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

UFOP

COURSE OF COMPUTER ENGINEERING - 2026/2(curriculum 2)

JOAO MONLEVADE'S CAMPUS

CODE	MANDATORY DISCIPLINES	PREREQUISITE	SWL/EWL	CWL	CLASSES		SEM
					T	P	
CEA038	GENERAL CHEMISTRY		30/0	36	2	0	1
CEA039	GENERAL EXPERIMENTAL CHEMISTRY		30/0	36	0	2	1
CEA049	ANALYTIC GEOMETRY AND LINEAR ALGEBRA		60/0	72	4	0	1
CEA050	DIFFERENTIAL AND INTEGRAL CALCULUS I		60/0	72	4	0	1
CSI101	COMPUTER PROGRAMMING I		60/0	72	2	2	1
CSI902	RESEARCH METHODOLOGY		30/0	36	2	0	1
CSI903	INTRODUCTION TO COMPUTER ENGINEERING		30/0	36	2	0	1
EAD707	COMMUNICATION AND EXPRESSION		30/0	36	2	0	1
CEA051	DIFFERENTIAL AND INTEGRAL CALCULUS II	CEA050	60/0	72	4	0	2
CEA055	STATISTICS AND PROBABILITY	CEA050	60/0	72	4	0	2
CEA061	PHYSICS I	CEA049 CEA050	60/0	72	3	1	2
CSI011	DISCRETE MATHEMATICS		60/0	72	4	0	2
CSI102	COMPUTER PROGRAMMING II	CSI101	60/0	72	2	2	2
CEA052	DIFFERENTIAL AND INTEGRAL CALCULUS III	CEA051	60/0	72	4	0	3
CEA056	INTRODUCTION TO ORDINARY DIFFERENTIAL EQUATIONS	CEA051	60/0	72	4	0	3
CEA062	PHYSICS II	CEA061	60/0	72	3	1	3
CSI103	ALGORITHMS AND DATA STRUCTURES I	CSI101	60/0	72	2	2	3
ELT341	FUNDAMENTALS OF DIGITAL SYSTEMS	CSI101	60/0	72	3	1	3
CEA063	PHYSICS III	CEA049 CEA061	60/0	72	3	1	4
CSI104	ALGORITHMS AND DATA STRUCTURES II	CSI102 CSI103	60/0	72	3	1	4
CSI115	ALGORITHMS AND DATA STRUCTURES III	CSI011 CSI103	60/0	72	3	1	4
ELT552	ELECTRIC CIRCUITS I	CEA056 CEA062	60/0	72	3	1	4
ELT562	SIGNALS AND SYSTEMS	CEA056	60/0	72	3	1	4
CEA064	PHYSICS IV	CEA062 CEA063	60/0	72	3	1	5
CSI012	NUMERICAL ANALISYS	CEA049 CEA056 CSI101	60/0	72	4	0	5
CSI209	COMPUTER ARCHITECTURE AND ORGANIZATION I	ELT341	60/0	72	3	1	5
CSI412	SOFTWARE ENGINEERING I	CSI102 CSI103	60/0	72	4	0	5
ELT551	MODELING AND LINEAR SYSTEM ANALYSIS	CEA063 ELT552	60/0	72	4	0	5
CSI210	COMPUTER ARCHITECTURE AND ORGANIZATION II	CSI209	60/0	72	4	0	6
CSI301	COMPUTER NETWORKS I	CSI101 CSI209	60/0	72	3	1	6
CSI602	DATABASE I	CSI103	60/0	72	4	0	6
ELT561	ELECTRONICS I	ELT552	60/0	72	2	2	6
ELT582	COMMUNICATIONS FUNDAMENTALS	ELT552 ELT562	60/0	72	3	1	6
CSI106	THEORETICAL FUNDAMENTALS OF COMPUTING	CSI115	60/0	72	4	0	7
CSI204	OPERATING SYSTEMS	CSI103 CSI209	60/0	72	4	0	7
CSI302	DISTRIBUTED SYSTEMS	CSI301	60/0	72	3	1	7
CSI706	COMPUTER GRAPHICS	CSI103	60/0	72	4	0	7
ELT580	MICROPROCESSORS AND MICROCONTROLLERS	CSI209 ELT561	60/0	72	2	2	7
CSI114	PROGRAMMING LANGUAGES	CSI106	60/0	72	4	0	8
CSI206	SYSTEMS PERFORMANCE EVALUATION	CSI302	60/0	72	4	0	8
CSI522	HUMAN-COMPUTER INTERACTION	CSI412	60/0	72	4	0	8
CSI701	ARTIFICIAL INTELLIGENCE	CSI115	60/0	72	4	0	8
CSI990	INTEGRATOR PROJECT I	900 hours	30/30	36	2	0	8
CEA066	FUNDAMENTALS OF ENVIRONMENTAL SCIENCE	900 hours CEA038 CEA039	30/0	36	2	0	9
CSI109	COMPILERS I	CSI106	60/0	72	4	0	9
CSI901	INFORMATICS AND SOCIETY		30/0	36	2	0	9
CSI991	INTEGRATOR PROJECT II	CSI990	90/90	108	2	4	9
CSI995	UNDERGRADUATE THESIS I	1800 hours CSI902	60/0	72	0	4	9

