



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



COURSE OF MECHANICAL ENGINEERING - 2020/1(curriculum 1)
OURO PRETO'S CAMPUS

CODE	MANDATORY DISCIPLINES	PREREQUISITE	SWL	CWL	CLASSES		SEM
					T	P	
BCC701	COMPUTER PROGRAMMING I		60	72	2	2	1
MEC100	INTRODUCTION TO MECHANICAL ENGINEERING		30	36	2	0	1
MEC101	WORK SAFETY		30	36	2	0	1
MTM131	ANALYTICAL GEOMETRY AND VECTOR CALCULUS		60	72	4	0	1
MTM700	DIFFERENTIAL AND INTEGRAL CALCULUS A		60	72	4	0	1
QUI701	FUNDAMENTAL CHEMISTRY		60	72	2	2	1
ARQ702	MECHANICAL DRAWING		60	72	2	2	2
EST202	STATISTICS AND PROBABILITY		60	72	4	0	2
FIS130	PHYSICS I		60	72	3	1	2
MTM112	INTRODUCTION TO LINEAR ALGEBRA		60	72	4	0	2
MTM702	DIFFERENTIAL AND INTEGRAL CALCULUS B		60	72	4	0	2
ARQ703	MACHINE DRAWING		60	72	2	2	3
BCC760	NUMERICAL CALCULUS		60	72	2	2	3
FIS132	PHYSICS III		60	72	3	1	3
MTM125	INTRODUCTION TO ORDINARY DIFFERENTIAL EQUATIONS		60	72	4	0	3
MTM703	DIFFERENTIAL AND INTEGRAL CALCULUS C		60	72	4	0	3
CAT172	GENERAL ELECTROTECHNICS I	BCC701 MEC100 MEC101 MTM131 MTM700 QUI701	60	72	2	2	4
FIS134	PHYSICS IV	BCC701 MEC100 MEC101 MTM131 MTM700 QUI701	60	72	3	1	4
FIS214	RATIONAL MECHANICS	BCC701 MEC100 MEC101 MTM131 MTM700 QUI701	60	72	2	2	4
MEC102	MECHANICAL PROPERTIES OF MATERIALS	BCC701 MEC100 MEC101 MTM131 MTM700 QUI701	60	72	2	2	4
MEC119	FLUID MECHANICS	BCC701 MEC100 MEC101 MTM131 MTM700 QUI701	60	72	2	2	4
CAT173	METROLOGY AND INSTRUMENTATION	ARQ702 BCC701 EST202 FIS130 MEC100 MEC101 MTM112 MTM131 MTM700 MTM702 QUI701	60	72	2	2	5
CIV613	STRENGTH OF MATERIALS M	ARQ702 BCC701 EST202 FIS130 MEC100 MEC101 MTM112 MTM131 MTM700 MTM702 QUI701	60	72	2	2	5
MEC103	ASSAYS OF MATERIALS	ARQ702 BCC701 EST202 FIS130 MEC100 MEC101 MTM112 MTM131 MTM700 MTM702 QUI701	30	36	1	1	5
MEC104	MACHINES ELEMENTS I	ARQ702 BCC701 EST202 FIS130 MEC100 MEC101 MTM112 MTM131 MTM700 MTM702 QUI701	60	72	4	0	5
MEC620	APPLIED THERMODYNAMICS	ARQ702 BCC701 EST202 FIS130 MEC100 MEC101 MTM112 MTM131 MTM700 MTM702 QUI701	60	72	2	2	5
MET149	ELEMENTS OF MECHANICS OF MATERIALS	ARQ702 BCC701 EST202 FIS130 MEC100 MEC101 MTM112 MTM131 MTM700 MTM702 QUI701	30	36	2	0	5



