



People's Democratic Republic of Algeria
Ministry of Higher Education and Scientific Research
Sétif 1 University – Ferhat Abbas

Faculty of Technology
Department of Mechanical Engineering

Training Canvas

Engineer Degree in mechanical engineering

Specialty: Mechanical manufacturing and maintenance

Semester 1

Semester	Teaching unit	Subject headings	code	Credits	Coefficients	Weekly Hourly Volume			VHS	Evaluation method	
						Course	GW	PW		Continuous assessment	Final exam
1	Fundamental T.U Code : FTU 1.1 Credits : 10 Coefficients : 5	Analyse 1	IST.1.1	6	3	1h30	3h00		67h30	40%	60%
		Algebra 1	IST.1.2	4	2	1h30	1h30		45h00	40%	60%
	Fundamental T.U Code :FTU 1.2 Credits : 14 Coefficients : 8	Chemistry Elements (Structure of matter)	IST.1.3	7	4	1h30	3h00	1h30	90h00	40% (20% TD + 20%TP)	60%
		Mechanical elements (Physics 1)	IST.1.4	7	4	1h30	3h00	1h30	90h00	40% (20% TD + 20%TP)	60%
	Methodological T.U Code : MTU 1.1 Credits : 4 Coefficients : 4	Probabilities and statistics	IST.1.5	2	2	1h30	1h30		45h00	40%	60%
		Computer structures and applications	IST.1.6	2	2			3h00	45h00	100%	
	Transversal T.U Code : TTU 1.1 Credits : 2 Coefficients : 2	Dimension Ethic et deontology (the fundaments)	IST.1.7	1	1	1h30			22h30		100%
		Stranger language 1 (French or English)	IST.1.8	1	1		1h30		22h30	100%	
Total Hourly Volume of semester 1				30	19	9h00	13h30	6h00	427h30		

Semester 2

Semester	Teaching unit	Subject headings	code	Credits	Coefficients	Weekly Hourly Volume			VHS	Evaluation method	
						Course	GW	PW		Continuous assessment	Final exam
2	Fundamental T.U Code : FTU 2.1 Credits : 10 Coefficients : 5	Analyse 2	IST.2.1	6	3	1h30	3h00		67h30	40%	60%
		algebra 2	IST.2.2	4	2	1h30	1h30		45h00	40%	60%
	Fundamental T.U Code : FTU 2.2 Credits : 14 Coefficients : 8	Electricity and Magnetism (physics2)	IST.2.3	7	4	1h30	3h00	1h30	90h00	40% (20% GW + 20%PT)	60%
		Thermodynamic	IST.2.4	7	4	1h30	3h00	1h30	90h00	40% (20% GW + 20%PW)	60%
	Methodological T.U Code : MTU 2.1 Credits : 4 Coefficients : 4	Dessin technique	IST.2.5	2	2			3h00	45h00	100%	
		Computer programming (informatics 2)	IST.2.6	2	2			3h00	45h00	100%	
	Transversal T.U Code : TTU 2.1 Credits : 1 Coefficients : 1	language 2 (English)	IST.2.7	1	1		1h30		22h30	100%	
	Discovery T.U Code : DTU 2.1 Credits : 1 Coefficients : 1	Engineer professions	IST.2.8	1	1	1h30			22h30		100%
Total Hourly Volume of semester 2				30	19	7h30	12h00	9h00	427h30		

