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

UFOP

COURSE OF PRODUCTION ENGINEERING - 2026/2(curriculum 3)

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
CSI002	ALGORITHMS I		60/0	72	2	2	1
ENP042	INTRODUCTION TO INDUSTRIAL ENGINEERING		30/0	36	2	0	1
GEP028	STUDY METHODS AND TECHNIQUES		30/0	36	2	0	1
CEA051	DIFFERENTIAL AND INTEGRAL CALCULUS II	CEA049 CEA050	60/0	72	4	0	2
CEA061	PHYSICS I	CEA049 CEA050	60/0	72	3	1	2
CSI003	ALGORITHMS II	CSI002	60/0	72	2	2	2
ENP043	ETHICS AND RESPONSIBILITY SOCIAL AND ENVIRONMENTAL		60/0	72	4	0	2
ENP044	GRAPHIC EXPRESSION		60/0	72	2	2	2
CEA052	DIFFERENTIAL AND INTEGRAL CALCULUS III	CEA050 CEA051	60/0	72	4	0	3
CEA053	PROBABILITY	CEA050 CEA051	60/0	72	4	0	3
CEA056	INTRODUCTION TO ORDINARY DIFFERENTIAL EQUATIONS	CEA051	60/0	72	4	0	3
CEA062	PHYSICS II	CEA038 CEA039 CEA051 CEA061	60/0	72	3	1	3
ENP045	SCIENCE, TECHNOLOGY AND SOCIETY		60/0	72	4	0	3
CEA054	STATISTICS I	CEA053	60/0	72	4	0	4
CEA058	NUMERICAL CALCULUS	CEA051 CEA056 CEA062 CSI002	60/0	72	3	1	4
CEA063	PHYSICS III	CEA038 CEA039 CEA052 CEA053	60/0	72	3	1	4
CEA067	PRINCIPLES OF MATERIALS SCIENCE	CEA038 CEA039 CEA062	60/0	72	4	0	4
ENP001	TECHNOLOGICAL EXTENSION PROJECT I		30/30	36	2	0	4
ENP101	INTRODUCTION TO RESEARCH METHODOLOGY	ENP045	30/0	36	2	0	4
ENP003	PRODUCTION PROCESSES	CEA058 CEA063	30/0	36	2	0	5
ENP006	TECHNOLOGICAL EXTENSION PROJECT II	ENP001	30/30	36	2	0	5
ENP012	LINEAR AND INTEGER PROGRAMMING	CEA049 CSI002 CSI003	60/0	72	3	1	5
ENP046	ORGANIZATIONAL THEORY	ENP101	60/0	72	4	0	5
ENP047	ERGONOMICS / HUMAN FACTORS	750 hours ENP101	60/0	72	4	0	5
ENP157	STATISTICS II	CEA053 CEA054	60/0	72	3	1	5
ENP007	COMBINATORIAL OPTIMIZATION LABORATORY	ENP012	30/0	36	0	2	6
ENP008	SAFETY WORK	ENP047	30/0	36	2	0	6
ENP015	MICROECONOMICS	CEA052 CEA054	60/0	72	4	0	6
ENP022	QUALITY MANAGEMENT	CEA054	60/0	72	4	0	6
ENP048	MANUFACTURING COSTS	1200 hours	60/0	72	4	0	6
ENP049	WORK OF ORGANIZATION	ENP047 ENP101	60/0	72	4	0	6
ENP023	ENGINEERING ECONOMICS	CEA053 CEA054 ENP015 ENP048	60/0	72	4	0	7
ENP050	WORK PSYCHOLOGY	ENP049	60/0	72	4	0	7
ENP122	PRODUCTION PLANNING AND CONTROL I	1200 hours	60/0	72	4	0	7
ENP141	STATISTICAL QUALITY CONTROL	ENP022	60/0	72	4	0	7
ENP154	STRATEGIC AND MARKETING PLANNING	1050 hours ENP015	60/0	72	4	0	7
ENP009	LOGISTICS AND SUPPLY CHAIN MANAGEMENT	ENP003 ENP007 ENP012	60/0	72	4	0	8
ENP051	PRODUCT DEVELOPMENT SYSTEM	ENP023 ENP044 ENP157	60/0	72	4	0	8
ENP123	PRODUCTION PLANNING AND CONTROL II	ENP122	60/0	72	4	0	8

