



# 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 2018

Course : Energy Systems Management

Faculty : skumathe - Ms. Shradha

Krishna Umathe

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Introduction to Subject & its Application in Allied Areas	11/12/2017	IPSL532	A
1	2	Load flow Analysis	11/12/2017	IPSL532	A
1	3	Gauss Seidel Method	12/12/2017	IPSL532	A
1	4	Newton Raphson Method	13/12/2017	IPSL532	A
1	5	Fast decoupled load flow	15/12/2017	IPSL532	A
1	6	dc load flow	20/12/2017	IPSL532	A
1	7	Contingency Analysis	21/12/2017	IPSL532	A
1	8	Contingency Analysis	22/12/2017	IPSL532	A
1	9	Numericals	03/01/2018	IPSL532	A
2	10	Representation of transmission loss by B coefficient	08/01/2018	IPSL532	A
2	11	Interactive producer for the solution, of co-ordination equation	08/01/2018	IPSL532	A
2	12	Derivation of transmission loss TAE -I	09/01/2018	IPSL532	A
2	13	Derivation of transmission loss	15/01/2018	IPSL532	A
2	14	Emission Dispatch	15/01/2018	IPSL532	A
2	15	Effects of Pollutions, Problem, formulation	16/01/2018	IPSL532	A
2	16	Practical measures Regulations	17/01/2018	IPSL532	A
2	17	Numericals	19/01/2018	IPSL532	A
2	18	Numericals	22/01/2018	IPSL532	A
2	19	Advanced Methods	22/01/2018	IPSL532	A
3	20	Optimal Power Flow: Introduction	23/01/2018	IPSL532	A
3	21	sub problem of OPF	24/01/2018	IPSL532	A
3	22	Methods for OPF solution	29/01/2018	IPSL532	A



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Course : Energy Systems Management

Faculty : skumathe - Ms. Shradha

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Unit	Topic Code	Topic Covered	Date	Course	Section
3	23	Gradient method	29/01/2018	IPSL532	A
3	24	Co-ordination of steam, Hydro and Nuclear Power Solutions	01/02/2018	IPSL532	A
3	25	Optimum generation allocation to thermal units	02/02/2018	IPSL532	A
3	26	optimal generation allocation without losses	07/02/2018	IPSL532	A
3	27	Reactive power management	16/02/2018	IPSL532	A
3	28	TAE - II	19/02/2018	IPSL532	A
3	29	Elementary introduction to deregulated Power System and Market	19/02/2018	IPSL532	A
3	30	Elementary introduction to deregulated Power System and Market	20/02/2018	IPSL532	A
3	31	Numericals	21/02/2018	IPSL532	A
4	32	Hydro-thermal co-ordination	23/02/2018	IPSL532	A
4	34	Advantages of co-ordination	26/02/2018	IPSL532	A
0	35		26/02/2018	IPSL532	A
4	36	Optimal scheduling of hydrothermal system	27/02/2018	IPSL532	A
4	37	Combined working of Runoff river plant with steam plant	28/02/2018	IPSL532	A
4	38	Pumped storage hydro plants	05/03/2018	IPSL532	A
4	39	Numericals	05/03/2018	IPSL532	A
5	40	Introduction Unit Commitment	08/03/2018	IPSL532	A
5	41	Unit Commitment	09/03/2018	IPSL532	A
5	42	Optimal Unit commitment	12/03/2018	IPSL532	A
5	44	Solution to unit commitment by Dynamic programming	12/03/2018	IPSL532	A
5	45	Solution to unit commitment by Dynamic programming	15/03/2018	IPSL532	A



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Course : Energy Systems Management

Faculty : skumathe - Ms. Shradha

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Unit	Topic Code	Topic Covered	Date	Course	Section
5	46	TAE - V	16/03/2018	IPSL532	A
5	47	Optimal unit commitment with security	19/03/2018	IPSL532	A
0	48		19/03/2018	IPSL532	A
0	49		22/03/2018	IPSL532	A
5	50	Performance optimization by reactive power control	23/03/2018	IPSL532	A
5	51	Performance optimization by reactive power control	26/03/2018	IPSL532	A
5	52	Revision	26/03/2018	IPSL532	A
6	53	Revision	29/03/2018	IPSL532	A
7	54	Revision	30/03/2018	IPSL532	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : Sub-Station Engineering

