-population models	16/01/2017	CADL533	A
3	16	Unit III: Properties and generation of random numbers	17/01/2017	CADL533	A
3	17	Testing of generated random numbers.	19/01/2017	CADL533	A
3	18	Random Variate Generation : Exponential, Uniform,	20/01/2017	CADL533	A
3	19	Random Variate Generation : Weibull, Triangular, Empirical,	23/01/2017	CADL533	A
3	20	Random Variate Generation: Numericals	24/01/2017	CADL533	A





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Course : Modeling and Simulations

Faculty : Dr. Santosh B. Jaju

Unit	Topic Code	Topic Covered	Date	Course	Section
3	21	Random Variate Generation: Numericals	27/01/2017	CADL533	A
3	22	Discrete distributions, Direct transformation for normal distribution	30/01/2017	CADL533	A
3	23	Discrete distributions, Direct transformation for normal distribution	31/01/2017	CADL533	A
3	24	Convolution method, Acceptance-rejection technique	02/02/2017	CADL533	A
4	25	Unit IV: Data collection, Identifying distributions, Parameter estimation, Goodness-of-fit tests	03/02/2017	CADL533	A
4	26	Data collection, Identifying distributions, Parameter estimation, Goodness-of-fit tests	06/02/2017	CADL533	A
4	27	Data collection, Identifying distributions, Parameter estimation, Goodness-of-fit tests	07/02/2017	CADL533	A
4	28	Multivariate and time series input models.	09/02/2017	CADL533	A
4	29	Model building, Verification, Validation process, Verification of simulation models	10/02/2017	CADL533	A
4	30	Calibration and validation of models : Validation of assumptions,	13/02/2017	CADL533	A
4	31	Input-output transformations,	14/02/2017	CADL533	A
4	32	Validation of input-output using historical data and turing test.	20/02/2017	CADL533	A
4	33	Modeling manufacturing systems, Material handling system,	21/02/2017	CADL533	A
4	34	Modeling manufacturing systems, Material handling system,	27/02/2017	CADL533	A
4	35	Goals and performance measures, Modeling down times and failures, Trace-driven models	28/02/2017	CADL533	A
4	36	Case studies of manufacturing and Material Handling systems.	02/03/2017	CADL533	A
4	37	Case studies of manufacturing and Material Handling systems.	03/03/2017	CADL533	A



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Course : Modeling and Simulations

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Unit	Topic Code	Topic Covered	Date	Course	Section
5	38	Unit V: Statistical procedures for comparing real world observations and simulation output data.	06/03/2017	CADL533	A
5	39	Simulation Languages, introduction to SIMLIB, SIMAN, SIMSCRIPT, SLAM-II	07/03/2017	CADL533	A
5	40	Promodel General description, Action times,	09/03/2017	CADL533	A
5	41	Succession of events, Choice of paths,	10/03/2017	CADL533	A
5	42	Simulation of Mfg. shop, Facilities & storages,	14/03/2017	CADL533	A
5	43	Simulation of Mfg. shop, Facilities & storages,	16/03/2017	CADL533	A
5	44	Gathering statistics, Conditional transfers,	17/03/2017	CADL533	A
5	45	Program control statements, GPSS examples	20/03/2017	CADL533	A
5	46	Advance Topics	21/03/2017	CADL533	A
5	47	Advance Topics	23/03/2017	CADL533	A
5	48	Advance Topics	24/03/2017	CADL533	A
5	49	Advance Topics	27/03/2017	CADL533	A
5	50	Revision	28/03/2017	CADL533	A
5	51	Revision	30/03/2017	CADL533	A
5	52	Revision	31/03/2017	CADL533	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Plastics and Composites

Faculty : Raghavendra G Daramwar

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Introduction, Importance and Scope of Subject introduction of CO	12/12/2016	CADL536	A
1	2	Introduction to nonmetallic materials	14/12/2016	CADL536	A
1	3	Introduction to polymers	15/12/2016	CADL536	A
1	4	Classification of polymers	16/12/2016	CADL536	A
1	5	Overview of important polymer processes	19/12/2016	CADL536	A
1	6	extrusion, injection moulding	21/12/2016	CADL536	A
1	7	Blow molding	22/12/2016	CADL536	A
1	8	thermoforming	23/12/2016	CADL536	A
1	9	compression moulding	26/12/2016	CADL536	A
1	10	Introduction to the functional process analysis of	28/12/2016	CADL536	A
2	11	Polymer blending	29/12/2016	CADL536	A
2	12	Polymer blending	30/12/2016	CADL536	A
2	13	Master batches of polymers	02/01/2017	CADL536	A
2	14	Properties of polymers important for basic polymer process analysis	04/01/2017	CADL536	A
2	15	Properties of polymers important for basic polymer process analysis	05/01/2017	CADL536	A
2	16	Characterization of polymers important for basic polymer process	06/01/2017	CADL536	A
2	17	Characterization of polymers important for basic polymer process	09/01/2017	CADL536	A
3	18	Joining of plastics	11/01/2017	CADL536	A
3	19	Joining of plastics	12/01/2017	CADL536	A
3	20	Heated tool welding	13/01/2017	CADL536	A
3	21	Heated tool welding	16/01/2017	CADL536	A



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Course : Plastics and Composites