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	
CSI004	INTRODUCTION TO TECHNOLOGY AND INFORMATION SYSTEMS	1500 hours	60/0	72	4	0	9
ENP010	MODELING OF PRODUCTION AND LOGISTICS SYSTEMS I	CEA054 ENP007 ENP009 ENP122	30/0	36	0	2	9
ENP013	DISCRETE EVENT SIMULATION	CEA053 CSI003 ENP007	30/0	36	0	2	9
ENP016	PREPARATION OF COURSE COMPLETION PROJECT	2100 hours	30/0	36	2	0	9
ENP052	PROJECT MANAGEMENT	ENP046 ENP122 ENP154	60/0	72	4	0	9
ENP053	KNOWLEDGE MANAGEMENT	ENP046 ENP154	60/0	72	4	0	9
ENP020	MODELING OF PRODUCTION AND LOGISTICS SYSTEMS II	ENP010	30/0	36	0	2	10
ENP021	COMPLETION OF COURSE WORK	ENP016	60/0	72	4	0	10
ENP029	ENVIRONMENTAL MANAGEMENT	1500 hours	60/0	72	4	0	10
ENP054	SERVICE MANAGEMENT	ENP046 ENP049 ENP154	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 CEA054 CSI003	60/0	72	4	0	
CEA041	DATA EXPLORATION AND VISUALIZATION	CEA054 CSI002	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	
CEA048	MATHEMATICAL MODELLING	CEA056	60/0	72	4	0	
CEA064	PHYSICS IV	CEA063	60/0	72	3	1	
CEA076	INTRODUCTION TO THE BRAZILIAN SIGN LANGUAGE		60/0	72	2	2	
CSI011	DISCRETE MATHEMATICS	1200 hours	60/0	72	4	0	
CSI102	COMPUTER PROGRAMMING II	CSI002	60/0	72	2	2	
CSI104	ALGORITHMS AND DATA STRUCTURES II	CSI003	60/0	72	3	1	
CSI202	COMPUTER ORGANIZATION AND ARCHITECTURE I	1500 hours CSI002	60/0	72	4	0	
CSI301	COMPUTER NETWORKS I	CSI003	60/0	72	3	1	
CSI403	SOFTWARE ENGINEERING I	1500 hours CSI003	60/0	72	4	0	
CSI404	SOFTWARE ENGINEERING II	CSI403	60/0	72	4	0	
CSI405	SOFTWARE PROJECT MANAGEMENT	CSI404	60/0	72	4	0	
CSI466	GRAPH THEORY	CSI003 CSI011	60/0	72	4	0	
CSI504	HUMAN-COMPUTER INTERACTION	CSI403	60/0	72	4	0	
CSI546	ALGORITHM DESIGN AND ANALYSIS	CSI466	60/0	72	4	0	
CSI601	FUNDAMENTALS OF INFORMATION SYSTEMS	1200 hours	60/0	72	4	0	
CSI602	DATABASE I	CSI003	60/0	72	4	0	
CSI605	DECISION SUPPORT SYSTEMS	CSI601 CSI602	60/0	72	3	1	
CSI609	SOCIAL MEDIA ANALYSIS	CSI466	60/0	72	2	2	
CSI701	ARTIFICIAL INTELLIGENCE	1500 hours CSI003	60/0	72	4	0	
CSI703	EVOLUTIONARY COMPUTING	CSI701 ENP012	60/0	72	2	2	
CSI704	MACHINE LEARNING	CSI701	60/0	72	4	0	
CSI802	INFORMATION TECHNOLOGY MANAGEMENT	1500 hours	60/0	72	4	0	
CSI804	GEOPROCESSING AND GEOGRAPHIC INFORMATION SYSTEMS	CSI602	60/0	72	4	0	
CSI901	INFORMATICS AND SOCIETY	1200 hours	30/0	36	2	0	
DTE016	GLOBALIZATION	1500 hours	60/0	72	4	0	
DTE071	PHILOSOPHICAL AND SOCIOLOGICAL FUNDAMENTALS OF EDUCATION		45/0	54	3	0	