Faculty : rhadware - Mr. Ramchandra

Harishchandra Adware

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Introduction to subject	11/12/2017	IPSL625	A
1	2	Development of Indian Power Sector and grid Management	13/12/2017	IPSL625	A
1	3	Development of Indian Power Sector and grid Management continue..	15/12/2017	IPSL625	A
1	4	Development of Indian Power Sector and grid Management continue..	16/12/2017	IPSL625	A
1	5	Development in Distribution Power Sector	20/12/2017	IPSL625	A
1	6	continue..	22/12/2017	IPSL625	A
1	7	continue..	23/12/2017	IPSL625	A
1	8	Sub-station:Types of substation(Indoor & outdoor)	03/01/2018	IPSL625	A
1	9	Sub-station:Types of substation(Indoor & outdoor)	08/01/2018	IPSL625	A
1	10	Sub-station:Types of substation(Indoor & outdoor)	10/01/2018	IPSL625	A
1	11	Layout, Busbar sectionalization	15/01/2018	IPSL625	A
1	12	Power transformers, Design of Earthing	17/01/2018	IPSL625	A
1	13	Gas Insulated substation (GIS).	19/01/2018	IPSL625	A
1	14	Gas Insulated substation (GIS).	20/01/2018	IPSL625	A
2	15	Overhead Insulators	22/01/2018	IPSL625	A
1	16	Overhead Insulators	24/01/2018	IPSL625	A
1	17	CT/PT's, Station Batteries and charging equipment	27/01/2018	IPSL625	A
1	18	Parameters of Overhead Lines and under-ground cables..	29/01/2018	IPSL625	A
1	19	Fault finding	31/01/2018	IPSL625	A
2	20	Fault finding	02/02/2018	IPSL625	A
2	21	Computer applications for Sub-station engineering	03/02/2018	IPSL625	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : Sub-Station Engineering

Faculty : rhadware - Mr. Ramchandra

Harishchandra Adware

Unit	Topic Code	Topic Covered	Date	Course	Section
2	22	Computer applications for Sub-station engineering	07/02/2018	IPSL625	A
3	23	Voltage control methods	19/02/2018	IPSL625	A
3	24	Voltage control methods	21/02/2018	IPSL625	A
3	25	Voltage control methods	23/02/2018	IPSL625	A
3	26	Protection against over-voltages	24/02/2018	IPSL625	A
3	27	bus-bars protection	26/02/2018	IPSL625	A
4	28	Operation, Maintenance & safety aspects of substation	28/02/2018	IPSL625	A
4	29	Operation, Maintenance & safety aspects of substation	02/03/2018	IPSL625	A
4	30	Operation, Maintenance & safety aspects of substation	03/03/2018	IPSL625	A
4	31	metering aspects of substation	05/03/2018	IPSL625	A
4	32	metering aspects of substation	07/03/2018	IPSL625	A
5	33	Indian electricity grid code	09/03/2018	IPSL625	A
5	34	Indian electricity grid code	10/03/2018	IPSL625	A
5	35	Case studies with 100 % stand-by	12/03/2018	IPSL625	A
5	36	Case studies with 100 % stand-by	14/03/2018	IPSL625	A
5	37	Case studies with Participation for Co-generation and energy-sale	16/03/2018	IPSL625	A
5	38	Case studies with emergency-supply arrangements	19/03/2018	IPSL625	A
5	39	Case studies with emergency-supply arrangements	21/03/2018	IPSL625	A
5	40	Case studies with emergency-supply arrangements	23/03/2018	IPSL625	A
5	41	Case studies with emergency-supply arrangements	24/03/2018	IPSL625	A
5	42	Advanced topic on the subject	26/03/2018	IPSL625	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : Sub-Station Engineering

Faculty : rhadware - Mr. Ramchandra

~~Harishchandra Adware~~

Unit	Topic Code	Topic Covered	Date	Course	Section
5	43	Advanced topic on the subject	28/03/2018	IPSL625	A
5	44	Advanced topic on the subject	30/03/2018	IPSL625	A
5	45	Advanced topic on the subject	31/03/2018	IPSL625	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : Processor Applications to Power Systems

Faculty : pmdaigavane - DR.P.M.