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							T	P	
CIV612	STRUCTURAL ANALYSIS	ARQ702 BCC760 FIS132 MTM112 MTM700 QUI701	ARQ703 EST202 MEC100 MTM125 MTM702	BCC701 FIS130 MEC101 MTM131 MTM703	60	72	2	2	6
MEC105	FLOW MACHINES AND HYDRAULIC SYSTEMS	ARQ702 BCC760 FIS132 MTM112 MTM700 QUI701	ARQ703 EST202 MEC100 MTM125 MTM702	BCC701 FIS130 MEC101 MTM131 MTM703	60	72	2	2	6
MEC106	MACHINES ELEMENTS II	ARQ702 BCC760 FIS132 MTM112 MTM700 QUI701	ARQ703 EST202 MEC100 MTM125 MTM702	BCC701 FIS130 MEC101 MTM131 MTM703	60	72	2	2	6
MEC174	MASS AND HEAR TRANSFER I M	ARQ702 BCC760 FIS132 MTM112 MTM700 QUI701	ARQ703 EST202 MEC100 MTM125 MTM702	BCC701 FIS130 MEC101 MTM131 MTM703	60	72	2	2	6
MEC416	METALS HEAT TREATMENTS	ARQ702 BCC760 FIS132 MTM112 MTM700 QUI701	ARQ703 EST202 MEC100 MTM125 MTM702	BCC701 FIS130 MEC101 MTM131 MTM703	60	72	2	2	6
MEC107	SMELTING PROCESS AND WELDING	ARQ702 BCC760 FIS130 FIS214 MEC102 MTM131 MTM703	ARQ703 CAT172 FIS132 MEC100 MTM112 MTM700 QUI701	BCC701 EST202 FIS134 MEC101 MTM125 MTM702	60	72	2	2	7
MEC108	MACHINING PROCESS	ARQ702 BCC760 FIS130 FIS214 MEC102 MTM131 MTM703	ARQ703 CAT172 FIS132 MEC100 MTM112 MTM700 QUI701	BCC701 EST202 FIS134 MEC101 MTM125 MTM702	60	72	2	2	7
MEC110	HYDRAULIC DRIVES AND PNEUMATICS	ARQ702 BCC760 FIS130 FIS214 MEC102 MTM131 MTM703	ARQ703 CAT172 FIS132 MEC100 MTM112 MTM700 QUI701	BCC701 EST202 FIS134 MEC101 MTM125 MTM702	60	72	2	2	7
MEC112	MECHANICAL SYSTEMS VIBRATIONS	ARQ702 BCC760 FIS130 FIS214 MEC102 MTM131 MTM703	ARQ703 CAT172 FIS132 MEC100 MTM112 MTM700 QUI701	BCC701 EST202 FIS134 MEC101 MTM125 MTM702	60	72	2	2	7



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					T	P	
MEC114	THERMAL SYSTEMS M	ARQ702 ARQ703 BCC701 BCC760 CAT172 EST202 FIS130 FIS132 FIS134 FIS214 MEC100 MEC101 MEC102 MTM112 MTM125 MTM131 MTM700 MTM702 MTM703 QUI701	60	72	2	2	7
AMB111	BASIC ENVIRONMENT ENGINEERING M	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV613 EST202 FIS130 FIS132 FIS134 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MET149 MTM112 MTM125 MTM131 MTM700 MTM702 MTM703 QUI701	30	36	2	0	8
MEC109	MECHANICAL FORMING PROCESSES	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV613 EST202 FIS130 FIS132 FIS134 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MET149 MTM112 MTM125 MTM131 MTM700 MTM702 MTM703 QUI701	60	72	2	2	8
MEC111	MECHANICAL MAINTENANCE	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV613 EST202 FIS130 FIS132 FIS134 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MET149 MTM112 MTM125 MTM131 MTM700 MTM702 MTM703 QUI701	60	72	4	0	8
MEC113	CONSTRUCTION BUILDING MATERIALS	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV613 EST202 FIS130 FIS132 FIS134 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MET149 MTM112 MTM125 MTM131 MTM700 MTM702 MTM703 QUI701	30	36	2	0	8
PRO224	ENGINEERING ECONOMICS	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV613 EST202 FIS130 FIS132 FIS134 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MET149 MTM112 MTM125 MTM131 MTM700 MTM702 MTM703 QUI701	60	72	4	0	8