Faculty : Raghavendra G Daramwar

Unit	Topic Code	Topic Covered	Date	Course	Section
3	22	Ultrasonic welding	18/01/2017	CADL536	A
3	23	Ultrasonic welding	23/01/2017	CADL536	A
3	24	Vibration welding	25/01/2017	CADL536	A
3	25	Vibration welding	26/01/2017	CADL536	A
3	26	Spin welding	27/01/2017	CADL536	A
3	27	Spin welding	30/01/2017	CADL536	A
3	28	Hot gas welding	01/02/2017	CADL536	A
3	29	Hot gas welding	02/02/2017	CADL536	A
3	30	Extrusion welding	03/02/2017	CADL536	A
3	31	Extrusion welding	06/02/2017	CADL536	A
3	32	Laser welding	08/02/2017	CADL536	A
3	33	Laser welding	09/02/2017	CADL536	A
3	34	IR welding	10/02/2017	CADL536	A
3	35	IR welding	13/02/2017	CADL536	A
3	36	Resistive implant welding	15/02/2017	CADL536	A
3	37	Induction welding	16/02/2017	CADL536	A
3	38	Heat sealing, flash free welding, friction stir welding	17/02/2017	CADL536	A
4	39	Fibres, matrix materials	20/02/2017	CADL536	A
4	40	Interfaces, polymer matrix composites	22/02/2017	CADL536	A
4	41	Metal matrix composites	27/02/2017	CADL536	A
4	42	Ceramic matrix composites, whiskers,	01/03/2017	CADL536	A
5	43	Different composite processing methods,	02/03/2017	CADL536	A



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Course : Plastics and Composites

Faculty : Raghavendra G Daramwar

Unit	Topic Code	Topic Covered	Date	Course	Section
5	44	Different composite processing methods,	03/03/2017	CADL536	A
5	45	Industrial sector wise engineering applications	06/03/2017	CADL536	A
5	46	Composite in aircraft industry	08/03/2017	CADL536	A
5	47	carbon fibre composites	09/03/2017	CADL536	A
5	48	composite for structural application	10/03/2017	CADL536	A
5	49	carbon fibre composites	13/03/2017	CADL536	A
5	50	Induction welding	15/03/2017	CADL536	A
5	51	Resistative implant welding	16/03/2017	CADL536	A
5	52	Heat sealing, flash free welding, friction stir welding	17/03/2017	CADL536	A
5	53	carbon fibre composites	20/03/2017	CADL536	A
5	54	Advanced topics on the subject	22/03/2017	CADL536	A
5	55	Advanced topics on the subject	23/03/2017	CADL536	A
5	56	Advanced topics on the subject	24/03/2017	CADL536	A
5	57	Revision	27/03/2017	CADL536	A
5	58	Revision	29/03/2017	CADL536	A
5	59	Revision	30/03/2017	CADL536	A
5	60	Revision	31/03/2017	CADL536	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Product Design and Development

Faculty : ABHIJEET A. RAUT

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Introduction to Subjet PDD, CO,PO,Overview	14/12/2016	CADL530	A
1	2	Importance of Product design,Case studies	15/12/2016	CADL530	A
1	3	Type of design, product definition Product specification	16/12/2016	CADL530	A
1	4	Phases of production development: conceptual, embodiment	20/12/2016	CADL530	A
1	5	Phases of production development: conceptual, embodiment, Detailed design	21/12/2016	CADL530	A
1	6	Product and technology development cycle	22/12/2016	CADL530	A
1	7	Concept generation,Evaluation Methods	23/12/2016	CADL530	A
2	8	Material selection	03/01/2017	CADL530	A
2	9	Importance classification material performance characteristic	04/01/2017	CADL530	A
2	10	Selection criteria	05/01/2017	CADL530	A
2	11	Ashby Material selection chart	06/01/2017	CADL530	A
2	12	Introduction to Process selection	10/01/2017	CADL530	A
2	13	Process selection	11/01/2017	CADL530	A
2	14	Importance types of manufacturing process and their classification	12/01/2017	CADL530	A
2	15	Sources of information selection criteria Material	13/01/2017	CADL530	A
2	16	Introduction to Expert systems	17/01/2017	CADL530	A
2	17	Computer Database Approach	18/01/2017	CADL530	A
2	18	Introduction to Expert systems	24/01/2017	CADL530	A
2	19	Introduction to material and process selection software	25/01/2017	CADL530	A
3	20	Benchmarking ,Types	27/01/2017	CADL530	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Product Design and Development

Faculty : ABHIJEET A. RAUT

Unit	Topic Code	Topic Covered	Date	Course	Section
3	21	Benchmarking ,Types	31/01/2017	CADL530	A
3	22	DFM	01/02/2017	CADL530	A
3	23	DFA, DFX	02/02/2017	CADL530	A
3	24	DFA, DFX	03/02/2017	CADL530	A
3	25	Robust design	07/02/2017	CADL530	A
3	26	Early supplier involvement robust design	08/02/2017	CADL530	A
3	27	QFD	09/02/2017	CADL530	A
3	28	QFD	10/02/2017	CADL530	A
3	29	Concurrent engineering	14/02/2017	CADL530	A
3	30	Concurrent engineering	15/02/2017	CADL530	A
4	31	Mathematics of Times Value of Money Cost Comparison Depreciation Taxes	16/02/2017	CADL530	A
4	32	Inflation profitability of Investment and Investment Decision Analysis Sensitivity Analysis	17/02/2017	CADL530	A
4	33	Methods of cost Estimates	21/02/2017	CADL530	A
4	34	Industrial Engineering Approach	22/02/2017	CADL530	A
4	35	Parametric Approach	28/02/2017	CADL530	A
4	36	Introduction to Assembly Modeling	01/03/2017	CADL530	A
4	37	Top-Down and Bottom-Up Approaches of AM	02/03/2017	CADL530	A
4	38	Mating Conditions, Constraints	03/03/2017	CADL530	A
4	39	Generation of Assembly Sequences	07/03/2017	CADL530	A
5	40	Introduction to Prototyping	08/03/2017	CADL530	A
5	41	Importance of Prototyping	09/03/2017	CADL530	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Product Design and Development