SWL – SEMESTER WORKLOAD IN HOURS; EWL – EXTENSION WORKLOAD IN HOURS; CWL - 50 MINUTE CLASS WORKLOAD; P - PRACTICAL CLASSES; T - THEORY CLASSES; SEM - SEMESTER

CODE	MANDATORY DISCIPLINES	PREREQUISITE	SWL/EWL	CWL	CLASSES		SEM
					T	P	
CSI996	UNDERGRADUATE THESIS II	CSI995	60/0	72	0	4	10
EAD344	MANAGEMENT THEORIES I		60/0	72	4	0	10
GEP351	PHILOSOPHY AND ETHICS		60/0	72	4	0	10

CODE	ELECTIVE DISCIPLINES	PREREQUISITE	SWL/EWL	CWL	CLASSES		SEM
					T	P	
CEA040	STRUCTURE AND DYNAMICS OF COMPLEX NETWORKS	CEA049 CEA050 CEA055	60/0	72	4	0	
CEA041	DATA EXPLORATION AND VISUALIZATION	CEA055 CSI101	60/0	72	4	0	
CEA042	ALGEBRA AND APPLICATIONS	CEA049 CEA050	60/0	72	4	0	
CEA043	APPLICATIONS OF LINEAR ALGEBRA	CEA049 CEA050	60/0	72	4	0	
CEA044	INTRODUCTION TO DYNAMICAL SYSTEMS	CEA056	60/0	72	4	0	
CEA045	BAYESIAN NETWORKS	CEA049 CEA050	60/0	72	4	0	
CEA046	APPLIED ELECTROCHEMISTRY	CEA038 CEA039	60/0	72	4	0	
CEA047	PHYSICAL CHEMISTRY PRINCIPLES	CEA038 CEA039	60/0	72	4	0	
CEA057	MATHEMATICAL METHODS APPLIED TO ELECTRICAL ENGINEERING	CEA052 CEA056	60/0	72	4	0	
CEA065	APPLIED QUANTUM MECHANICS	CEA057 CEA064	60/0	72	4	0	
CEA068	FINANCIAL MATHEMATICS	CEA050	60/0	72	4	0	
CEA069	QUANTUM COMPUTATION AND QUANTUM INFORMATION	CEA056 CEA064	60/0	72	4	0	
CEA070	CLASSICAL RELATIVISTIC ELECTRODYNAMICS	ELT502	60/0	72	4	0	
CEA071	ELECTROMAGNETISM II	ELT502	60/0	72	4	0	
CEA073	FUNDAMENTALS OF QUANTUM MECHANICS	CEA064	60/0	72	4	0	
CEA074	INTRODUCTION TO QUANTUM FIELD THEORY	CEA052 CEA056 CEA064	60/0	72	4	0	
CEA075	APPLIED QUANTUM MECHANICS II	CEA065	60/0	72	4	0	
CEA076	INTRODUCTION TO THE BRAZILIAN SIGN LANGUAGE		60/0	72	2	2	
CSI111	LOGIC APPLIED TO COMPUTING	CSI011 CSI103	60/0	72	4	0	
CSI207	ROBOTICS	CSI101 CSI209	60/0	72	2	2	
CSI208	HARDWARE DESCRIPTION LANGUAGES	CSI101 CSI209	60/0	72	2	2	
CSI304	COMPUTER NETWORKS II	CSI301	60/0	72	3	1	
CSI305	INTERNET OF THINGS	CSI301	60/0	72	4	0	
CSI306	MOBILE COMPUTING	CSI301	60/0	72	4	0	
CSI308	NETWORK SECURITY	CSI301	60/0	72	2	2	
CSI405	SOFTWARE PROJECT MANAGEMENT	CSI412	60/0	72	4	0	
CSI406	AGILE SOFTWARE DEVELOPMENT	CSI412	60/0	72	4	0	
CSI408	SOFTWARE TESTS	CSI412	60/0	72	4	0	
CSI409	PROJECT STANDARDS	CSI412 CSI603	60/0	72	3	1	
CSI410	SOFTWARE ENGINEERING II	CSI412	60/0	72	4	0	
CSI411	SOFTWARE QUALITY	CSI412	60/0	72	4	0	
CSI505	ASSESSMENT OF INTERACTIVE SYSTEMS	CSI522	60/0	72	4	0	
CSI507	GAME DESIGN AND DEVELOPMENT	CSI412	60/0	72	4	0	
CSI521	WEB ACCESSIBILITY	CSI522 CSI606	60/0	72	2	2	
CSI523	GAME DESIGN AND DEVELOPMENT LAB	CSI101	60/0	72	1	3	
CSI603	DATABASE II	CSI104 CSI602	60/0	72	4	0	
CSI605	DECISION SUPPORT SYSTEMS	CSI602	60/0	72	3	1	
CSI606	WEB SYSTEMS I	CSI602 CSI603	60/0	72	2	2	
CSI607	WEB SYSTEMS II	CSI606	60/0	72	2	2	
CSI608	PROGRAMMING FOR MOBILE DEVICES	CSI412	60/0	72	1	3	
CSI609	SOCIAL MEDIA ANALYSIS	CSI115	60/0	72	2	2	
CSI702	COMPUTATIONAL INTELLIGENCE FOR OPTIMIZATION	CSI115 CSI701	60/0	72	2	2	
CSI703	EVOLUTIONARY COMPUTING	CSI115 CSI701	60/0	72	2	2	
CSI704	MACHINE LEARNING	CSI701	60/0	72	4	0	
CSI705	DEEP LEARNING	CSI701	60/0	72	4	0	
CSI707	DIGITAL IMAGE PROCESSING	CSI101 CSI103	60/0	72	3	1	
CSI708	COMPUTER VISION	CEA049 CSI101	60/0	72	4	0	
CSI709	ONTOLOGICAL ENGINEERING AND FUZZY LOGIC	CSI114 CSI701	60/0	72	4	0	
CSI710	DESIGN AND ANALYSIS OF EXPERIMENTS	CEA055	60/0	72	3	1	
CSI711	DATA MINING	CSI602	60/0	72	0	4	
CSI803	GEOGRAPHIC DATABASES	CSI602	60/0	72	4	0	