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					T	P	
MEC115	TRIBOLOGY	ARQ702 ARQ703 BCC701 BCC760 CAT173 CIV612 CIV613 EST202 FIS130 FIS132 FIS134 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC416 MET149 MTM112 MTM125 MTM131 MTM700 MTM702 MTM703 QUI701	30	36	2	0	9
MEC117	REFRIGERATION AND AIR CONDITIONING	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS130 FIS132 FIS134 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC416 MET149 MTM112 MTM125 MTM131 MTM700 MTM702 MTM703 QUI701	60	72	4	0	9
MEC380	FINAL UNDERGRADUATE WORK (PROJECT) I	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS130 FIS132 FIS134 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC416 MET149 MTM112 MTM125 MTM131 MTM700 MTM702 MTM703 QUI701	30	36	2	0	9
PRO243	ORGANIZATION AND ADMINISTRATION I	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS130 FIS132 FIS134 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC416 MET149 MTM112 MTM125 MTM131 MTM700 MTM702 MTM703 QUI701	30	36	2	0	9
DIR250	INTRODUCTION AT LAW AND LEGISLATION	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS130 FIS132 FIS134 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC107 MEC108 MEC110 MEC112 MEC114 MEC119 MEC174 MEC416 MEC620 MET149 MTM112 MTM125 MTM131 MTM700 MTM702 MTM703 QUI701	30	36	2	0	10



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MEC381	FINAL UNDERGRADUATE THESIS II	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS130 FIS132 FIS134 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC107 MEC108 MEC110 MEC112 MEC114 MEC380 MEC416 MET149 MTM112 MTM125 MTM131 MTM700 MTM702 MTM703 QUI701	60	72	2	2	10
MEC390	SUPERVISED INTERNSHIP	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS130 FIS132 FIS134 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC107 MEC108 MEC110 MEC112 MEC114 MEC416 MET149 MTM112 MTM125 MTM131 MTM700 MTM702 MTM703 QUI701	30	36	0	2	10
PRO244	ORGANIZATION AND ADMINISTRATION II	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS130 FIS132 FIS134 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC107 MEC108 MEC110 MEC112 MEC114 MEC416 MET149 MTM112 MTM125 MTM131 MTM700 MTM702 MTM703 QUI701	30	36	2	0	10

CODE	ELECTIVE DISCIPLINES	PREREQUISITE	SWL	CWL	CLASSES		SEM
					T	P	
CAT181	INDUSTRIAL ROBOTICS	1500 hours	60	72	4	0	
CAT305	ENERGY DEMAND ANALYSIS AND PROJECT	1500 hours	60	72	4	0	
CAT326	NUMERICAL CONTROL TECHNOLOGY	1500 hours	45	54	3	0	
CAT409	APPLIED AUTOMATION FOR ENGINEERING MECHANICAL	1500 hours	30	36	1	1	
CIV500	SPECIAL TOPICS IN METAL CONSTRUCTIONS	1500 hours	30	36	2	0	
CIV501	MACHINE FOUNDATIONS PROJECTS	1500 hours	30	36	2	0	
LET966	INTRODUCTION TO BRAZILIAN SIGN LANGUAGE (LIBRAS)		60	72	2	2	
MEC116	AN INTRODUCTION TO FIRE ENGINEERING	1800 hours	60	72	2	2	
MEC118	PROBLEM-BASED LEARNING	2400 hours	30	36	2	0	
MEC339	INTRODUCTION TO INTELLIGENT MATERIALS	1500 hours MEC102	30	36	2	0	
MEC340	VISCOELASTIC THEORY	1500 hours MEC102	30	36	2	0	
MEC400	INDUSTRIAL VENTILATION	1500 hours	60	72	4	0	
MEC401	ENERGY USE MANAGEMENT	1500 hours	60	72	4	0	
MEC402	AUXILIARY INDUSTRIAL FACILITIES	1500 hours	30	36	2	0	



