DEPARTMENT OF ELECTRICAL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY KURUKKSHETRA

MASTER OF TECHNOLOGY (ELECTRICAL ENGINEERING)
POWER SYSTEMS SPECIALIZATION

FIRST SEMESTER

Course No.	Title	Schedule of Teaching				Credit Point
		Lecture	Tutorial	Practical	Total	
E-501	Advanced Power System Analysis	4	—	—	4	4
E-503	Power System Protection and Relaying	4	—	—	4	4
E-505	EHVAC Transmission	4	—	—	4	4
E-507	Systems Engineering	4	—	—	4	4
	Elective-I	4	—	-	4	4
E-509	Power Systems Lab	—	—	3	3	1.5
E-511	Seminar-I	—	—	1	1	1
	Total	20	—	4	24	22.5

E-501 APSA is a core course in 1st sem PED also.

E-507 SE is a core course in 1st sem CS also.

SECOND SEMESTER

Course No.	Title	Schedule of Teaching				Credit Point
		Lecture	Tutorial	Practical	Total	
E-502	Power System Operation And Control	4	—	—	4	4
E-504	Power Systems Dynamics and Stability	4	—	—	4	4
E-506	HVDC Transmission	4	—	--	4	4
E-508	Power Apparatus and Machines	4	—	—	4	4
E-510	Information Security	4	—	-	4	4
E-512	Computer Applications Lab	—	—	3	3	1.5
E-514	Seminar-II	—	—	1	1	1.0
	Total	20	—	4	24	22.5

E-508 PAM is a core course in 2nd sem PED also.

E-510 IS is a core course in 2nd sem PED and 2nd sem CS also,

THIRD SEMESTER

Course No.	Title	Schedule of Teaching				Credit Point
		Lecture	Tutorial	Practical	Total	
	Elective-II	4	-	-	4	4
	Elective-III	4	—	-	4	4
E-601	Simulation Lab	—	—	3	3	1.5
	Dissertation	—	—	9	9	
E-603	Seminar-I on Dissertation					
	Total	8	—	12	20	9.5

FOURTH SEMESTER

Course No.	Title	Schedule of Teaching				Credit Point
		Lecture	Tutorial	Practical	Total	
E-602	Dissertation	—	—	20	20	—
E-604	Seminar-11 on Dissertation	—	—	—	—	—
	Total	—	—	20	20	—

For Theory Courses : During Semester Evaluation Weightage = 40%
End Semester Examination Weightage = 60%

For Laboratory Courses: During Semester Evaluation Weightage = 60%
End Semester Examination Weightage = 40%

Duration of end semester examination in each theory and laboratory course is three hours.

The examination in the subject of Dissertation is to be conducted jointly by two examiners, one of which will be the dissertation supervisor, and the other, an external examiner.

The result of the examination in Dissertation shall be one of the following- Approved, Approved with Distinction, Rejected.

DEPARTMENT OF ELECTRICAL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY KURUKKSHETRA

MASTER OF TECHNOLOGY (ELECTRICAL ENGINEERING)
POWER SYSTEMS SPECIALIZATION

List of Courses under Electives-I, II, III

SNo	Course No	Title
1	E-701	Transients in Power Systems
2	E-703	FACTS
3	E-705	Drives and Control
4	E-707	Power Systems Reliability
5	E-709	Power System Planning
6	E-711	Power Systems Communication
7	E-713	Wind Energy and Small Hydro energy Station
8	E-715	Special Topics In Power Systems
9	E-717	Intelligent Control
10	E-719	Cryptography
11	E-533	Modeling and Analysis of Electrical Machines
12	E-561	Microprocessors and Digital Signal Processors

E-705 D&C is an elective course in 3rd sem CS also.

E-717 IC is an elective course in 3rd sem PED and 3rd sem CS also.

E-719 Cryptography is an elective course in 3rd sem PED and 3rd sem CS also.

E-533 MAEM is also a core course in 1st sem PED.

E-561 MP&DSP is also an elective course in 1st sem PED and a core course in 1st sem CS.

DEPARTMENT OF ELECTRICAL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY KURUKKSHETRA

MASTER OF TECHNOLOGY (ELECTRICAL ENGINEERING)
CONTROL SYSTEMS SPECIALIZATION

FIRST SEMESTER

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Course No.	Title	Schedule of Teaching				Credit Point
		Lecture	Tutorial	Practical	Total	
E-507	Systems Engineering	4	—	~	4	4
E-535	Digital Control Systems	4	—	~	4	4
E-561	Microprocessors And Digital Signal Processors	4	—	—	4	4
E-563	Identification and Estimation	4	--	—	4	4
	Elective-I	4	--	—	4	4
E-565	Simulation Lab	—	---	3	3	1.5
E-567	Seminar-I	—	--	1	1	1
	Total	20	—	4	24	22.5

E-507 SE is a core course in 1st sem PS also.

E-535 DCS is a core course in 1st sem PED also.

E-561 MP&DSP is also an elective course in 1st sem PS and 1st sem PED.

SECOND SEMESTER

Course No.	Title	Schedule of Teaching				Credit Point
		Lecture	Tutorial	Practical	Total	
E-510	Information Securitv	4	—	—	4	4
E-562	Control Devices	4	—	—	4	4
E-564	Optimal and Robust Control	4	—	—	4	4
E-566	Non-linear and Adaptive Control	4	—	—	4	4
E-568	Reliability Engineering	4	—	—	4	4
E-570	Control Systems Lab	—	—	3	3	1.5
E-572	Seminar-II	—	—	1	1	1.0
	Total	20	-	4	24	22.5

E-510 IS is a core course in 2nd sem PS and 2nd sem PED also.