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DTE108	PHILOSOPHY OF TECHNOLOGY		60/0	72	4	0	
EAD627	ENERGY MATRIX AND DEVELOPMENT	1500 hours	60/0	72	4	0	
EAD707	COMMUNICATION AND EXPRESSION		30/0	36	2	0	
ELT116		CSI003 CSI301	60/0	72	2	2	
ELT502	ELECTROMAGNETISM	CEA052 CEA062	60/0	72	4	0	
ELT597	ELECTRICAL INSTALLATIONS	CEA063	60/0	72	4	0	
ELT710	PROBABILITY AND STOCHASTIC PROCESSES FOR ENGINEERING	CEA052 CEA053 CEA054	60/0	72	4	0	
ENP011	ERGONOMIC ANALYSIS OF WORK	1500 hours ENP047	60/0	72	4	0	
ENP018	BUSINESS NETWORKS	1500 hours ENP049	60/0	72	4	0	
ENP026	HUMAN RESOURCE MANAGEMENT	1500 hours	60/0	72	4	0	
ENP027	PRODUCTION SYSTEMS AUTOMATION	1500 hours ENP003	60/0	72	4	0	
ENP030	RADICAL INNOVATION MANAGEMENT	1500 hours	60/0	72	2	2	
ENP031	CONSUMPTION STUDIES	1500 hours	60/0	72	3	1	
ENP032	DECISION MAKING UNDER UNCERTAINTY	1500 hours	60/0	72	3	1	
ENP033	KNOWLEDGE STRATEGY AND COMPETITIVE INTELLIGENCE	1500 hours	60/0	72	4	0	
ENP034	REVERSE LOGISTICS	2100 hours	60/0	72	2	2	
ENP035	SCIENTIFIC METHODOLOGY II	1800 hours ENP101	30/0	36	1	1	
ENP036	MODELING OF PRODUCTION AND LOGISTICS SYSTEMS III	2100 hours	60/0	72	2	2	
ENP037	CREATION AND DESIGN OF NEW BUSINESS	1500 hours	60/0	72	2	2	
ENP038	INNOVATION EXPERTISE	1500 hours	60/0	72	2	2	
ENP039	MATERIALS TESTING	CEA067	60/0	72	4	0	
ENP040	METAL ALLOYS TECHNOLOGY	CEA067	60/0	72	4	0	
ENP041	METALLURGICAL PROCESS MANUFACTURING	CEA067	60/0	72	4	0	
ENP055	PREVENTION OF HUMAN ERROR IN PRODUCTIVE SYSTEMS	1500 hours ENP050	60/0	72	4	0	
ENP056	WORK RELATIONSHIPS	ENP046 ENP049	60/0	72	4	0	
ENP057	STATISTICAL METHODS IN RELIABILITY	CEA053 CEA054	60/0	72	4	0	
ENP058	SOLIDARY PROJECT MANAGEMENT	1500 hours	60/0	72	4	0	
ENP059	ERGONOMICS: METHODS AND TECHNIQUES	1500 hours ENP047	60/0	72	2	2	
ENP060	CREATIVITY AND CREATIVE METHODS IN ENGINEERING	1500 hours	60/0	72	2	2	
ENP061	DISRUPTIVE ORGANIZATIONAL MODELS	ENP046 ENP049	60/0	72	4	0	
ENP062	TRENDS AND STUDY OF THE FUTURE	1500 hours	60/0	72	2	2	
ENP063	ADVANCED MANUFACTURING PROCESSES	1500 hours ENP003	60/0	72	2	2	
ENP129	FINANCIAL MANAGEMENT	1500 hours ENP023	60/0	72	4	0	
ENP460	INFORMATION MANAGEMENT	1500 hours	60/0	72	4	0	
ENP473	ORGANIZATIONAL BEHAVIOR	1500 hours ENP049	60/0	72	4	0	
ENP493	ENTREPRENEURSHIP	ENP046 ENP048 ENP154	60/0	72	4	0	
ENP525	INDUSTRIAL ORGANIZATION	ENP049	60/0	72	4	0	
ENP526	DESIGN OF INDUSTRIAL EXPERIMENTS	CEA054	60/0	72	3	1	
ENP527	PROCESS, RISKS, AND LOSS PREVENTION ENGINEERING	1500 hours CEA054	60/0	72	4	0	
ENP529	PRODUCTION STRATEGY	ENP046 ENP122 ENP154	60/0	72	4	0	