DAIGAVANE

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Introduction to microprocessor	11/12/2017	IPSL621	A
1	2	Architecture of microprocessor	12/12/2017	IPSL621	A
1	3	Memory mapping	12/12/2017	IPSL621	A
1	4	Instruction set	13/12/2017	IPSL621	A
1	5	timing daigram	14/12/2017	IPSL621	A
1	6	Interfacing device	18/12/2017	IPSL621	A
1	7	Introduction to 8086	19/12/2017	IPSL621	A
1	8	8086 Pin daigram	19/12/2017	IPSL621	A
1	9	8086 Pin daigram	20/12/2017	IPSL621	A
1	10	8086 Pin daigram	21/12/2017	IPSL621	A
1	11	8086 Pin daigram	26/12/2017	IPSL621	A
1	12	8086 Architecture	26/12/2017	IPSL621	A
1	13	8086 Architecture	27/12/2017	IPSL621	A
1	14	8086 Architecture	28/12/2017	IPSL621	A
1	15	Minimum Mode	01/01/2018	IPSL621	A
2	16	8051 microcontroller architecture	02/01/2018	IPSL621	A
2	17	8051 microcontroller architecture	02/01/2018	IPSL621	A
2	18	8051 microcontroller architecture	03/01/2018	IPSL621	A
2	19	Minimum Mode	04/01/2018	IPSL621	A
2	20	Minimum Mode	08/01/2018	IPSL621	A
2	21	Minimum Mode	09/01/2018	IPSL621	A
2	22	Minimum Mode	09/01/2018	IPSL621	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : Processor Applications to Power Systems

Faculty : pmdaigavane - DR.P.M.

DAIGAVANE

Unit	Topic Code	Topic Covered	Date	Course	Section
2	23	Minimum Mode	10/01/2018	IPSL621	A
2	24	Minimum Mode	15/01/2018	IPSL621	A
2	25	Minimum Mode	16/01/2018	IPSL621	A
2	26	Minimum Mode	16/01/2018	IPSL621	A
2	27	Minimum Mode	17/01/2018	IPSL621	A
3	28	8051 microcontroller instruction	18/01/2018	IPSL621	A
3	29	8051 microcontroller programming	22/01/2018	IPSL621	A
3	30	Microcontroller timer	23/01/2018	IPSL621	A
3	31	Microcontroller serial mode	23/01/2018	IPSL621	A
3	32	Microcontroller serial mode	24/01/2018	IPSL621	A
3	33	Microcontroller interrupts	25/01/2018	IPSL621	A
3	34	Memory map	29/01/2018	IPSL621	A
3	35	Memory map	30/01/2018	IPSL621	A
4	36	Dsp processor 2812 block diagram	30/01/2018	IPSL621	A
4	37	Dsp processor 2812	31/01/2018	IPSL621	A
4	38	dsp processor 2812	01/02/2018	IPSL621	A
4	39	Dsp processor 2812	05/02/2018	IPSL621	A
4	40	DAC Interfacing	06/02/2018	IPSL621	A
4	41	Lcd Display	06/02/2018	IPSL621	A
4	42	stepper motor	07/02/2018	IPSL621	A
4	43	application of dsp	12/02/2018	IPSL621	A
5	44	Application of FPGA to power system	14/02/2018	IPSL621	A





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Faculty : pmdaigavane - DR.P.M.

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Unit	Topic Code	Topic Covered	Date	Course	Section
5	45	Application of FPGA to power system	15/02/2018	IPSL621	A
5	46	Application of FPGA to power system	26/02/2018	IPSL621	A
5	47	Fundamentals of DSP 28335	27/02/2018	IPSL621	A
5	48	Fundamental of DSP	27/02/2018	IPSL621	A
5	49	case study on application of microcontroller	28/02/2018	IPSL621	A
5	50	Application of microcontroller	01/03/2018	IPSL621	A
5	51	Application of microcontroller	05/03/2018	IPSL621	A
5	52	case study on application of microcontroller	06/03/2018	IPSL621	A
5	53	case study on application of microcontroller	06/03/2018	IPSL621	A
5	54	case study on application of microcontroller	07/03/2018	IPSL621	A
1	55	Revison	08/03/2018	IPSL621	A
1	56	Revison	12/03/2018	IPSL621	A
1	57	Revison	13/03/2018	IPSL621	A
2	58	Revison	13/03/2018	IPSL621	A
2	59	Application of dsp processor	14/03/2018	IPSL621	A
2	60	Revison	15/03/2018	IPSL621	A
2	61	Revison	19/03/2018	IPSL621	A
3	62	Revison	20/03/2018	IPSL621	A
3	63	Revison	20/03/2018	IPSL621	A
3	64	Revison	21/03/2018	IPSL621	A
4	65	Revison	22/03/2018	IPSL621	A
4	66	Revison	26/03/2018	IPSL621	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : Processor Applications to Power Systems

Faculty : pmdaigavane - DR.P.M.