Faculty : ABHIJEET A. RAUT

Unit	Topic Code	Topic Covered	Date	Course	Section
5	42	Types of prototypes	10/03/2017	CADL530	A
5	43	Generative Manufacturing process	14/03/2017	CADL530	A
5	44	Various Types of Generative Manufacturing process	15/03/2017	CADL530	A
5	45	Types of Generative Manufacturing process	16/03/2017	CADL530	A
5	46	Introduction to Rapid prototyping and applications	17/03/2017	CADL530	A
5	47	Types of RP, Stereo lithography, FDM	21/03/2017	CADL530	A
5	48	Powder based, Liquid based RP	22/03/2017	CADL530	A
5	49	Powder based, Liquid based RP	23/03/2017	CADL530	A
5	50	Factors Concerning to RP, Advantages, Accuracy and Economic Consideration	24/03/2017	CADL530	A
5	51	Advance Topic	29/03/2017	CADL530	A
5	52	Advance Topic	30/03/2017	CADL530	A
5	53	Revision	31/03/2017	CADL530	A





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## Course wise Teaching Plan for Session : Summer 2017

Course : Convective Heat and Mass Transfer

Faculty : Dr. Rupesh Sureshroa Shelke

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Hydrodynamic and Thermal boundary Layer,	12/12/2016	HPEL533	A
1	2	Turbulence. Energy equation of boundary layer,	13/12/2016	HPEL533	A
1	3	Momentum equation	14/12/2016	HPEL533	A
1	4	Momentum equation	16/12/2016	HPEL533	A
1	5	Von-karman integral momentum equation,	19/12/2016	HPEL533	A
1	6	Von-karman integral momentum equation,	20/12/2016	HPEL533	A
1	7	relationship between fluid friction and heat transfer	21/12/2016	HPEL533	A
1	8	relationship between fluid friction and heat transfer	23/12/2016	HPEL533	A
1	9	Turbulent Boundary Layer Heat Transfer	02/01/2017	HPEL533	A
1	10	Turbulent Boundary Layer Heat Transfer	03/01/2017	HPEL533	A
1	11	Heat transfer in Laminar and turbulent fluid flow	04/01/2017	HPEL533	A
1	12	Heat transfer in Laminar and turbulent fluid flow	06/01/2017	HPEL533	A
1	13	Heat transfer in high speed flow.	09/01/2017	HPEL533	A
1	14	Heat transfer in high speed flow.	10/01/2017	HPEL533	A
2	15	Empirical and practical relations for forced convection heat transfer	11/01/2017	HPEL533	A
2	16	Empirical and practical relations for forced convection heat transfer	13/01/2017	HPEL533	A
2	17	Relation for pipes and tube flow	16/01/2017	HPEL533	A
2	18	Flow across cylinder and sphere.	17/01/2017	HPEL533	A
2	19	Flow across cylinder and sphere.	18/01/2017	HPEL533	A
2	20	Flow across cylinder and sphere.	23/01/2017	HPEL533	A
2	21	Flow across tube banks	24/01/2017	HPEL533	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Convective Heat and Mass Transfer

Faculty : Dr. Rupesh Suresh Rao Shelke

Unit	Topic Code	Topic Covered	Date	Course	Section
2	22	Flow across tube banks	25/01/2017	HPEL533	A
2	23	Flow across tube banks	27/01/2017	HPEL533	A
2	24	Liquid metal heat transfer.	30/01/2017	HPEL533	A
2	25	Liquid metal heat transfer.	31/01/2017	HPEL533	A
3	26	Free Convection	01/02/2017	HPEL533	A
3	27	Free Convection	03/02/2017	HPEL533	A
3	28	Convection with change of phase	06/02/2017	HPEL533	A
3	29	Convection with change of phase	07/02/2017	HPEL533	A
3	30	Condensation and boiling heat transfer	08/02/2017	HPEL533	A
3	31	Condensation and boiling heat transfer	10/02/2017	HPEL533	A
3	32	Condensation and boiling heat transfer	13/02/2017	HPEL533	A
3	33	Heat Exchanger	14/02/2017	HPEL533	A
3	34	Heat Exchanger	15/02/2017	HPEL533	A
3	35	Analysis of Heat Exchanger	17/02/2017	HPEL533	A
4	36	Analysis of Heat Exchanger	20/02/2017	HPEL533	A
4	37	Numericals on Heat Exchanger	21/02/2017	HPEL533	A
4	38	Heat transfers Augmentation techniques.	22/02/2017	HPEL533	A
4	39	Heat transfers Augmentation techniques.	27/02/2017	HPEL533	A
4	40	Mass transfer	28/02/2017	HPEL533	A
4	41	Fick's law of radiation	01/03/2017	HPEL533	A
4	42	diffusion in gases	03/03/2017	HPEL533	A
4	43	The mass transfer co-efficient	06/03/2017	HPEL533	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Convective Heat and Mass Transfer

Faculty : Dr. Rupesh Suresh Rao Shelke

Unit	Topic Code	Topic Covered	Date	Course	Section
4	44	The mass transfer co-efficient	07/03/2017	HPEL533	A
4	45	The mass transfer co-efficient	08/03/2017	HPEL533	A
4	46	diffusion in gases	10/03/2017	HPEL533	A
4	47	diffusion in gases	13/03/2017	HPEL533	A
5	48	The mass transfer co	14/03/2017	HPEL533	A
5	49	Heat transfer in Magnate fluid dynamic (MFD) systems	15/03/2017	HPEL533	A
5	50	Ablation and Heat pipe	17/03/2017	HPEL533	A
5	51	Low density heat transfer	20/03/2017	HPEL533	A
5	52	Low density heat transfer	21/03/2017	HPEL533	A
5	53	Introduction to Heat Transfer Software.	22/03/2017	HPEL533	A
5	54	Introduction to Heat Transfer Software.	24/03/2017	HPEL533	A
5	55	Extra class	27/03/2017	HPEL533	A
5	56	Extra class	29/03/2017	HPEL533	A
5	57	Extra class	31/03/2017	HPEL533	A



