



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



COURSE OF COMPUTER 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
CSI030	COMPUTER PROGRAMMING I		60	72	2	2	1
CSI201	INTRODUCTION TO COMPUTER ENGINEERING		30	36	2	0	1
CSI427	RESEARCH METHODOLOGY APPLIED TO COMPUTING		30	36	2	0	1
EAD707	COMMUNICATION AND EXPRESSION		30	36	2	0	1
CEA003	PHYSICS I	CEA001 CEA160	60	72	3	1	2
CEA301	DIFFERENTIAL AND INTEGRAL CALCULUS II	CEA160	60	72	4	0	2
CEA307	STATISTICS AND PROBABILITY	CEA160	60	72	4	0	2
CSI032	COMPUTER PROGRAMMING II	CSI030	60	72	2	2	2
CSI443	DISCRETE MATHEMATICS		60	72	4	0	2
CEA006	DIFFERENTIAL AND INTEGRAL CALCULUS III	CEA301	60	72	4	0	3
CEA007	PHYSICS II	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
CSI488	ALGORITHMS AND DATA STRUCTURES I	CSI030	60	72	3	1	3
CEA013	PHYSICS III	CEA001 CEA003	60	72	3	1	4
CEA552	ELECTRICAL CIRCUITS I	CEA007 CEA302	60	72	2	2	4
CEA562	SIGNALS AND SYSTEMS	CEA301 CEA302	60	72	2	2	4
CSI429	ALGORITHMS AND DATA STRUCTURES II	CSI032 CSI488	60	72	4	0	4
CSI466	GRAPHS THEORY	CSI443 CSI488	60	72	4	0	4
CEA034	PHYSICS IV	CEA007 CEA013	60	72	3	1	5
CEA502	ELECTROMAGNETISM	CEA006 CEA007	60	72	2	2	5
CSI148	NUMERICAL ANALYSIS	CEA001 CEA302 CSI030	60	72	2	2	5
CSI203	COMPUTER ORGANIZATION AND ARCHITECTURE I	CEA341 CSI030	60	72	2	2	5
CSI485	SOFTWARE ENGINEERING I	CSI032 CSI488	60	72	4	0	5
CEA561	ELECTRONICS I	CEA034 CEA552	60	72	2	2	6
CEA582	FUNDAMENTALS OF COMMUNICATIONS	CEA562	60	72	2	2	6
CSI440	DATABASE I	CSI488	60	72	4	0	6
CSI509	COMPUTER ARCHITECTURE II	CSI203	60	72	4	0	6
CSI546	ALGORITHM DESIGN AND ANALYSIS	CSI466	60	72	4	0	6
CEA551	MODELING AND LINEAR SYSTEMS ANALYSIS	CEA013 CEA552	60	72	2	2	7
CEA580	MICROPROCESSOR AND MICROCONTROLLERS	CSI203	60	72	2	2	7
CSI437	OPERATIONAL SYSTEMS	CSI203 CSI488	60	72	4	0	7
CSI476	THEORETICAL FUNDAMENTALS OF COMPUTER	CSI466	60	72	4	0	7
CSI508	COMPUTER GRAPHICS	CEA001 CSI488	60	72	4	0	7
CSI419	PROGRAMMING LANGUAGES	CSI476	60	72	4	0	8
CSI450	HUMAN-COMPUTER INTERACTION	CSI485	60	72	4	0	8
CSI457	ARTIFICIAL INTELLIGENCE	CSI466	60	72	4	0	8
CSI548	COMPUTER NETWORKS I	CSI488	60	72	2	2	8
EAD344	ADMINISTRATION THEORY		60	72	4	0	8
CSI433	DISTRIBUTED SYSTEMS	CSI548	60	72	4	0	9
CSI495	UNDERGRADUATE THESIS I	2200 hours	90	108	0	6	9
CSI506	COMPILERS I	CSI476	60	72	4	0	9
CSI510	COMPUTER NETWORKS II	CSI548	60	72	3	1	9
EAD351	PHILOSOPHY AND ETHICS		60	72	4	0	9
CEA592	FUNDAMENTALS OF ENVIRONMENTAL SCIENCE		30	36	2	0	10
CSI491	INFORMATICS AND SOCIETY		30	36	2	0	10
CSI496	UNDERGRADUATE THESIS II	CSI495	60	72	0	4	10
CSI693	SYSTEMS PERFORMANCE EVALUATION	CSI433	60	72	4	0	10