THIRD SEMESTER

Course No.	Title	Schedule of Teaching				Credit Point
		Lecture	Tutorial	Practical	Total	
	Elective-II	4	—	—	4	4
	Elective-III	4	—	—	4	4
E-661	Advanced Systems Lab	—	—	3	3	1.5
	Dissertation	—	—	9	9	
E-663	Seminar-I on Dissertation					
	Total	8	—	12	20	9.5

FOURTH SEMESTER

Course No.	Title	Schedule of Teaching				Credit Point
		Lecture	Tutorial	Practical	Total	
E-662	Dissertation	—	-	20	20	—
E-664	Seminar-II on Dissertation	--	--	—	—	—
	Total	—	-	20	20	—

For Theory Courses : During Semester Evaluation Weightage = 40%
End Semester Examination Weightage - 60%

For Laboratory Courses : During Semester Evaluation Weightage = 60%
End Semester Examination Weightage = 40%

Duration of end semester examination in each theory and laboratory course is three hours.

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The result of the examination in Dissertation should be one of the following- Approved, Approved with Distinction, Rejected.

DEPARTMENT OF ELECTRICAL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY KURUKKSHETRA

MASTER OF TECHNOLOGY (ELECTRICAL ENGINEERING)
CONTROL SYSTEMS SPECIALIZATION

List of courses under Electives-I, II, III

SNo	Course No	Title
1	E-705	Drives and control
2	E-717	Intelligent Control
3	E-719	Cryptography
4	E-737	Signal Processing
5	E-761	Robot Dynamics and Control
6	E-763	Industrial Processes Control
7	E-765	Control Systems Design
8	E-767	Guidance and Tracking Systems
9	E-769	Special Topics in Control Systems
10	E-569	Linear Systems Theory

E-705 D&C is an elective course in 3rd sem PS also.

E-717 IC is a common elective course in 3rd sem PS, PED, and CS.

E-719 Cryptography is a common elective course in 3rd sem PS, PED, and CS.

E-737 SP is an elective course in 3rd sem PED also.

DEPARTMENT OF ELECTRICAL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY KIJRUKKSHETRA

MASTER OF TECHNOLOGY (ELECTRICAL ENGINEERING)
POWER ELECTRONICS & DRIVES SPECIALIZATION

FIRST SEMESTER

Course No.	Title	Schedule of Teaching				Credit Point
		Lecture	Tutorial	Practical	Total	
E-501	Advanced Power System Analysis	4	—	—	4	4
E-531	Power Electronics Devices	4	—	—	4	4
E-533	Modeling and Analysis of Electrical Machines	4	—	—	4	4
E-535	Digital Control Systems	4	—	—	4	4
	Elective-I	4	—	—	4	4
E-537	Power Electronics Lab	--	—	3	3	1.5
E-539	Seminar-I	—	—	1	1	1
	Total	20	—	4	24	22.5

E-501 APSA is a core course in 1st sem PS also.

E-533 MAEM is also an elective course in 3rd sem PS.

E-535 DCS is a core course in 1st sem CS also.

SECOND SEMESTER

Course No.	Title	Schedule of Teaching				Credit Point
		Lecture	Tutorial	Practical	Total	
E-508	Power Apparatus and machines	4	—	—	4	4
E-510	Information Security	4	—	—	4	4
E-532	Electric Drives	4	—	—	4	4
E-534	AC Controllers	4	—	—	4	4
E-536	System Modeling and Optimization	4			4	4
E-538	Electrical Machines and Drives Lab	---	--	3	3	1.5
E-540	Seminar-II		—	1	1	1.0
	Total	20		4	24	22.5

E-508 PAM is a core course in 2nd sem PS also.

E-510 IS is a core course in 2nd sem PS and 2nd CS also.

THIRD SEMESTER

Course No.	Title	Schedule of Teaching				Credit Point
		Lecture	Tutorial	Practical	Total	
	Elective-II	4	-	—	4	4
	Elective-III	4	—	—	4	4
E-631	Simulation Lab	—	—	3	3	1.5
	Dissertation	—	—	9	9	
E-633	Seminar-I on Dissertation					
	Total	8	—	12	20	9.5

FOURTH SEMESTER

Course No.	Title	Schedule of Teaching				Credit Point
		Lecture	Tutorial	Practical	Total	
E-632	Dissertation	—	—	20	20	—
E-634	Seminar-II on Dissertation	—	—	—	—	—
	Total	—	—	20	20	—

For Theory Courses : During Semester Evaluation Weightage = 40%
End Semester Examination Weightage = 60%

For Laboratory Courses: During Semester Evaluation Weightage - 60%
End Semester Examination Weightage = 40%

Duration of end semester examination in each theory and laboratory course is three hours.

The examination in the subject of Dissertation is to be conducted jointly by two examiners, one of which will be the dissertation supervisor, and the other, an external examiner.

The result of the examination in Dissertation shall be one of the following- Approved, Approved with Distinction, Rejected.

DEPARTMENT OF ELECTRICAL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY KURUKKSHETRA

MASTER OF TECHNOLOGY (ELECTRICAL ENGINEERING)
POWER ELECTRONICS AND DRIVES SPECIALIZATION

List of courses under Electives-I, II, III

S. No	Course No.	Title
1	E-717	Intelligent Control
2	E-719	Cryptography
3	E-731	PLC And Micro Controllers
4	E-733	Computer Aided Design Of Electrical Machines
5	E-735	Special Topics In PED
6	E-737	Signal Processing
7	E-561	Microprocessors And Digital Signal Processors

E-717 IC is an elective course in 3rd sem PS and 3rd sem CS also.

E-719 Cryptography is an elective course in 3rd sem PS and 3rd sem CS also.

E-737 SP is an elective course in 3rd sem CS also.

E-561 MP&DSP is also a core course in 1st sem CS, and an elective in 1st sem PS.