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

UFOP

COURSE OF MECHANICAL ENGINEERING - 2026/2(curriculum 1)

OURO PRETO'S CAMPUS

CODE	MANDATORY DISCIPLINES	PREREQUISITE	SWL/EWL	CWL	CLASSES		SEM
					T	P	
BCC701	COMPUTER PROGRAMMING I		60/0	72	2	2	1
MEC100	INTRODUCTION TO MECHANICAL ENGINEERING		30/0	36	2	0	1
MEC101	WORKPLACE SAFETY		30/0	36	2	0	1
MTM700	DIFFERENTIAL AND INTEGRAL CALCULUS A		60/0	72	4	0	1
MTM730	ANALYTICAL GEOMETRY AND LINEAR ALGEBRA		60/0	72	4	0	1
QUI701	FUNDAMENTAL CHEMISTRY		60/0	72	2	2	1
ARQ702	MECHANICAL DRAWING		60/0	72	2	2	2
EST202	STATISTICS AND PROBABILITY		60/0	72	4	0	2
FIS106	FUNDAMENTALS OF MECHANICS		60/0	72	4	0	2
MTM702	DIFFERENTIAL AND INTEGRAL CALCULUS B		60/0	72	4	0	2
ARQ703	MACHINE DRAWING		60/0	72	2	2	3
BCC760	NUMERICAL CALCULUS		60/0	72	2	2	3
FIS109	FUNDAMENTALS OF ELECTROMAGNETISM		60/0	72	4	0	3
MTM125	INTRODUCTION TO ORDINARY DIFFERENTIAL EQUATIONS		60/0	72	4	0	3
MTM703	DIFFERENTIAL AND INTEGRAL CALCULUS C		60/0	72	4	0	3
CAT172	GENERAL ELECTROTECHNICS I	BCC701 MEC100 MEC101 MTM700 QUI701	60/0	72	2	2	4
FIS105	FUNDAMENTALS OF EXPERIMENTAL PHYSICS	BCC701 MEC100 MEC101 MTM700 QUI701	30/0	36	0	2	4
FIS108	FUNDAMENTALS OF FLUIDS, OSCILLATIONS AND WAVES	BCC701 MEC100 MEC101 MTM700 QUI701	30/0	36	2	0	4
FIS214	RATIONAL MECHANICS	BCC701 MEC100 MEC101 MTM700 QUI701	60/0	72	2	2	4
MEC102	MECHANICAL PROPERTIES OF MATERIALS	BCC701 MEC100 MEC101 MTM700 QUI701	60/0	72	2	2	4
MEC119	FLUID MECHANICS	BCC701 MEC100 MEC101 MTM700 QUI701	60/0	72	2	2	4
CAT173	METROLOGY AND INSTRUMENTATION	ARQ702 BCC701 EST202 FIS106 MEC100 MEC101 MTM700 MTM702 QUI701	60/0	72	2	2	5
CIV613	STRENGTH OF MATERIALS M	ARQ702 BCC701 EST202 FIS106 MEC100 MEC101 MTM700 MTM702 QUI701	60/0	72	2	2	5
MEC103	MATERIALS TESTING	ARQ702 BCC701 EST202 FIS106 MEC100 MEC101 MTM700 MTM702 QUI701	30/0	36	1	1	5
MEC104	MACHINES ELEMENTS I	ARQ702 BCC701 EST202 FIS106 MEC100 MEC101 MTM700 MTM702 QUI701	60/0	72	4	0	5
MEC620	APPLIED THERMODYNAMICS	ARQ702 BCC701 EST202 FIS106 MEC100 MEC101 MTM700 MTM702 QUI701	60/0	72	2	2	5
MET149	ELEMENTS OF MECHANICS OF MATERIALS	ARQ702 BCC701 EST202 FIS106 MEC100 MEC101 MTM700 MTM702 QUI701	30/0	36	2	0	5
CIV612	STRUCTURAL ANALYSIS	ARQ702 ARQ703 BCC701 BCC760 EST202 FIS106 FIS109 MEC100 MEC101 MTM125 MTM700 MTM702 MTM703 QUI701	60/0	72	2	2	6