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					T	P	
CEA026	COMPUTER DRAWING		60	72	2	2	
CEA147	ON-BOARD ELECTRONICS	CEA580	60	72	2	2	
CEA342	MATHEMATICAL METHODS APPLIED TO ELECTRIC ENGINEERING	CEA006 CEA302	60	72	4	0	
CEA453	MULTIMEDIA SYSTEMS	CEA562	60	72	3	1	
CEA563	ELECTRICAL CIRCUITS II	CEA552	60	72	2	2	
CEA570	CONTROL SYSTEM I	CEA562	60	72	2	2	
CEA571	ELECTRONICS II	CEA551 CEA561	60	72	2	2	
CEA572	INSTRUMENTATION	CEA561 CEA570	60	72	2	2	
CEA671	DIGITAL SIGNALS PROCESSING	CEA562	60	72	3	1	
CEA708	PRINCIPLES OF DIGITAL COMMUNICATION	CEA562	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	
CEA711	MOBILE COMMUNICATIONS SYSTEMS AND NETWORKS	CEA302 CEA341 CSI488	60	72	4	0	
CEA712	SPECIAL TOPICS IN TELECOMMUNICATIONS	CEA562	60	72	3	1	
CSI001	SOCIAL MEDIA ANALYSIS	CSI466	60	72	4	0	
CSI401	DEVELOPMENT FOR MOBILE DEVICES		60	72	1	3	
CSI402	MOBILE COMPUTING		60	72	4	0	
CSI434	TOPICS IN COMPUTER NETWORKS	CSI548	60	72	4	0	
CSI436	MOBILE COMPUTING	CSI440	60	72	4	0	
CSI442	DATABASE II	CSI429 CSI440	60	72	4	0	
CSI472	COMPUTATIONAL INTELLIGENCE FOR OPTIMIZATION	CSI488	60	72	4	0	
CSI477	WEB SYSTEMS I	CSI440 CSI485 CSI548	60	72	2	2	
CSI486	SOFTWARE ENGINEERING II	CSI485	60	72	4	0	
CSI501	INTRODUCTION TO ROBOTICS	CEA341 CSI030	60	72	2	2	
CSI502	HARDWARE DESCRIPTION LANGUAGE	CEA341 CSI030	60	72	2	2	
CSI503	AGILE SOFTWARE DEVELOPMENT	CSI485	60	72	2	2	
CSI512	TOPICS IN SOFTWARE ENGINEERING I	CSI485	60	72	4	0	
CSI513	TOPICS IN SYSTEM DEVELOPMENT I	CSI440 CSI485	60	72	4	0	
CSI515	DIGITAL IMAGE PROCESSING	CEA302 CEA341 CEA562 CSI488	60	72	3	1	
CSI516	TOPICS IN SYSTEM DEVELOPMENT II	CSI486	60	72	4	0	
CSI518	INTERNSHIP II - LABOR AND SOCIAL SECURITY PRACTICE	CSI486	60	72	4	0	
CSI520	TOPICS IN ARTIFICIAL INTELLIGENCE	CSI032 CSI488	60	72	4	0	
CSI549	ASSESSMENT OF INTERACTIVE SYSTEMS	CSI450	60	72	4	0	
CSI557	EVOLUTIONARY COMPUTATION	CSI488	60	72	2	2	
CSI558	MODEL DIRECTED DEVELOPMENT	CSI485	60	72	4	0	
CSI559	FUNDAMENTALS OF PROGRAMMING LANGUAGES	CSI419	60	72	4	0	
CSI564	GEOPROCESSING AND GEOGRAPHIC INFORMATION SYSTEMS	900 hours CSI440	60	72	4	0	
CSI566	MODELING AND SIMULATION OF LAND SYSTEMS	900 hours CSI032 CSI488	60	72	4	0	
CSI567	PROJECT STANDARDS	CSI485	60	72	3	1	
CSI568	SOFTWARE QUALITY	CSI485	60	72	4	0	
CSI569	FORMAL SEMANTICS	CSI419	60	72	4	0	
CSI574	TYPES SYSTEMS	CSI419	60	72	4	0	
CSI575	WEB SYSTEMS II	CSI477 CSI486	60	72	2	2	
CSI576	SOFTWARE TESTS	CSI485	60	72	4	0	
CSI577	LOGIC APPLIED COMPUTING	CSI443 CSI488	60	72	4	0	
CSI578	TOPICS IN PROGRAMMING LANGUAGES	CSI419	60	72	4	0	
CSI604	COMPILERS	CSI506	60	72	4	0	
CSI730	TOPICS IN COMPUTING SYSTEMS	CSI032 CSI488	60	72	4	0	
CSI731	GEOGRAPHIC DATABASES	CSI440	60	72	4	0	
CSI732	ONTOLOGICAL ENGINEERING AND FUZZY LOGIC	CSI419 CSI457	60	72	4	0	
CSI733	MACHINE LEARNING	CSI457	60	72	4	0	
CSI734	INTERNET OF THINGS	CSI548	60	72	4	0	
CSI735	SOFTWARE PROJECT MANAGEMENT	CSI440 CSI485	60	72	4	0	
ENP151	SCIENCE, TECHNOLOGY AND SOCIETY		60	72	4	0	
ENP152	ETHICS AND SOCIAL AND ENVIRONMENTAL RESPONSIBILITY		60	72	4	0	