DAIGAVANE

Unit	Topic Code	Topic Covered	Date	Course	Section
4	67	Revison	27/03/2018	IPSL621	A
5	68	Revison	27/03/2018	IPSL621	A
5	69	Revison	28/03/2018	IPSL621	A
5	70	Revison	29/03/2018	IPSL621	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : FACTS

Faculty : ynkumar - YEJJALA NAVEEN  
KUMAR

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	SSR, Determination of SSR Methods of analysis SSR,	07/12/2017	IPSL626	A
1	2	Eigen value analysis	09/12/2017	IPSL626	A
1	3	Series Vs shunt compensation	14/12/2017	IPSL626	A
1	4	By pass damping filter Damping scheme , N.G. Hingorani Damping scheme , Dynamic stabilizers.	16/12/2017	IPSL626	A
1	5	Active/Reactive power flow transmission using elementary models	21/12/2017	IPSL626	A
2	6	Difficulties with reactive power transmission	23/12/2017	IPSL626	A
2	7	classification, methods of analysis, voltage collapse	28/12/2017	IPSL626	A
2	8	Transient voltage stability	30/12/2017	IPSL626	A
2	9	(P-V) curves (nose curves	04/01/2018	IPSL626	A
2	10	Modeling requirements for voltage stability	06/01/2018	IPSL626	A
2	11	Modeling requirements for voltage stability	13/01/2018	IPSL626	A
3	12	Static VAR compensator (SVC)	18/01/2018	IPSL626	A
3	13	Types of SVC characteristics of ideal and realistic SVC their operation	20/01/2018	IPSL626	A
3	14	Composite characteristics	25/01/2018	IPSL626	A
3	15	modeling of SVC, Flexible AC Transmission Systems ( FACTS ) Applications	27/01/2018	IPSL626	A
3	16	Six pulse TCR	01/02/2018	IPSL626	A
3	17	Application of SVC	03/02/2018	IPSL626	A
4	18	Flexible AC Transmission Systems ( FACTS ) Applications	15/02/2018	IPSL626	A
4	19	Flexible AC Transmission Systems ( FACTS ) Applications	17/02/2018	IPSL626	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : FACTS

Faculty : ynkumar - YEJJALA NAVEEN  
KUMAR

Unit	Topic Code	Topic Covered	Date	Course	Section
4	20	Flexible AC Transmission Systems ( FACTS ) Applications, Flexible AC Transmission Systems ( FACTS ) Applications	22/02/2018	IPSL626	A
4	21	Flexible AC Transmission Systems ( FACTS ) Applications	24/02/2018	IPSL626	A
4	22	Basic concepts, Voltage source converters	01/03/2018	IPSL626	A
4	23	Current source converter comparison of STATCOM and SVC	03/03/2018	IPSL626	A
4	24	Static Voltage and phase angle regulators	08/03/2018	IPSL626	A
5	25	TCVR and TCPAR combine compensator	10/03/2018	IPSL626	A
5	26	UPFC (Unified Power Flow),	15/03/2018	IPSL626	A
5	27	IPFC (Interline power flow controller)	17/03/2018	IPSL626	A
5	28	IPFC (Interline power flow controller)	22/03/2018	IPSL626	A
5	29	Active Filters (Series and Shunt types only)	24/03/2018	IPSL626	A
5	30	Active Filters (Series and Shunt types only)	29/03/2018	IPSL626	A
5	31	Advanced topic on the subject.	31/03/2018	IPSL626	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : Power system simulation Lab