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### Course wise Teaching Plan for Session : Summer 2015

Course : Energy Conservation and Management

Faculty : Mr. Sachin Ramrao Karale

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Introduction	01/12/2014	HPEL536	A
1	2	energy scenario – principles and imperatives of energy conservation	02/12/2014	HPEL536	A
1	3	energy scenario – principles and imperatives of energy conservation	03/12/2014	HPEL536	A
1	4	energy consumption patterns- resource availability	05/12/2014	HPEL536	A
1	5	energy consumption patterns- resource availability	08/12/2014	HPEL536	A
1	6	role of energy management in industry.	09/12/2014	HPEL536	A
1	7	role of energy management in industry.	09/12/2014	HPEL536	A
2	8	Energy Audit – types and methodology, material and energy balance.	10/12/2014	HPEL536	A
2	9	Energy Audit – types and methodology, material and energy balance.	12/12/2014	HPEL536	A
2	10	thermal energy auditing: energy audit – purpose	15/12/2014	HPEL536	A
2	11	methodology with respect to process industry- power plants, boilers etc	16/12/2014	HPEL536	A
2	12	characteristics method employed in certain energy intensive industries	17/12/2014	HPEL536	A
2	13	various energy conservation measures in steam systems	19/12/2014	HPEL536	A
2	14	losses in boiler, methodology of upgrading boiler performance	22/12/2014	HPEL536	A
2	15	FBC boilers, cogeneration.	23/12/2014	HPEL536	A
2	16	FBC boilers, cogeneration.	24/12/2014	HPEL536	A
2	17	Energy conservation in pumps, fans and compressors, air conditioning and refrigeration systems	02/01/2015	HPEL536	A



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## Course wise Teaching Plan for Session : Summer 2015

Course : Energy Conservation and Management

Faculty : Mr. Sachin Ramrao Karale

Unit	Topic Code	Topic Covered	Date	Course	Section
2	18	Energy conservation in pumps, fans and compressors, air conditioning and refrigeration systems	05/01/2015	HPEL536	A
2	19	steam traps- types, functions, necessity, waste heat recovery systems.	06/01/2015	HPEL536	A
2	20	steam traps- types, functions, necessity, waste heat recovery systems.	07/01/2015	HPEL536	A
3	21	Electrical energy auditing: potential areas for electrical energy conservation in various industries	09/01/2015	HPEL536	A
3	22	Electrical energy auditing: potential areas for electrical energy conservation in various industries	16/01/2015	HPEL536	A
3	23	energy efficient motors – factors involved in determination of motor efficiency	19/01/2015	HPEL536	A
3	24	Adjective AC drives, applications and its use,	20/01/2015	HPEL536	A
3	25	variable speed drives / belt drives.	21/01/2015	HPEL536	A
3	26	Role of instrumentation in energy conservation.	23/01/2015	HPEL536	A
4	27	Total energy systems – concept of total energy	27/01/2015	HPEL536	A
4	28	Total energy systems – concept of total energy	28/01/2015	HPEL536	A
4	29	advantages and limitations- total energy system and application	30/01/2015	HPEL536	A
4	30	advantages and limitations- total energy system and application	02/02/2015	HPEL536	A
4	31	various possible schemes employing steam turbines movers used in total energy systems.	03/02/2015	HPEL536	A
4	32	various possible schemes employing steam turbines movers used in total energy systems.	04/02/2015	HPEL536	A



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### Course wise Teaching Plan for Session : Summer 2015

Course : Energy Conservation and Management

Faculty : Mr. Sachin Ramrao Karale

Unit	Topic Code	Topic Covered	Date	Course	Section
4	33	various possible schemes employing steam turbines movers used in total energy systems.	06/02/2015	HPEL536	A
4	34	various possible schemes employing steam turbines movers used in total energy systems.	09/02/2015	HPEL536	A
4	35	various possible schemes employing steam turbines movers used in total energy systems.	10/02/2015	HPEL536	A
4	36	various possible schemes employing steam turbines movers used in total energy systems. CASE STUDY	11/02/2015	HPEL536	A
4	37	various possible schemes employing steam turbines movers used in total energy systems. CASE STUDY	13/02/2015	HPEL536	A
5	38	Energy Management: importance of energy management,	16/02/2015	HPEL536	A
5	39	Energy Management: importance of energy management, CASE STUDY	17/02/2015	HPEL536	A
5	40	Energy Management: importance of energy management, CASE STUDY	18/02/2015	HPEL536	A
5	42	energy economics discount rates, pay back periods,	24/02/2015	HPEL536	A
5	43	energy economics discount rates, pay back periods, CASE STUDY	25/02/2015	HPEL536	A
5	44	energy economics discount rates, pay back periods,	27/02/2015	HPEL536	A
5	45	energy economics discount rates, pay back periods, CASE STUDY	02/03/2015	HPEL536	A
5	46	internal rate of returns, life cycle costing	03/03/2015	HPEL536	A
5	47	internal rate of returns, life cycle costing	04/03/2015	HPEL536	A
5	48	internal rate of returns, life cycle costing	09/03/2015	HPEL536	A
5	49	project management, energy action planning, energy monitoring.	10/03/2015	HPEL536	A



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### Course wise Teaching Plan for Session : Summer 2015

