



MINISTÉRIO DA EDUCAÇÃO
UNIVERSIDADE FEDERAL DE OURO PRETO
PRÓ-REITORIA DE GRADUAÇÃO



COURSE OF ELECTRICAL ENGINEERING - 2020/1(curriculum 1)

JOAO MONLEVADE'S CAMPUS

CODE	MANDATORY DISCIPLINES	PREREQUISITE	SWL	CWL	CLASSES		SEM
					T	P	
CEA001	ANALYTIC GEOMETRY AND LINEAR ALGEBRA		60	72	4	0	1
CEA031	GENERAL CHEMISTRY		60	72	2	2	1
CEA160	DIFFERENTIAL AND INTEGRAL CALCULUS I		60	72	4	0	1
CEA204	INTRODUCTION TO ELECTRIC ENGINEERING		30	36	2	0	1
CEA458	RESEARCH METHODOLOGY		30	36	2	0	1
CSI030	COMPUTER PROGRAMMING I		60	72	2	2	1
EAD707	COMMUNICATION AND EXPRESSION		30	36	2	0	1
CEA003	PHYSICS I	CEA160	60	72	3	1	2
CEA026	COMPUTER DRAWING		60	72	2	2	2
CEA301	DIFFERENTIAL AND INTEGRAL CALCULUS II	CEA001 CEA160	60	72	4	0	2
CEA307	STATISTICS AND PROBABILITY	CEA160	60	72	4	0	2
CSI488	ALGORITHMS AND DATA STRUCTURES I	CSI030	60	72	3	1	2
CEA006	DIFFERENTIAL AND INTEGRAL CALCULUS III	CEA301	60	72	4	0	3
CEA007	PHYSICS II	CEA003 CEA031	60	72	3	1	3
CEA013	PHYSICS III	CEA003	60	72	3	1	3
CEA302	INTRODUCTION TO ORDINARY DIFFERENTIAL EQUATIONS	CEA301	60	72	4	0	3
CEA341	PRINCIPLES OF DIGITAL ELECTRONICS	CSI030	60	72	2	2	3
CEA034	PHYSICS IV	CEA007 CEA013	60	72	3	1	4
CEA342	MATHEMATICAL METHODS APPLIED TO ELECTRIC ENGINEERING	CEA006 CEA302	60	72	4	0	4
CEA552	ELECTRICAL CIRCUITS I	CEA007 CEA302	60	72	2	2	4
CSI148	NUMERICAL ANALYSIS	CEA302 CSI030	60	72	2	2	4
CSI203	COMPUTER ORGANIZATION AND ARCHITECTURE I	CEA341 CSI030	60	72	2	2	4
CEA035	APPLIED QUANTUM MECHANICS	CEA034 CEA342	60	72	4	0	5
CEA502	ELECTROMAGNETISM	CEA006 CEA007	60	72	2	2	5
CEA555	MODELING AND LINEAR SYSTEMS ANALYSIS	CEA013 CEA342 CEA552	60	72	4	0	5
CEA562	SIGNALS AND SYSTEMS	CEA302	60	72	2	2	5
CEA563	ELECTRICAL CIRCUITS II	CEA552	60	72	2	2	5
CEA550	ELECTRICAL MACHINES I	CEA502 CEA563	60	72	2	2	6
CEA561	ELECTRONICS I	CEA034 CEA552	60	72	2	2	6
CEA570	CONTROL SYSTEM I	CEA555 CEA562	60	72	2	2	6
CEA573	POTENCY SYSTEMS I	CEA563	60	72	2	2	6
CEA582	FUNDAMENTALS OF COMMUNICATIONS	CEA562	60	72	2	2	6
CEA560	ELECTRICAL MACHINES II	CEA550	60	72	2	2	7
CEA571	ELECTRONICS II	CEA555 CEA561	60	72	2	2	7
CEA580	MICROPROCESSOR AND MICROCONTROLLERS	CEA561 CSI203	60	72	2	2	7
CEA583	POTENCY SYSTEMS II	CEA573	60	72	2	2	7
CEA147	ON-BOARD ELECTRONICS	CEA580	60	72	2	2	8
CEA581	POTENCY ELECTRONICS	CEA571	60	72	2	2	8
CEA671	DIGITAL SIGNALS PROCESSING	CEA562	60	72	3	1	8
EAD344	ADMINISTRATION THEORY		60	72	4	0	8
CEA572	INSTRUMENTATION	CEA561 CEA570	60	72	2	2	9
CEA590	ELECTRICAL DRIVE SYSTEMS	CEA560 CEA581	60	72	2	2	9
CEA598	ELECTRICAL ENGINEERING PROJECT	2300 hours CEA458 EAD707	30	36	2	0	9
CSI548	COMPUTER NETWORKS I	CSI488	60	72	2	2	9
EAD351	PHILOSOPHY AND ETHICS		60	72	4	0	9
CEA592	FUNDAMENTALS OF ENVIRONMENTAL SCIENCE	CEA031	30	36	2	0	10
CEA593	ELECTRICAL MATERIALS	CEA031 CEA502	60	72	4	0	10
CEA594	INTEGRATION DESIGN	2300 hours	60	72	0	4	10
CEA595	INDUSTRIAL INFORMATICS	CSI030 CSI548	60	72	2	2	10
CEA597	ELECTRICAL INSTALLATIONS	CEA563	60	72	4	0	10