Faculty : ppjagtap - Mr. Prashant P. Jagtap

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Overview of lab	16/12/2017	IPSP630	A
1	2	study of 3 phase balanced and unbalanced system	23/12/2017	IPSP630	A
1	3	symmetrical and unsymmetrical fault using pscad	20/01/2018	IPSP630	A
1	4	Power world simulator load flow analysis	27/01/2018	IPSP630	A
1	5	To study ETAP software	03/02/2018	IPSP630	A
1	6	characteristics of TCSC	24/02/2018	IPSP630	A
1	7	Transient analysis using Matlab	03/03/2018	IPSP630	A
1	8	To study TCR	10/03/2018	IPSP630	A
1	9	ferranti Effect	17/03/2018	IPSP630	A
1	10	to study GCSC	24/03/2018	IPSP630	A
1	11	to study UPFC	31/03/2018	IPSP630	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : Processor Applications to Power Systems Lab

Faculty : pmdaigavane - DR.P.M.

DAIGAVANE

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Program on unit no.1	14/12/2017	IPSP621	A
1	2	Program on unit no.1	21/12/2017	IPSP621	A
1	3	programming on 8085	28/12/2017	IPSP621	A
3	4	Program on unit no.3	04/01/2018	IPSP621	A
3	5	Program on unit no.3	18/01/2018	IPSP621	A
4	6	Program on unit no.4	25/01/2018	IPSP621	A
5	7	Program on unit no.5	01/02/2018	IPSP621	A
5	8	Program on unit no.5	15/02/2018	IPSP621	A
5	9	Program on unit no.5	22/02/2018	IPSP621	A
6	10	Program on unit no.6	01/03/2018	IPSP621	A
6	11	Program on unit no.6	08/03/2018	IPSP621	A
6	12	Program on unit no.6	15/03/2018	IPSP621	A
6	13	revison	22/03/2018	IPSP621	A
6	14	revison	29/03/2018	IPSP621	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : Electrical Transportation Systems

Faculty : hsdalvi - Mr. Harshit S. Dalvi

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Electric Vehicle (EV) System	11/12/2017	PEDL535	A
1	2	EV components	12/12/2017	PEDL535	A
1	3	EV Advantages and its efficiency	13/12/2017	PEDL535	A
1	4	capital cost in EV	14/12/2017	PEDL535	A
1	7	roadway fundamentals	20/12/2017	PEDL535	A
1	8	laws of motion	21/12/2017	PEDL535	A
1	9	Pollution aspects	03/01/2018	PEDL535	A
1	5	operating cost	04/01/2018	PEDL535	A
1	6	dynamics of vehicle motion	08/01/2018	PEDL535	A
1	10	propulsion power	09/01/2018	PEDL535	A
1	11	velocity and acceleration	10/01/2018	PEDL535	A
2	12	Basics of battery	15/01/2018	PEDL535	A
2	13	Ni-Cd battery	16/01/2018	PEDL535	A
2	14	Li-ion battery,	17/01/2018	PEDL535	A
2	15	Li-polymer battery	18/01/2018	PEDL535	A
2	16	sodium battery	22/01/2018	PEDL535	A
2	17	sulphur battery, zinc – air battery	23/01/2018	PEDL535	A
2	18	various battery parameters and their characteristic	24/01/2018	PEDL535	A
2	19	fuel cells	25/01/2018	PEDL535	A
2	20	types and characteristic	29/01/2018	PEDL535	A
2	21	hydrogen storage systems	30/01/2018	PEDL535	A
2	22	super-capacitors and ultra-capacitors	31/01/2018	PEDL535	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : Electrical Transportation Systems