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					T	P	
ENP153	LINEAR PROGRAMMING	CEA001 CSI030 CSI488	60	72	3	1	
ENP160	OPTIMIZATION COMBINING	ENP153	60	72	3	1	
ENP493	ENTREPRENEURSHIP	1800 hours	60	72	4	0	
LET966	INTRODUCTION TO BRAZILIAN SIGN LANGUAGE (LIBRAS)		60	72	2	2	
CEA453	MULTIMEDIA SYSTEMS	CEA562	60	72	3	1	
CEA708	PRINCIPLES OF DIGITAL COMMUNICATION	CEA562	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	
CEA711	MOBILE COMMUNICATIONS SYSTEMS AND NETWORKS	CEA302 CEA341 CSI488	60	72	4	0	
CEA712	SPECIAL TOPICS IN TELECOMMUNICATIONS	CEA562	60	72	3	1	
CSI515	DIGITAL IMAGE PROCESSING	CEA302 CEA341 CEA562 CSI488	60	72	3	1	
CSI436	MOBILE COMPUTING	CSI440	60	72	4	0	
CSI442	DATABASE II	CSI429 CSI440	60	72	4	0	
CSI472	COMPUTATIONAL INTELLIGENCE FOR OPTIMIZATION	CSI488	60	72	4	0	
CSI477	WEB SYSTEMS I	CSI440 CSI485 CSI548	60	72	2	2	
CSI486	SOFTWARE ENGINEERING II	CSI485	60	72	4	0	
CSI512	TOPICS IN SOFTWARE ENGINEERING I	CSI485	60	72	4	0	
CSI513	TOPICS IN SYSTEM DEVELOPMENT I	CSI440 CSI485	60	72	4	0	
CSI516	TOPICS IN SYSTEM DEVELOPMENT II	CSI486	60	72	4	0	
CSI518	INTERNSHIP II - LABOR AND SOCIAL SECURITY PRACTICE	CSI486	60	72	4	0	
CSI549	ASSESSMENT OF INTERACTIVE SYSTEMS	CSI450	60	72	4	0	
CSI557	EVOLUTIONARY COMPUTATION	CSI488	60	72	2	2	
CSI558	MODEL DIRECTED DEVELOPMENT	CSI485	60	72	4	0	
CSI564	GEOPROCESSING AND GEOGRAPHIC INFORMATION SYSTEMS	900 hours CSI440	60	72	4	0	
CSI567	PROJECT STANDARDS	CSI485	60	72	3	1	
CSI568	SOFTWARE QUALITY	CSI485	60	72	4	0	
CSI575	WEB SYSTEMS II	CSI477 CSI486	60	72	2	2	
CSI576	SOFTWARE TESTS	CSI485	60	72	4	0	

CODE	ACTIVITIES	PREREQUISITE	CHARACTER	SWL	SEM
ATV100	ACADEMIC-SCIENTIFIC-CULTURAL ACTIVITY		MANDATORY	190	
ATV500	MANDATORY INTERNSHIP	1500	MANDATORY	200	

Required Courses Load	Work Load
Mandatory Disciplines	2940
Elective Disciplines	300
Optative Disciplines	0
Facultative Disciplines	0
Activities	390
Total	3630