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					T	P	
ENP530	PROCESS MANAGEMENT	ENP022 ENP053	60/0	72	4	0	
ENP537	ECONOMETRICS	1500 hours ENP015	60/0	72	4	0	
ENP545	INNOVATION AND TECHNOLOGY MANAGEMENT	1500 hours	60/0	72	4	0	
ENP546	STRATEGIC PLANNING: IMPLEMENTATION AND CONTROL	ENP154	60/0	72	4	0	
ENP547	DECISION MAKING PROCESSES	ENP049 ENP154	60/0	72	4	0	
ENP548	THEORY OF STRATEGY	ENP154	60/0	72	4	0	
ENP549	POLITICAL ECONOMY OF POWER	ENP050	60/0	72	4	0	
ENP554	BEHAVIORAL SAFETY AT WORKPLACE	1500 hours ENP050	60/0	72	4	0	
ENP556	WORK ENGINEERING	1500 hours ENP047	60/0	72	4	0	
ENP557	HEURISTICS AND METAHEURISTICS	CSI003 ENP007	60/0	72	3	1	
ENP558	DYNAMIC PROGRAMMING	CEA053 CSI003 ENP007	60/0	72	3	1	
ENP559	GAME THEORY	CEA053 ENP007 ENP015 ENP023	60/0	72	3	1	
ENP560	NETWORK OPTIMIZATION	ENP007	60/0	72	3	1	
ENP562	ACTIVITY-BASED COSTING	CEA054 ENP048	60/0	72	4	0	
ENP563	INVESTMENTS UNDER UNCERTAINTY	CEA053 CEA054 ENP015 ENP023	60/0	72	4	0	
ENP564	DERIVATIVE CAPITAL MARKET	CEA053 CEA054 ENP015 ENP023	60/0	72	4	0	
ENP565	METHODS AND TECHNIQUES APPLIED TO PRODUCTION SYSTEMS	ENP122 ENP123	60/0	72	4	0	
ENP569	TOPICS IN LOGISTICS AND SUPPLY CHAIN MANAGEMENT	2100 hours	60/0	72	4	0	
ENP576	LARGE-SCALE SYSTEMS OPTIMIZATION	ENP007	60/0	72	3	1	

CODE	ACTIVITIES	PREREQUISITE	CHARACTER	SWL	SEM
ATV025		1800	MANDATORY	160	7
ATV100			MANDATORY	90	
ATV301			MANDATORY	110	
ATV302			MANDATORY	100	
ATV303			MANDATORY	100	

Required Courses Load		Work Load
Mandatory Disciplines		2760
Elective Disciplines		300
Optative Disciplines		0
Facultative Disciplines		0
Activities		560
Extensions		370
	Total	3620

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