Course : Energy Conservation and Management

Faculty : Mr. Sachin Ramrao Karale

Unit	Topic Code	Topic Covered	Date	Course	Section
5	50	project management, energy action planning, energy monitoring.	11/03/2015	HPEL536	A
5	51	project management, energy action planning, energy monitoring.	13/03/2015	HPEL536	A
1	41	REVISION	16/03/2015	HPEL536	A
2	52	REVISION	17/03/2015	HPEL536	A
3	53	REVISION	18/03/2015	HPEL536	A
4	54	REVISION	20/03/2015	HPEL536	A
5	55	REVISION	23/03/2015	HPEL536	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Fluid Dynamics

Faculty : Mr. Vivek W. Khond

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Fluid Flow Concepts, Euler's equation of motion,.	12/12/2016	HPEL530	A
1	2	Continuity equation, Stream function, potential function flow nets, rotational ,irrotational	13/12/2016	HPEL530	A
1	3	Numericals on rotational,irrotational flow	14/12/2016	HPEL530	A
1	4	Circulation.and numerical	15/12/2016	HPEL530	A
1	1	Tutorial 1	16/12/2016	HPEL530	A
1	5	Vortices,	19/12/2016	HPEL530	A
1	6	Numericals	20/12/2016	HPEL530	A
1	7	Conformal mapping	21/12/2016	HPEL530	A
1	8	Simple and inverse transfer	22/12/2016	HPEL530	A
1	2	Tutorial 2	23/12/2016	HPEL530	A
2	9	Derivation of Navier-Stock's equations	02/01/2017	HPEL530	A
2	10	Fundamental equation of motion and continuity applied to fluid flow	03/01/2017	HPEL530	A
2	11	General stress in a deformable body, rate at which the fluid element strained in a flow;	04/01/2017	HPEL530	A
2	12	Navier-Stoke's equation, Reynold's principle of similarity,	05/01/2017	HPEL530	A
2	3	Tutorial 3	06/01/2017	HPEL530	A
2	13	Exact solutions of Navier-Stoke's equations	09/01/2017	HPEL530	A
2	14	Hydrodynamic theory of lubrication	10/01/2017	HPEL530	A
3	15	Boundary Layer equations for flow along flat plate	11/01/2017	HPEL530	A
3	16	separation of boundary layer	12/01/2017	HPEL530	A
2	4	Tutorial 4	13/01/2017	HPEL530	A





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## Course wise Teaching Plan for Session : Summer 2017

Course : Fluid Dynamics

Faculty : Mr. Vivek W. Khond

Unit	Topic Code	Topic Covered	Date	Course	Section
3	17	Momentum-Integral equation of the Boundary Layer	16/01/2017	HPEL530	A
3	18	Exact solution of Boundary Layer equations to flow past a cylinder, two-dimensional	17/01/2017	HPEL530	A
3	19	Boundary Layer control and its applications	18/01/2017	HPEL530	A
3	20	Drag; Pressure, form and skin friction	23/01/2017	HPEL530	A
4	21	Turbulent Flow: The origin of turbulence,,	24/01/2017	HPEL530	A
4	22	Numericals	25/01/2017	HPEL530	A
3	5	Tutorial 5	27/01/2017	HPEL530	A
4	23	Numericals	30/01/2017	HPEL530	A
4	24	Numericals	31/01/2017	HPEL530	A
4	25	Reynolds modification of Navier-Stokes equation for Turbulent flow	01/02/2017	HPEL530	A
4	26	Mean values and fluctuations	02/02/2017	HPEL530	A
3	6	Tutorial 6	03/02/2017	HPEL530	A
4	27	numericals	06/02/2017	HPEL530	A
4	28	numericals	07/02/2017	HPEL530	A
4	29	Turbulent flow in pipes	08/02/2017	HPEL530	A
4	30	Turbulent boundary layer	09/02/2017	HPEL530	A
4	7	Tutorial 7	10/02/2017	HPEL530	A
4	31	Numerical	13/02/2017	HPEL530	A
4	32	Numerical	14/02/2017	HPEL530	A
5	33	Compressible fluids	15/02/2017	HPEL530	A
5	34	Derivation of compressible fluid	16/02/2017	HPEL530	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Fluid Dynamics

Faculty : Mr. Vivek W. Khond

Unit	Topic Code	Topic Covered	Date	Course	Section
4	8	Tutorial 8	17/02/2017	HPEL530	A
5	35	Numericals on compressible flow	20/02/2017	HPEL530	A
5	36	Numericals on compressible flow	21/02/2017	HPEL530	A
5	37	Introduction to Boundary layer for compressible fluids	22/02/2017	HPEL530	A
5	38	Numericals	27/02/2017	HPEL530	A
5	39	Numericals	28/02/2017	HPEL530	A
5	40	numericals	01/03/2017	HPEL530	A
5	41	numericals	02/03/2017	HPEL530	A
5	42	Advance Topic on flow visualisation techniques	02/03/2017	HPEL530	A
5	9	Tutorial 9	03/03/2017	HPEL530	A
5	43	Advance Topic on flow visualisation techniques	06/03/2017	HPEL530	A
5	44	Advance Topic on flow visualisation techniques	07/03/2017	HPEL530	A
5	45	Advance Topic on flow visualisation techniques	08/03/2017	HPEL530	A
5	46	Revision and backlog if any	09/03/2017	HPEL530	A
5	10	Tutorial 10	10/03/2017	HPEL530	A
5	47	Revision and backlog if any	15/03/2017	HPEL530	A
5	48	Revision and backlog if any	16/03/2017	HPEL530	A
5	11	Tutorial 11	17/03/2017	HPEL530	A
5	49	Revision and backlog if any	20/03/2017	HPEL530	A
5	50	Revision and backlog if any	21/03/2017	HPEL530	A
5	12	Tutorial 12	24/03/2017	HPEL530	A
5	51	Revision and backlog if any	27/03/2017	HPEL530	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Fluid Dynamics