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					T	P	
CEA453	MULTIMEDIA SYSTEMS	CEA562	60	72	3	1	
CEA515	DIGITAL IMAGE PROCESSING	CEA562	60	72	3	1	
CEA708	PRINCIPLES OF DIGITAL COMMUNICATION	CEA582	60	72	3	1	
CEA709	RADIO WAVE PROPAGATION	CEA502 CEA562	60	72	3	1	
CEA710	PROBABILITY AND STOCHASTIC PROCESSES FOR ENGINEERS	CEA006 CEA307	60	72	3	1	
CEA712	SPECIAL TOPICS IN TELECOMMUNICATIONS	CEA562	60	72	3	1	
CEA713	MULTIVARIABLE CONTROL SYSTEMS	CEA555	60	72	3	1	
CEA714	NON-LINEAR CONTROL SYSTEMS	CEA555	60	72	3	1	
CEA715	STOCHASTIC CONTROL SYSTEMS	CEA307 CEA555	60	72	3	1	
CEA716	CONTROL SYSTEM II	CEA555 CEA562	60	72	3	1	
CEA717	SYSTEMS IDENTIFICATION	CEA555 CEA562	60	72	3	1	
CEA718	ADAPTIVE CONTROL	CEA555 CEA562	60	72	3	1	
CEA719	SPECIAL TOPICS IN CONTROL SYSTEMS	CEA555	60	72	3	1	
CEA720	ELECTRICAL GROUNDING	CEA502 CEA552	60	72	3	1	
CEA721	INDUSTRIAL ELECTRICAL SYSTEMS	CEA563	60	72	3	1	
CEA722	POWER SYSTEM OPTIMIZATION	CEA006	60	72	3	1	
CEA723	ENERGY SYSTEM PLANNING	CEA563	60	72	3	1	
CEA724	ELECTRICITY QUALITY	CEA563	60	72	3	1	
CEA725	ELECTRICITY GENERATION	CEA563	60	72	3	1	
CEA726	ELECTRICITY DISTRIBUTION	CEA563	60	72	3	1	
CEA727	SPECIAL TOPICS IN ELECTRICAL SYSTEM	CEA563	60	72	3	1	
CEA728	CONTROL OF ELECTRIC SWITCHERS	CEA555	60	72	3	1	
CEA731	FOUNDATIONS OF BIOMEDICAL ENGINEERING	CEA341 CEA561 CEA562	60	72	3	1	
CEA732	BIOLOGICAL SIGNAL PROCESSING	CEA307 CEA562	60	72	3	1	
CEA733	TOPICS IN CONTROL SYSTEMS I	CEA555	60	72	3	1	
CEA734	TOPICS IN CONTROL SYSTEMS II	CEA555	60	72	3	1	
CEA735	TOPICS IN CONTROL SYSTEMS III	CEA555	60	72	3	1	
CEA736	TOPICS IN CONTROL SYSTEMS IV	CEA555	60	72	3	1	
CEA737	TOPICS IN ELECTRICAL SYSTEMS I	CEA563	60	72	3	1	
CEA738	TOPICS IN ELECTRICAL SYSTEMS II	CEA563	60	72	3	1	
CEA739	TOPICS IN ELECTRICAL SYSTEMS III	CEA563	60	72	3	1	
CEA740	TOPICS IN ELECTRICAL SYSTEMS IV		60	72	3	1	
CEA741	TOPICS IN TELECOMMUNICATIONS I	CEA563	60	72	3	1	
CEA742	TOPICS IN TELECOMMUNICATIONS II	CEA562	60	72	3	1	
CEA743	TOPICS IN TELECOMMUNICATIONS III	CEA562	60	72	3	1	
CEA744	TOPICS IN TELECOMMUNICATIONS IV	CEA562	60	72	3	1	
CSI472	COMPUTATIONAL INTELLIGENCE FOR OPTIMIZATION	CSI488	60	72	4	0	
CSI510	COMPUTER NETWORKS II	CSI548	60	72	3	1	
LET966	INTRODUCTION TO BRAZILIAN SIGN LANGUAGE (LIBRAS)		60	72	2	2	
CEA453	MULTIMEDIA SYSTEMS	CEA562	60	72	3	1	
CEA515	DIGITAL IMAGE PROCESSING	CEA562	60	72	3	1	
CEA708	PRINCIPLES OF DIGITAL COMMUNICATION	CEA582	60	72	3	1	
CEA709	RADIO WAVE PROPAGATION	CEA502 CEA562	60	72	3	1	
CEA710	PROBABILITY AND STOCHASTIC PROCESSES FOR ENGINEERS	CEA006 CEA307	60	72	3	1	
CEA712	SPECIAL TOPICS IN TELECOMMUNICATIONS	CEA562	60	72	3	1	
CEA731	FOUNDATIONS OF BIOMEDICAL ENGINEERING	CEA341 CEA561 CEA562	60	72	3	1	
CEA732	BIOLOGICAL SIGNAL PROCESSING	CEA307 CEA562	60	72	3	1	
CEA741	TOPICS IN TELECOMMUNICATIONS I	CEA563	60	72	3	1	
CEA742	TOPICS IN TELECOMMUNICATIONS II	CEA562	60	72	3	1	
CEA743	TOPICS IN TELECOMMUNICATIONS III	CEA562	60	72	3	1	
CEA744	TOPICS IN TELECOMMUNICATIONS IV	CEA562	60	72	3	1	
CEA745	TRANSMISSION LINES AND RADIATION	CEA502	60	72	4	0	
CSI510	COMPUTER NETWORKS II	CSI548	60	72	3	1	
CEA720	ELECTRICAL GROUNDING	CEA502 CEA552	60	72	3	1	
CEA721	INDUSTRIAL ELECTRICAL SYSTEMS	CEA563	60	72	3	1	
CEA722	POWER SYSTEM OPTIMIZATION	CEA006	60	72	3	1	
CEA723	ENERGY SYSTEM PLANNING	CEA563	60	72	3	1	
CEA724	ELECTRICITY QUALITY	CEA563	60	72	3	1	