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MEC403	MECHANICAL PROJECTS	1500 hours	60	72	4	0	
MEC404	ACOUSTICS	1500 hours	60	72	4	0	
MEC405	MECHANICAL ENGINEERING COMPUTATIONAL METHODS	1500 hours	30	36	2	0	
MEC406	VEHICLES MECHANICS	1500 hours	30	36	2	0	
MEC407	SPECIAL TOPCIS IN HEAT AND FLUIDS	1500 hours	60	72	4	0	
MEC408	SPECIAL TOPCIS IN ENERGY CONSERVATION	1500 hours	30	36	2	0	
MEC410	DUCTS AND INDUSTRIAL PIPING	1500 hours	30	36	2	0	
MEC411	TOPICS SPECIAL IN LIFTING AND TRANSPORT	1500 hours	30	36	2	0	
MEC412	COMPUTER AIDED MANUFACTURING	1500 hours	30	36	1	1	
MEC414	SYSTEMS DYNAMIC ANALYSIS AND CONTROL	1500 hours	30	36	2	0	
MEC415	SPECIAL TOPICS IN INDUSTRIAL ASSEMBLY	1500 hours	30	36	2	0	
MEC417	COMBUSTION	1500 hours	60	72	2	2	
MEC418		1500 hours	60	72	2	2	
MEC419	SPECIAL TOPICS IN MANUFACTURING PROCESSES	1500 hours	60	72	1	3	
MEC422	METHODS, TECHNIQS AND TOOLS OF THE QUALITY APPLIED THE MAINTENANCE IN THE INDUSTRY	1500 hours	60	72	3	1	
MEC423	ACQUISITION AND SIGNAL PROCESSING FOR DYNAMIC TESTS	1500 hours	60	72	2	2	
MEC424	CONTROL OF MECHANICAL SYSTEMS	ARQ702 ARQ703 BCC701 BCC760 CAT172 EST202 FIS130 FIS132 FIS134 FIS214 MEC100 MEC101 MEC102 MEC119 MTM112 MTM125 MTM131 MTM700 MTM702 MTM703 QUI701	30	36	2	0	
MEC425	INTRODUCTION TO STRUCTURAL DYNAMICS	MEC112	60	72	3	1	
MET300	REFRACTORY MATERIALS	1500 hours	30	36	1	1	
MET301	CORROSION AND PROTECTION OF METALS	1500 hours	30	36	2	0	
MET302	FUNDAMENTALS OF FRACTURE MECHANICS	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS130 FIS132 FIS134 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC119 MEC174 MEC416 MEC620 MET149 MTM112 MTM125 MTM131 MTM700 MTM702 MTM703 QUI701	30	36	2	0	
MET303	FATIGUE OF MATERIALS	ARQ702 ARQ703 BCC701 BCC760 CAT172 CAT173 CIV612 CIV613 EST202 FIS130 FIS132 FIS134 FIS214 MEC100 MEC101 MEC102 MEC103 MEC104 MEC105 MEC106 MEC119 MEC174 MEC416 MEC620 MET149 MTM112 MTM125 MTM131 MTM700 MTM702 MTM703 QUI701	30	36	2	0	
MTM146	MATHEMATICS APPLIED TO AUTOMATION AND CONTROL ENGINEERING	1500 hours	60	72	4	0	
PRO215	PLANNING AND PRODUCTION CONTROL I	1500 hours	60	72	4	0	
PRO350	PLANNING AND QUALITY MANAGEMENT	1500 hours	30	36	2	0	



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

Required Courses Load	Work Load
Mandatory Disciplines	2640
Elective Disciplines	480
Optative Disciplines	0
Facultative Disciplines	0
Activities	490
Total	3610