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					T	P	
CSI804	GEOPROCESSING AND GEOGRAPHIC INFORMATION SYSTEMS	CSI602	60/0	72	4	0	
CSI805	MODELING AND SIMULATION OF LAND SYSTEMS	CSI102 CSI103	60/0	72	4	0	
CSI806	WEARABLE COMPUTING	CSI209	60/0	72	4	0	
ELT026	COMPUTER DRAWING		60/0	72	2	2	
ELT106	ELECTRONICS LABORATORY II	ELT551 ELT561	30/0	36	0	2	
ELT107	INSTRUMENTATION LABORATORY	ELT106 ELT570 ELT571	30/0	36	0	2	
ELT147	EMBEDDED ELECTRONIC	ELT580	60/0	72	2	2	
ELT453	MULTIMEDIA SYSTEMS	ELT562	60/0	72	2	2	
ELT502	ELECTROMAGNETISM	CEA052 ELT552	60/0	72	4	0	
ELT563	ELECTRIC CIRCUITS II	ELT552	60/0	72	3	1	
ELT570	CONTROL SYSTEMS I	ELT551 ELT562	45/0	54	3	0	
ELT571	ELECTRONICS II	ELT551 ELT561	30/0	36	2	0	
ELT572	INSTRUMENTATION	ELT106 ELT570 ELT571	30/0	36	2	0	
ELT671	DIGITAL SIGNAL PROCESSING	ELT562	60/0	72	3	1	
ELT708	PRINCIPLES OF DIGITAL COMMUNICATIONS	ELT562	60/0	72	2	2	
ELT709	RADIO WAVE PROPAGATION	ELT502 ELT562	60/0	72	3	1	
ELT710	PROBABILITY AND STOCHASTIC PROCESSES FOR ENGINEERING	CEA052 CEA055	60/0	72	4	0	
ELT712	SPECIAL TOPICS IN TELECOMMUNICATIONS	ELT562	60/0	72	3	1	
ELT741	SPECIAL TOPICS IN TELECOMMUNICATIONS I	ELT502	60/0	72	3	1	
ELT742	SPECIAL TOPICS IN TELECOMMUNICATIONS II	ELT562	60/0	72	2	2	
ELT743	SPECIAL TOPICS IN TELECOMMUNICATIONS III	ELT562	60/0	72	2	2	
ELT744	SPECIAL TOPICS IN TELECOMMUNICATIONS IV	ELT562	60/0	72	0	4	
ELT745	TRANSMISSION LINES AND RADIATION	ELT502	60/0	72	4	0	
ENP007	COMBINATORIAL OPTIMIZATION LABORATORY	ENP012	30/0	36	0	2	
ENP012	LINEAR AND INTEGER PROGRAMMING	CEA049 CSI103	60/0	72	3	1	
ENP043	ETHICS AND RESPONSIBILITY SOCIAL AND ENVIRONMENTAL		60/0	72	4	0	
ENP045	SCIENCE, TECHNOLOGY AND SOCIETY		60/0	72	4	0	
ENP493	ENTREPRENEURSHIP	1800 hours	60/0	72	4	0	

CODE	ACTIVITIES	PREREQUISITE	CHARACTER	SWL	SEM
ATV021		1230	MANDATORY	160	
ATV100			MANDATORY	110	
ATV300			MANDATORY	240	

Required Courses Load		Work Load
Mandatory Disciplines		2850
Elective Disciplines		240
Optative Disciplines		0
Facultative Disciplines		0
Activities		510
Extensions		360
	Total	3600

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