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CEA725	ELECTRICITY GENERATION	CEA563	60	72	3	1	
CEA726	ELECTRICITY DISTRIBUTION	CEA563	60	72	3	1	
CEA727	SPECIAL TOPICS IN ELECTRICAL SYSTEM	CEA563	60	72	3	1	
CEA737	TOPICS IN ELECTRICAL SYSTEMS I	CEA563	60	72	3	1	
CEA738	TOPICS IN ELECTRICAL SYSTEMS II	CEA563	60	72	3	1	
CEA739	TOPICS IN ELECTRICAL SYSTEMS III	CEA563	60	72	3	1	
CEA740	TOPICS IN ELECTRICAL SYSTEMS IV		60	72	3	1	
CEA713	MULTIVARIABLE CONTROL SYSTEMS	CEA555	60	72	3	1	
CEA714	NON-LINEAR CONTROL SYSTEMS	CEA555	60	72	3	1	
CEA715	STOCHASTIC CONTROL SYSTEMS	CEA307 CEA555	60	72	3	1	
CEA716	CONTROL SYSTEM II	CEA555 CEA562	60	72	3	1	
CEA717	SYSTEMS IDENTIFICATION	CEA555 CEA562	60	72	3	1	
CEA718	ADAPTIVE CONTROL	CEA555 CEA562	60	72	3	1	
CEA719	SPECIAL TOPICS IN CONTROL SYSTEMS	CEA555	60	72	3	1	
CEA728	CONTROL OF ELECTRIC SWITCHERS	CEA555	60	72	3	1	
CEA733	TOPICS IN CONTROL SYSTEMS I	CEA555	60	72	3	1	
CEA734	TOPICS IN CONTROL SYSTEMS II	CEA555	60	72	3	1	
CEA735	TOPICS IN CONTROL SYSTEMS III	CEA555	60	72	3	1	
CEA736	TOPICS IN CONTROL SYSTEMS IV	CEA555	60	72	3	1	
CSI472	COMPUTATIONAL INTELLIGENCE FOR OPTIMIZATION	CSI488	60	72	4	0	

CODE	ACTIVITIES	PREREQUISITE	CHARACTER	SWL	SEM
ATV100	ACADEMIC-SCIENTIFIC-CULTURAL ACTIVITY		MANDATORY	200	
ATV500	MANDATORY INTERNSHIP	1800	MANDATORY	160	
ATV600	MONOGRAPH		MANDATORY	150	

Required Courses Load	Work Load
Mandatory Disciplines	2850
Elective Disciplines	300
Optative Disciplines	0
Facultative Disciplines	0
Activities	510
Total	3660