Faculty : Mr. Vivek W. Khond

Unit	Topic Code	Topic Covered	Date	Course	Section
5	52	Revision and backlog if any	29/03/2017	HPEL530	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Refrigeration & Air Conditioning Technologies

Faculty : Dr. Uday S. Wankhede

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Vapour compression refrigeration system	05/12/2016	HPEL531	A
1	1	Vapour compression refrigeration system	05/12/2016	HPEL531	A
1	2	Advanced VARS	06/12/2016	HPEL531	A
1	2	Advanced VARS	06/12/2016	HPEL531	A
1	3	Advanced VARS	08/12/2016	HPEL531	A
1	3	Advanced VARS	08/12/2016	HPEL531	A
1	4	Advanced VARS	09/12/2016	HPEL531	A
1	4	Advanced VARS	09/12/2016	HPEL531	A
1	5	Multipressure systems and their thermal analysis	12/12/2016	HPEL531	A
1	5	Multipressure systems and their thermal analysis	12/12/2016	HPEL531	A
1	6	Multipressure systems and their thermal analysis	13/12/2016	HPEL531	A
1	6	Multipressure systems and their thermal analysis	13/12/2016	HPEL531	A
1	7	Multipressure systems and their thermal analysis	15/12/2016	HPEL531	A
1	7	Multipressure systems and their thermal analysis	15/12/2016	HPEL531	A
1	8	Multielevator systems and their analysis	16/12/2016	HPEL531	A
1	8	Multielevator systems and their analysis	16/12/2016	HPEL531	A
2	9	Multielevator systems and their analysis	19/12/2016	HPEL531	A
2	9	Multielevator systems and their analysis	19/12/2016	HPEL531	A
2	10	Multielevator systems and their analysis	20/12/2016	HPEL531	A
2	10	Multielevator systems and their analysis	20/12/2016	HPEL531	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Refrigeration & Air Conditioning Technologies

Faculty : Dr. Uday S. Wankhede

Unit	Topic Code	Topic Covered	Date	Course	Section
2	11	Multieaporator systems and their analysis	22/12/2016	HPEL531	A
2	11	Multieaporator systems and their analysis	22/12/2016	HPEL531	A
2	12	Multieaporator systems and their analysis, component selection and system balance	23/12/2016	HPEL531	A
2	12	Multieaporator systems and their analysis, component selection and system balance	23/12/2016	HPEL531	A
2	13	Refrigerants, mixture refrigerants	26/12/2016	HPEL531	A
2	13	Refrigerants, mixture refrigerants	26/12/2016	HPEL531	A
2	14	ozone layer depletion, global warming	27/12/2016	HPEL531	A
2	14	ozone layer depletion, global warming	27/12/2016	HPEL531	A
2	15	Montreal and Kyoto protocols, alternatives to CFC AND HFC, natural refrigerants	29/12/2016	HPEL531	A
2	15	Montreal and Kyoto protocols, alternatives to CFC AND HFC, natural refrigerants	29/12/2016	HPEL531	A
2	16	Retrofitting of domestic refrigerator using hydrocarbon blends,	30/12/2016	HPEL531	A
2	16	Retrofitting of domestic refrigerator using hydrocarbon blends,	30/12/2016	HPEL531	A
3	17	Introduction to simulation softwares in refrigeration	02/01/2017	HPEL531	A
3	17	Introduction to simulation softwares in refrigeration	02/01/2017	HPEL531	A
3	18	Analysis of non conventional refrigeration system: Introduction	03/01/2017	HPEL531	A
3	18	Analysis of non conventional refrigeration system: Introduction	03/01/2017	HPEL531	A
3	19	Thermoelectric refrigeration system	05/01/2017	HPEL531	A
3	19	Thermoelectric refrigeration system	05/01/2017	HPEL531	A
3	20	Thermoelectric refrigeration system	06/01/2017	HPEL531	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Refrigeration & Air Conditioning Technologies

Faculty : Dr. Uday S. Wankhede

Unit	Topic Code	Topic Covered	Date	Course	Section
3	20	Thermoelectric refrigeration system	06/01/2017	HPEL531	A
3	21	Thermoelectric refrigeration system	12/01/2017	HPEL531	A
3	21	Thermoelectric refrigeration system	12/01/2017	HPEL531	A
3	22	Thermoelectric refrigeration system	13/01/2017	HPEL531	A
3	22	Thermoelectric refrigeration system	13/01/2017	HPEL531	A
3	23	Steam jet refrigeration system	16/01/2017	HPEL531	A
3	23	Steam jet refrigeration system	16/01/2017	HPEL531	A
3	24	Steam jet refrigeration system	17/01/2017	HPEL531	A
3	24	Steam jet refrigeration system	17/01/2017	HPEL531	A
3	25	Steam jet refrigeration system	19/01/2017	HPEL531	A
3	25	Steam jet refrigeration system	19/01/2017	HPEL531	A
3	26	Steam jet refrigeration system	20/01/2017	HPEL531	A
3	26	Steam jet refrigeration system	20/01/2017	HPEL531	A
3	27	Steam jet refrigeration system	23/01/2017	HPEL531	A
3	27	Steam jet refrigeration system	23/01/2017	HPEL531	A
3	28	Steam jet refrigeration system	24/01/2017	HPEL531	A
3	28	Steam jet refrigeration system	24/01/2017	HPEL531	A
4	29	Vortex tube refrigeration system	27/01/2017	HPEL531	A
4	29	Vortex tube refrigeration system	27/01/2017	HPEL531	A
4	30	Vortex tube refrigeration system	30/01/2017	HPEL531	A
4	30	Vortex tube refrigeration system	30/01/2017	HPEL531	A
4	31	Pulse tube refrigeration	31/01/2017	HPEL531	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Refrigeration & Air Conditioning Technologies