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	
MEC105	FLOW MACHINES AND HYDRAULIC SYSTEMS	ARQ702 ARQ703 BCC701 BCC760 EST202 FIS106 FIS109 MEC100 MEC101 MTM125 MTM700 MTM702 MTM703 QUI701	60/0	72	2	2	6
MEC106	MACHINES ELEMENTS II	ARQ702 ARQ703 BCC701 BCC760 EST202 FIS106 FIS109 MEC100 MEC101 MTM125 MTM700 MTM702 MTM703 QUI701	60/0	72	2	2	6
MEC174	MASS AND HEAT TRANSFER I M	ARQ702 ARQ703 BCC701 BCC760 EST202 FIS106 FIS109 MEC100 MEC101 MTM125 MTM700 MTM702 MTM703 QUI701	60/0	72	2	2	6
MEC416	METALS HEAT TREATMENTS	ARQ702 ARQ703 BCC701 BCC760 EST202 FIS106 FIS109 MEC100 MEC101 MTM125 MTM700 MTM702 MTM703 QUI701	60/0	72	2	2	6
MEC107	SMELTING AND WELDING PROCESS	ARQ702 ARQ703 BCC701 BCC760 CAT172 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC119 MTM125 MTM700 MTM702 MTM703 QUI701	60/0	72	2	2	7
MEC108	MACHINING PROCESS	ARQ702 ARQ703 BCC701 BCC760 CAT172 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC119 MTM125 MTM700 MTM702 MTM703 QUI701	60/0	72	2	2	7
MEC110	HYDRAULIC AND PNEUMATIC DRIVES	ARQ702 ARQ703 BCC701 BCC760 CAT172 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC119 MTM125 MTM700 MTM702 MTM703 QUI701	60/0	72	2	2	7
MEC112	MECHANICAL SYSTEMS VIBRATIONS	ARQ702 ARQ703 BCC701 BCC760 CAT172 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC119 MTM125 MTM700 MTM702 MTM703 QUI701	60/0	72	2	2	7
MEC114	THERMAL SYSTEMS M	ARQ702 ARQ703 BCC701 BCC760 CAT172 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC119 MTM125 MTM700 MTM702 MTM703 QUI701	60/0	72	2	2	7

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CODE	MANDATORY DISCIPLINES	PREREQUISITE	SWL/EWL	CWL	CLASSES		SEM
					T	P	
AMB111	BASIC ENVIRONMENTAL ENGINEERING M	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV613 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC119 MEC620 MET149 MTM125 MTM700 MTM702 MTM703 QUI701	30/0	36	2	0	8
MEC109	MECHANICAL FORMING PROCESSES	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV613 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC119 MEC620 MET149 MTM125 MTM700 MTM702 MTM703 QUI701	60/0	72	2	2	8
MEC111	MECHANICAL MAINTENANCE	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV613 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC119 MEC620 MET149 MTM125 MTM700 MTM702 MTM703 QUI701	60/0	72	4	0	8
MEC113	MECHANICAL BUILDING MATERIALS	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV613 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC119 MEC620 MET149 MTM125 MTM700 MTM702 MTM703 QUI701	30/0	36	2	0	8
PRO224	ENGINEERING ECONOMICS	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV613 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC119 MEC620 MET149 MTM125 MTM700 MTM702 MTM703 QUI701	60/0	72	4	0	8
MEC115	TRIBOLOGY	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC119 MEC174 MEC416 MEC620 MET149 MTM125 MTM700 MTM702 MTM703 QUI701	30/0	36	2	0	9