Faculty : hsdalvi - Mr. Harshit S. Dalvi

Unit	Topic Code	Topic Covered	Date	Course	Section
3	23	Introduction to Induction machines	01/02/2018	PEDL535	A
3	24	difference between AC machines and DC machines	07/02/2018	PEDL535	A
3	25	permanent magnet machines	15/02/2018	PEDL535	A
3	26	switched reluctance machines	19/02/2018	PEDL535	A
3	27	configurations and operation	20/02/2018	PEDL535	A
3	28	Power converters	21/02/2018	PEDL535	A
3	29	drive controllers	22/02/2018	PEDL535	A
3	30	power electronic switches	26/02/2018	PEDL535	A
3	31	modulation techniques	27/02/2018	PEDL535	A
3	32	AC-DC drives	28/02/2018	PEDL535	A
4	33	EV configurations	01/03/2018	PEDL535	A
4	34	transmission components	05/03/2018	PEDL535	A
4	35	steady state model of ideal gear box,	06/03/2018	PEDL535	A
4	36	EV motor sizing	07/03/2018	PEDL535	A
4	37	Related Problems	08/03/2018	PEDL535	A
5	38	Introduction to Hybrid Electric Vehicles	12/03/2018	PEDL535	A
5	39	Types of HEV	13/03/2018	PEDL535	A
5	40	Inter Combustion Engines	14/03/2018	PEDL535	A
5	41	Types of Combustion Engines	15/03/2018	PEDL535	A
5	42	gas turbine engines	19/03/2018	PEDL535	A
5	43	complete design of HEV	20/03/2018	PEDL535	A
5	44	Analysis of HEV	21/03/2018	PEDL535	A





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## Course wise Teaching Plan for Session : Summer 2018

Course : Electrical Transportation Systems

Faculty : hsdalvi - Mr. Harshit S. Dalvi

Unit	Topic Code	Topic Covered	Date	Course	Section
5	45	Related Problems of HEV	22/03/2018	PEDL535	A
5	46	Braking system in HEV	26/03/2018	PEDL535	A
5	47	advantages of HEV	27/03/2018	PEDL535	A
5	48	Related Numericals	28/03/2018	PEDL535	A
5	49	Revision of Topic	29/03/2018	PEDL535	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : Electric Drives-I

Faculty : rssaxena - RUNZUN

**SANJIVKUMAR SAXENA**

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	introduction to subject	12/12/2017	PEDL531	A
1	2	types of drives	13/12/2017	PEDL531	A
1	3	Components of power electronic Drives	13/12/2017	PEDL531	A
1	4	Criteria for selection of Drive components-match between the motor and the load	14/12/2017	PEDL531	A
1	5	continue..	15/12/2017	PEDL531	A
1	6	match between the motor and the power electronics converter	19/12/2017	PEDL531	A
1	7	continue..	20/12/2017	PEDL531	A
1	8	characteristics of mechanical systems	20/12/2017	PEDL531	A
1	9	continue..	21/12/2017	PEDL531	A
1	10	stability criteria.	22/12/2017	PEDL531	A
1	11	Numericals	26/12/2017	PEDL531	A
1	12	Numericals	27/12/2017	PEDL531	A
1	13	TAE-I	27/12/2017	PEDL531	A
1	14	Numericals	28/12/2017	PEDL531	A
2	15	introduction to DC Motor Drives	29/12/2017	PEDL531	A
2	16	DC Motor Drives characteristics	02/01/2018	PEDL531	A
2	17	DC motor load System	03/01/2018	PEDL531	A
2	18	Modes of operation of DC Motor Drives	03/01/2018	PEDL531	A
2	19	Dc motor drive Performance parameters	04/01/2018	PEDL531	A
2	20	System model for Dc motor drives	05/01/2018	PEDL531	A
2	21	motor rating	09/01/2018	PEDL531	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : Electric Drives-I

Faculty : rssaxena - RUNZUN

~~SANJIVKUMAR SAXENA~~

Unit	Topic Code	Topic Covered	Date	Course	Section
2	22	motor-mechanism dynamics-Drive transfer function	10/01/2018	PEDL531	A
2	23	Numericals	10/01/2018	PEDL531	A
2	24	Numericals	16/01/2018	PEDL531	A
3	25	Phase controlled DC Motor Drives	17/01/2018	PEDL531	A
3	26	Steady state analysis of the 3-phase converter controlled DC motors Drive	17/01/2018	PEDL531	A
3	27	Steady state analysis of the 3-phase converter controlled DC motors Drive	18/01/2018	PEDL531	A
3	28	Steady state solution including Harmonics	19/01/2018	PEDL531	A
3	29	continue..	23/01/2018	PEDL531	A
3	30	Discontinuous current conduction	24/01/2018	PEDL531	A
3	31	Transfer functions of the sub systems	24/01/2018	PEDL531	A
3	32	Numericals	25/01/2018	PEDL531	A
3	33	two quadrant dc motor drive with field weakening	30/01/2018	PEDL531	A
3	34	Four quadrant dc motor drive.	31/01/2018	PEDL531	A
3	35	Four quadrant dc motor drive...continue	31/01/2018	PEDL531	A
4	36	Chopper- Controlled DC motor drive	01/02/2018	PEDL531	A
4	37	Four quadrant chopper circuit	02/02/2018	PEDL531	A
4	38	Four quadrant chopper circuit,continue...	06/02/2018	PEDL531	A
4	39	chopper for inversion	07/02/2018	PEDL531	A
4	40	Model of the chopper	07/02/2018	PEDL531	A
4	41	steady state analysis of chopper	14/02/2018	PEDL531	A
4	42	steady state analysis of chopper continue	14/02/2018	PEDL531	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : Electric Drives-I