Faculty : Dr. Uday S. Wankhede

Unit	Topic Code	Topic Covered	Date	Course	Section
4	31	Pulse tube refrigeration	31/01/2017	HPEL531	A
4	32	Mixture refrigeration, adsorption refrigeration	02/02/2017	HPEL531	A
4	32	Mixture refrigeration, adsorption refrigeration	02/02/2017	HPEL531	A
4	33	Dessicant cooling, hybrid systems, environmental impact of insulation	03/02/2017	HPEL531	A
4	33	Dessicant cooling, hybrid systems, environmental impact of insulation	03/02/2017	HPEL531	A
4	34	Cryogenic applications, Gas liquification systems	06/02/2017	HPEL531	A
4	34	Cryogenic applications, Gas liquification systems	06/02/2017	HPEL531	A
4	35	Cryogenic refrigeration systems	07/02/2017	HPEL531	A
4	35	Cryogenic refrigeration systems	07/02/2017	HPEL531	A
4	36	Storage and handling of cryogenes	13/02/2017	HPEL531	A
4	36	Storage and handling of cryogenes	13/02/2017	HPEL531	A
4	37	Cryogenic insulations, Measuring instruments in air conditioning, Thermal insulations, Fans and air distribution devices	14/02/2017	HPEL531	A
4	37	Cryogenic insulations, Measuring instruments in air conditioning, Thermal insulations, Fans and air distribution devices	14/02/2017	HPEL531	A
5	38	Advanced Psychrometry, Heat load calculations and equipment selection	16/02/2017	HPEL531	A
5	38	Advanced Psychrometry, Heat load calculations and equipment selection	16/02/2017	HPEL531	A
5	39	Duct design	17/02/2017	HPEL531	A
5	39	Duct design	17/02/2017	HPEL531	A
5	40	Air distribution systems	20/02/2017	HPEL531	A



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Course : Refrigeration & Air Conditioning Technologies

Faculty : Dr. Uday S. Wankhede

Unit	Topic Code	Topic Covered	Date	Course	Section
5	40	Air distribution systems	20/02/2017	HPEL531	A
5	41		21/02/2017	HPEL531	A
5	41		21/02/2017	HPEL531	A
5	42	Practice Numericals VARS	23/02/2017	HPEL531	A
5	42	Practice Numericals VARS	23/02/2017	HPEL531	A
5	43	Practice Numericals VARS	27/02/2017	HPEL531	A
5	43	Practice Numericals VARS	27/02/2017	HPEL531	A
5	44	Practice Numericals Multipressure systems	28/02/2017	HPEL531	A
5	44	Practice Numericals Multipressure systems	28/02/2017	HPEL531	A
5	45	Practice Numericals Multipressure systems	02/03/2017	HPEL531	A
5	45	Practice Numericals Multipressure systems	02/03/2017	HPEL531	A
5	46	Practice Numericals Multievaporator systems	03/03/2017	HPEL531	A
5	46	Practice Numericals Multievaporator systems	03/03/2017	HPEL531	A
5	47	Practice Numericals Multievaporator systems	06/03/2017	HPEL531	A
5	47	Practice Numericals Multievaporator systems	06/03/2017	HPEL531	A
5	48	Practice Numericals Thermoelectric refrigeration system	07/03/2017	HPEL531	A
5	48	Practice Numericals Thermoelectric refrigeration system	07/03/2017	HPEL531	A
5	49	Practice Numericals Thermoelectric refrigeration system	09/03/2017	HPEL531	A
5	49	Practice Numericals Thermoelectric refrigeration system	09/03/2017	HPEL531	A
5	50	Practice Numericals Thermoelectric refrigeration system	10/03/2017	HPEL531	A
5	50	Practice Numericals Thermoelectric refrigeration system	10/03/2017	HPEL531	A





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## Course wise Teaching Plan for Session : Summer 2017

Course : Refrigeration & Air Conditioning Technologies

Faculty : Dr. Uday S. Wankhede

Unit	Topic Code	Topic Covered	Date	Course	Section
5	51	Practice Numericals Steam jet refrigeration system	17/03/2017	HPEL531	A
5	51	Practice Numericals Steam jet refrigeration system	17/03/2017	HPEL531	A
6	52	Practice Numericals Steam jet refrigeration system	20/03/2017	HPEL531	A
6	52	Practice Numericals Steam jet refrigeration system	20/03/2017	HPEL531	A
6	53	Practice Numericals Steam jet refrigeration system	21/03/2017	HPEL531	A
6	53	Practice Numericals Steam jet refrigeration system	21/03/2017	HPEL531	A
6	54	Practice Numericals Steam jet refrigeration system	23/03/2017	HPEL531	A
6	54	Practice Numericals Steam jet refrigeration system	23/03/2017	HPEL531	A
6	55	Practice Numericals Vortex tube refrigeration system	24/03/2017	HPEL531	A
6	55	Practice Numericals Vortex tube refrigeration system	24/03/2017	HPEL531	A
6	56	Practice Numericals Vortex tube refrigeration system	27/03/2017	HPEL531	A
6	56	Practice Numericals Vortex tube refrigeration system	27/03/2017	HPEL531	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Thermal Engineering –II