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CODE	MANDATORY DISCIPLINES	PREREQUISITE	SWL/EWL	CWL	CLASSES		SEM
					T	P	
MEC117	REFRIGERATION AND AIR CONDITIONING	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC119 MEC174 MEC416 MEC620 MET149 MTM125 MTM700 MTM702 MTM703 QUI701	60/0	72	4	0	9
MEC380	FINAL RESEARCH PROJECT I	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC119 MEC174 MEC416 MEC620 MET149 MTM125 MTM700 MTM702 MTM703 QUI701	30/0	36	2	0	9
PRO243	ORGANIZATION AND ADMINISTRATION I	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC119 MEC174 MEC416 MEC620 MET149 MTM125 MTM700 MTM702 MTM703 QUI701	30/0	36	2	0	9
DIR250	INTRODUCTION TO LAW AND LEGISLATIONS	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC107 MEC108 MEC110 MEC112 MEC114 MEC119 MEC174 MEC416 MEC620 MET149 MTM125 MTM700 MTM702 MTM703 QUI701	30/0	36	2	0	10
MEC381	UNDERGRADUATE THESIS II	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC107 MEC108 MEC110 MEC112 MEC114 MEC119 MEC174 MEC380 MEC416 MEC620 MET149 MTM125 MTM700 MTM702 MTM703 QUI701	60/0	72	2	2	10

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CODE	MANDATORY DISCIPLINES	PREREQUISITE	SWL/EWL	CWL	CLASSES		SEM
					T	P	
MEC390	SUPERVISED INTERNSHIP	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC107 MEC108 MEC110 MEC112 MEC114 MEC119 MEC174 MEC416 MEC620 MET149 MTM125 MTM700 MTM702 MTM703 QUI701	30/0	36	0	2	10
PRO244	ORGANIZATION AND ADMINISTRATION II	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC107 MEC108 MEC110 MEC112 MEC114 MEC119 MEC174 MEC416 MEC620 MET149 MTM125 MTM700 MTM702 MTM703 QUI701	30/0	36	2	0	10

CODE	ELECTIVE DISCIPLINES	PREREQUISITE	SWL/EWL	CWL	CLASSES		SEM
					T	P	
CAT181	INDUSTRIAL ROBOTICS	1500 hours	60/0	72	4	0	
CAT305	ENERGY DEMAND ANALYSIS AND PROJECTION	1500 hours	60/0	72	4	0	
CAT326	NUMERICAL CONTROL TECHNOLOGY	1500 hours	45/0	54	3	0	
CAT409	AUTOMATION APPLIED TO MECHANICAL ENGINEERING	1500 hours	30/0	36	1	1	
CIV500	SPECIAL TOPICS IN METAL STRUCTURES	1500 hours	30/0	36	2	0	
CIV501	MACHINE FOUNDATIONS PROJECTS	1500 hours	30/0	36	2	0	
LET966	INTRODUCTION TO THE BRAZILIAN SIGN LANGUAGE		60/0	72	2	2	
MEC001	ENGINEERING ACOUSTICS		60/0	72	3	1	
MEC116	INTRODUCTION TO FIRE ENGINEERING	1800 hours	60/0	72	2	2	
MEC118	PROBLEM-SOLVING BASED LEARNING	2400 hours	30/0	36	2	0	
MEC123	COGENERATION AND RENEWABLE ENERGY GENERATION	1500 hours	60/0	72	3	1	
MEC339	INTRODUCTION TO SMART MATERIALS	1500 hours MEC102	30/0	36	2	0	
MEC340	THEORY OF VISCOELASTICITY	1500 hours MEC102	30/0	36	2	0	
MEC400	INDUSTRIAL VENTILATION	1500 hours	60/0	72	4	0	
MEC401	ENERGY USE MANAGEMENT	1500 hours	60/0	72	4	0	
MEC402	AUXILIARY INDUSTRIAL FACILITIES	1500 hours	30/0	36	2	0	
MEC403	MECHANICAL DESIGNS	1500 hours	60/0	72	4	0	
MEC404	ACOUSTICS	1500 hours	60/0	72	4	0	
MEC405	COMPUTATIONAL METHODS IN MECHANICAL ENGINEERING	1500 hours	30/0	36	2	0	
MEC406	VEHICLES MECHANICS	1500 hours	30/0	36	2	0	
MEC407	SPECIAL TOPICS IN HEAT AND FLUIDS	1500 hours	60/0	72	4	0	
MEC408	SPECIAL TOPICS IN ENERGY CONSERVATION	1500 hours	30/0	36	2	0	