Faculty : rssaxena - RUNZUN

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Unit	Topic Code	Topic Covered	Date	Course	Section
4	43	numericals	15/02/2018	PEDL531	A
4	44	numericals	16/02/2018	PEDL531	A
4	45	controlled dc motor drive	20/02/2018	PEDL531	A
4	46	continuous and discontinuous conduction operation	21/02/2018	PEDL531	A
4	47	continuous and discontinuous conduction operation	21/02/2018	PEDL531	A
4	48	closed-loop operation.	22/02/2018	PEDL531	A
4	49	closed-loop operation...continue	23/02/2018	PEDL531	A
4	50	Numericals	27/02/2018	PEDL531	A
4	51	Numericals	28/02/2018	PEDL531	A
4	52	Numericals	28/02/2018	PEDL531	A
5	53	Induction motor drives	01/03/2018	PEDL531	A
5	54	Torque speed characteristics of 3-phase induction motor drive	06/03/2018	PEDL531	A
5	55	Torque speed characteristics of 3-phase induction motor drive continue..	07/03/2018	PEDL531	A
5	56	Numericals	07/03/2018	PEDL531	A
5	57	Numericals	08/03/2018	PEDL531	A
5	58	speed control of 3-phase induction motor by varying stator frequency and voltage	09/03/2018	PEDL531	A
5	59	speed control of 3-phase induction motor by varying stator frequency and voltage continue..	13/03/2018	PEDL531	A
5	60	speed control of 3-phase induction motor by varying stator frequency and voltage continue..	14/03/2018	PEDL531	A
5	61	impact of non sinusoidal excitation on induction motors..	14/03/2018	PEDL531	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : Electric Drives-I

Faculty : rssaxena - RUNZUN

~~SANJIVKUMAR SAXENA~~

Unit	Topic Code	Topic Covered	Date	Course	Section
5	62	impact of non sinusoidal excitation on induction motors..	15/03/2018	PEDL531	A
5	63	variable frequency converter classifications	16/03/2018	PEDL531	A
5	64	variable frequency PWM-VSI drives	20/03/2018	PEDL531	A
5	65	variable frequency square wave VSI drives	21/03/2018	PEDL531	A
5	66	variable frequency CSI drives	21/03/2018	PEDL531	A
5	67	Line frequency variable voltage drives	22/03/2018	PEDL531	A
5	68	soft start of induction motors	23/03/2018	PEDL531	A
5	69	speed control by static slip power recovery	27/03/2018	PEDL531	A
1	70	static Cramer and Scherbius drives	28/03/2018	PEDL531	A
1	71	Advanced Topic on Subject	28/03/2018	PEDL531	A
1	72	Revision	29/03/2018	PEDL531	A
1	73	Revision	30/03/2018	PEDL531	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : Special Machines