Faculty : Dr. Pramod V. Walke

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Syllabus discussion	12/12/2016	HPEL532	A
1	1	Introduction of subject etc.	13/12/2016	HPEL532	A
1	2	Gas Turbines	14/12/2016	HPEL532	A
1	3	Gas Turbines – Analysis of Positive displacement rotary air compressor	15/12/2016	HPEL532	A
1	4	Dynamic compressor	16/12/2016	HPEL532	A
1	5	Thermodynamic analysis of gas turbine cycles,	19/12/2016	HPEL532	A
1	2	Inter-cooled and reheat and regenerative cycles	20/12/2016	HPEL532	A
1	6	Performance of practical gas turbine cycles	21/12/2016	HPEL532	A
1	7	Gas turbine combustion systems	22/12/2016	HPEL532	A
1	8	Problems on Performance of gas turbine	23/12/2016	HPEL532	A
1	3	Charismas Vacation	27/12/2016	HPEL532	A
1	9	Pressure and Flow losses	02/01/2017	HPEL532	A
1	4	Mechanical Losses	03/01/2017	HPEL532	A
1	10	loss due to incomplete combustion	04/01/2017	HPEL532	A
1	11	Problems on inter-cooled and reheat and regenerative cycles	05/01/2017	HPEL532	A
1	12	Problems on inter-cooled and reheat and regenerative cycles	06/01/2017	HPEL532	A
2	13	Problems on inter-cooled and reheat and regenerative cycles	09/01/2017	HPEL532	A
2	14	Problems on Performance of practical gas turbine cycles	11/01/2017	HPEL532	A
2	15	Problems on Performance of practical gas turbine cycles	12/01/2017	HPEL532	A
2	16	Problems on Performance of gas turbine	13/01/2017	HPEL532	A
2	17	Problems on Performance of gas turbine	16/01/2017	HPEL532	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Thermal Engineering –II

Faculty : Dr. Pramod V. Walke

Unit	Topic Code	Topic Covered	Date	Course	Section
2	18	Measurement and Testing of I.C. Engine : performance parameters and characteristics	18/01/2017	HPEL532	A
2	19	CAE-I	19/01/2017	HPEL532	A
2	20	CAE-I	20/01/2017	HPEL532	A
2	21	Derivation of excess air	23/01/2017	HPEL532	A
2	22	Volumetric efficiency, scavenging	25/01/2017	HPEL532	A
2	23	Republican day	26/01/2017	HPEL532	A
2	24	Scavenging efficiency,	27/01/2017	HPEL532	A
3	25	Charge efficiency	30/01/2017	HPEL532	A
3	26	Heat balance	01/02/2017	HPEL532	A
3	27	Problems on excess air, Minimum mass of air required for complete comb.	02/02/2017	HPEL532	A
3	28	Problems on heat balance sheet	03/02/2017	HPEL532	A
3	29	Problems on heat balance sheet	06/02/2017	HPEL532	A
3	30	Emission control, Exhaust gas Recirculation system,	08/02/2017	HPEL532	A
3	31	Catalytic converter, Particulate trap.	09/02/2017	HPEL532	A
3	32	Problems on heat balance sheet	10/02/2017	HPEL532	A
3	33	Design of Hydraulic and Pneumatic systems –Oil hydraulic system	13/02/2017	HPEL532	A
3	34	control and regulation element,	15/02/2017	HPEL532	A
3	35	Reciprocating quick return,	16/02/2017	HPEL532	A
3	36	Accumulator circuit, industrial circuits, press circuits, ,	17/02/2017	HPEL532	A
4	37	Accumulator circuit, industrial circuits, press circuits, ,	20/02/2017	HPEL532	A
4	38	Design aspect of of Hydraulic systems	22/02/2017	HPEL532	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Thermal Engineering –II

Faculty : Dr. Pramod V. Walke

Unit	Topic Code	Topic Covered	Date	Course	Section
4	39	Design aspect of of Hydraulic systems	23/02/2017	HPEL532	A
4	40	CAE-II	24/02/2017	HPEL532	A
4	41	CAE-II	27/02/2017	HPEL532	A
4	42	Pressure sensing	01/03/2017	HPEL532	A
4	43	Logic circuit	02/03/2017	HPEL532	A
4	44	Compound circuit design	03/03/2017	HPEL532	A
4	45	Combination circuit design	06/03/2017	HPEL532	A
4	46	Design aspect of of pneumatic systems	08/03/2017	HPEL532	A
4	47	Design aspect of of pneumatic systems	09/03/2017	HPEL532	A
5	48	Power Plants – Fluctuating loads on Power plant,	10/03/2017	HPEL532	A
5	49	Power Plants – Fluctuating loads on Power plant	13/03/2017	HPEL532	A
5	50	Peak load plant	15/03/2017	HPEL532	A
5	51	Economic Analysis of Power plant	16/03/2017	HPEL532	A
5	52	Tariffs methods	17/03/2017	HPEL532	A
5	53	Problems	20/03/2017	HPEL532	A
5	54	Problems	22/03/2017	HPEL532	A
5	55	Performance and operating characteristics of power plant	23/03/2017	HPEL532	A
5	56	Combined operation of different power plant,	24/03/2017	HPEL532	A
5	57	Pollution and its control.	27/03/2017	HPEL532	A
5	58	Peak load plant	29/03/2017	HPEL532	A
5	59	Problems related to Performance and operating characteristics of power plant	30/03/2017	HPEL532	A



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## Course wise Teaching Plan for Session : Summer 2017

Course : Thermal Engineering –II

Faculty : Dr. Pramod V. Walke

Unit	Topic Code	Topic Covered	Date	Course	Section
5	60	Problems related to Performance and operating characteristics of power plant	31/03/2017	HPEL532	A