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CODE	ELECTIVE DISCIPLINES	PREREQUISITE	SWL/EWL	CWL	CLASSES		SEM
					T	P	
MEC410	INDUSTRIAL DUCTS AND PIPES	1500 hours	30/0	36	2	0	
MEC411	SPECIAL TOPICS IN LIFTING AND TRANSPORT	1500 hours	30/0	36	2	0	
MEC412	COMPUTER AIDED MANUFACTURING	1500 hours	30/0	36	1	1	
MEC414	DYNAMIC ANALYSIS OF SYSTEMS AND CONTROL	1500 hours	30/0	36	2	0	
MEC415	SPECIAL TOPICS IN INDUSTRIAL ASSEMBLY	1500 hours	30/0	36	2	0	
MEC417	COMBUSTION	1500 hours	60/0	72	2	2	
MEC419	SPECIAL TOPICS IN MANUFACTURING PROCESSES	1500 hours	60/0	72	1	3	
MEC422	QUALITY METHODS, TECHNIQUES, AND TOOLS APPLIED TO INDUSTRIAL MAINTENANCE	1500 hours	60/0	72	3	1	
MEC423	ACQUISITION AND PROCESSING OF SIGNS FOR DYNAMIC TESTING	1500 hours	60/0	72	2	2	
MEC424	CONTROL OF MECHANICAL SYSTEMS	ARQ702 ARQ703 BCC701 BCC760 CAT172 EST202 FIS105 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC119 MTM125 MTM700 MTM702 MTM703 QUI701	30/0	36	2	0	
MEC425	INTRODUCTION TO STRUCTURAL DYNAMICS	MEC112	60/0	72	3	1	
MET300	REFRACTORY MATERIALS	1500 hours	30/0	36	1	1	
MET301	CORROSION AND PROTECTION OF METALS	1500 hours	30/0	36	2	0	
MET302	FUNDAMENTALS OF FRACTURE MECHANICS	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC119 MEC174 MEC416 MEC620 MET149 MTM125 MTM700 MTM702 MTM703 QUI701	30/0	36	2	0	
MET303	FATIGUE OF MATERIALS	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS106 FIS108 FIS109 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC119 MEC174 MEC416 MEC620 MET149 MTM125 MTM700 MTM702 MTM703 QUI701	30/0	36	2	0	
MTM112	INTRODUCTION TO LINEAR ALGEBRA		60/0	72	4	0	
MTM146	MATHEMATICS APPLIED TO AUTOMATION AND CONTROL ENGINEERING	1500 hours	60/0	72	4	0	
PRO215	PLANNING AND PRODUCTION CONTROL I	1500 hours	60/0	72	4	0	
PRO350	PLANNING AND QUALITY MANAGEMENT	1500 hours	30/0	36	2	0	

CODE	ACTIVITIES	PREREQUISITE	CHARACTER	SWL	SEM
ATV100	ACADEMIC-SCIENTIFIC-CULTURAL ACTIVITY		MANDATORY	120	
ATV500	SUPERVISED INTERNSHIP		MANDATORY	160	
ATV600	MONOGRAPH		MANDATORY	210	

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Required Courses Load		Work Load
Mandatory Disciplines		2580
Elective Disciplines		540
Optative Disciplines		0
Facultative Disciplines		0
Activities		490
Extensions		0
	Total	3610