Faculty : jgchoudhari - Mr. Jagdish G. Choudhari

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Objectives and Outcomes of Special machines	11/12/2017	PEDL536	A
1	2	Introduction to Synchronous Reluctance motor (UNIT -I)	12/12/2017	PEDL536	A
1	3	Constructional features	12/12/2017	PEDL536	A
1	4	Numerical based on SyRM for Phasors	14/12/2017	PEDL536	A
1	5	Types of SyRM	21/12/2017	PEDL536	A
1	6	Axial and radial air gap motors	04/01/2018	PEDL536	A
1	7	Operating principle	08/01/2018	PEDL536	A
1	8	Reluctance – Phasor diagram - Characteristics – Vernier motor.	09/01/2018	PEDL536	A
1	9	TAE I	09/01/2018	PEDL536	A
2	10	Introduction to STEPPING MOTORS	15/01/2018	PEDL536	A
1	11	Numerical based on characteristics for SyRM	16/01/2018	PEDL536	A
2	12	Constructional features	16/01/2018	PEDL536	A
2	13	Principle of operation	18/01/2018	PEDL536	A
2	14	Numerical based on Hybrid motor	22/01/2018	PEDL536	A
2	15	Variable reluctance motor	23/01/2018	PEDL536	A
2	16	Hybrid motor	23/01/2018	PEDL536	A
2	17	Single and multi stack configurations	25/01/2018	PEDL536	A
2	18	Numerical based on torque predictions	29/01/2018	PEDL536	A
2	19	Theory of torque predictions	30/01/2018	PEDL536	A
3	20	Numerical based on SRM	30/01/2018	PEDL536	A
2	21	Linear and non-linear analysis – Characteristics – Drive circuits.	01/02/2018	PEDL536	A
2	22	TAE II	15/02/2018	PEDL536	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : Special Machines

Faculty : jgchoudhari - Mr. Jagdish G. Choudhari

Unit	Topic Code	Topic Covered	Date	Course	Section
3	23	Numerical based on load angle control	19/02/2018	PEDL536	A
3	24	Introduction to SWITCHED RELUCTANCE MOTORS	20/02/2018	PEDL536	A
3	25	Constructional features	20/02/2018	PEDL536	A
3	26	Principle of operation	22/02/2018	PEDL536	A
4	27	Numerical based on torque equation for BLDC	26/02/2018	PEDL536	A
3	28	Torque prediction	27/02/2018	PEDL536	A
3	29	Power controllers	27/02/2018	PEDL536	A
3	30	Non-linear analysis	01/03/2018	PEDL536	A
4	31	Numericals based on speed control for BLDC	05/03/2018	PEDL536	A
3	32	Microprocessor based control - Characteristics	06/03/2018	PEDL536	A
3	33	Computer control	06/03/2018	PEDL536	A
5	34	Numerical based on EMF equation for PMSM	08/03/2018	PEDL536	A
3	35	TAE III	12/03/2018	PEDL536	A
4	36	Introduction to PERMANENT MAGNET BRUSHLESS D.C. MOTORS	13/03/2018	PEDL536	A
4	37	Principle of operation - Types - Magnetic circuit analysis	13/03/2018	PEDL536	A
5	38	Numerical based on PMSM speed control	15/03/2018	PEDL536	A
4	39	EMF and torque equations	19/03/2018	PEDL536	A
4	40	Power controllers - Motor characteristics and control.	20/03/2018	PEDL536	A
4	41	TAE 5	20/03/2018	PEDL536	A
5	42	Introduction to PERMANENT MAGNET SYNCHRONOUS MOTORS	22/03/2018	PEDL536	A
5	43	Principle of operation	26/03/2018	PEDL536	A



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## Course wise Teaching Plan for Session : Summer 2018

Course : Special Machines

Faculty : jgchoudhari - Mr. Jagdish G. Choudhari

Unit	Topic Code	Topic Covered	Date	Course	Section
5	44	EMF and torque equations	27/03/2018	PEDL536	A
5	45	Reactance – Phasor diagram –Power controllers - Converter	27/03/2018	PEDL536	A
5	46	Volt-ampere requirements – Torque speed characteristics	29/03/2018	PEDL536	A





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## Course wise Teaching Plan for Session : Summer 2018

Course : Electric Drives-I

Faculty : rssaxena - RUNZUN

~~SANJIVKUMAR SAXENA~~

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Practical 1	16/12/2017	PEDP531	A
1	2	Practical 2	23/12/2017	PEDP531	A
1	3	Practical 3	30/12/2017	PEDP531	A
1	4	Practical 4	06/01/2018	PEDP531	A
1	5	Practical 5	20/01/2018	PEDP531	A
1	6	Practical 6	27/01/2018	PEDP531	A
1	7	Practical 7	03/02/2018	PEDP531	A
1	8	Practical 8	24/02/2018	PEDP531	A
1	9	Practical 9	03/03/2018	PEDP531	A
1	10	Practical 10	10/03/2018	PEDP531	A
1	11	Practical 11	17/03/2018	PEDP531	A
1	12	Practical 12	24/03/2018	PEDP531	A
1	13	Practical 13	31/03/2018	PEDP531	A