Semester 3

Semester	Teaching unit	Subject headings	code	Credits	Coefficients	Weekly Hourly Volume			VHS	Evaluation method	
						Course	GW	PW		Continuous assessment	Final exam
3	Fundamental T.U Code : FTU 3.1 Credits : 10 Coefficients : 5	Applied Mathematics	IGM3.1	6	3	1h30	3h00		67h30	40%	60%
		Waves and vibrations	IGM3.2	5	3	1h30	1h30	1h30	67h30	40% (20% GW + 20%PW)	60%
	Fundamental T.U Code : FTU 3.2 Credits : 14 Coefficients : 8	Mechanical manufacturing	IGM3.3	5	3	1h30	1h30	1h30	67h30	40% (20% GW + 20%PW)	50%
		Fluids mechanics 1	IGM3.4	5	3	1h30	1h30	1h30	67h30	40% (20% GW + 20%PW)	60%
		Rational mechanics	IGM3.5	4	2	1h30	1h30		45h00	40%	60%
	Methodological T.U Code : MTU 3.1 Credits : 4 Coefficients : 4	Computer programming 3	IGM3.6	2	2	1h30		1h30	45h00	40%	60%
	Discovery T.U Code : DTU 3.1 Credits : 1 Coefficients : 1	Electronic	IGM3.7	1	1	1h30			22h30		100 %
		Electro technical	IGM3.8	1	1	1h30			22h30		100%
	Transversal T.U Code : TTU 3.1 Credits : 1 Coefficients : 1	Technical English	IGM3.9	1	1		1h30		22h30	40%	60%
Total Hourly Volume of semester 3				30	19	12h00	10h30	6h00	427h30		

Semester 4

Semester	Teaching unit	Subject headings	code	Credits	Coefficients	Weekly Hourly Volume			VHS	Evaluation method	
						Course	GW	PW		Continuous assessment	Final exam
4	Fundamental T.U Code : FTU 4.1 Credits : 10 Coefficients : 5	Applied Thermodynamic	IGM4.1	5	3	1h30	1h30	1h30	67h30	40% (20% GW +20%PW)	60%
		Heat transfer 1	IGM4.2	6	3	1h30	3h00		67h30	40%	60%
		Energy conversion	IGM4.3	2	1	1h30			22h30		100%
	Fundamental T.U Code : FTU 4.2 Credits : 14 Coefficients : 8	Strength of materials	IGM4.4	5	3	1h30	1h30	1h30	67h30	40% (20% GW +20%PW)	60%
		Hydraulic et pneumatic	IGM4.5	4	2	1h30	1h30		45h00	40%	60%
		Measurement and Instrumentation	IGM4.6	3	2	1h30		1h30	45h00	40%	60%
	Methodological T.U Code : MTU 4.1 Credits : 4 Coefficients : 4	Numerical methods	IGM4.7	2	2	1h30		1h30	45h00	40%	60%
		Computer-aided drawing	IGM4.8	1	1			1h30	22h30	100%	
	Transversal T.U Code : TTU 4.1 Credits : 1 Coefficients : 1	Energy production and transmission	IGM4.9	1	1	1h30			22h30		100 %
	Discovery T.U Code : DTU 4.1 Credits : 1 Coefficients : 1	Information, expression and communication techniques	IGM4.10	1	1		1h30		22h30	40%	60%
Total Hourly Volume of semester 4				30	19	12h00	9h00	7h30	427h30		

Semester 5

Semester	Teaching unit	Subject headings	code	Credits	Coefficients	Weekly Hourly Volume			VHS	Evaluation method	
						Course	GW	PW		Continuous assessment	Final exam
5	Fundamental T.U Code : FTU 5.1 Credits : 8 Coefficients : 4	Mechanical engineering1	IGMF5.1	4	2	1h30	1h30		45h00	40%	60%
		Analytical mechanics	IGMF5.2	4	2	1h30	1h30		45h00	40%	60%
	Fundamental T.U Code : FTU 5.2 Credits : 16 Coefficients : 9	Fracture mechanics and fatigue	IGMF5.3	4	2	1h30	1h30		45h00	40%	60%
		Crystallography	IGMF5.4	5	3	1h30	1h30	1h30	67h30	(20% GW+20%WP)	60%
		Non metallic materials	IGMF5.5	2	1	1h30			22h30		100%
		Automation of industrials systems	IGMF5.6	5	3	1h30	1h30	1h30	67h30	(20% GW+20%PW)	60%
	Methodological T.U Code : MTU 5.1 Credits : 4 Coefficients : 4	Tutored project 1	IGMF6.7	2	2		3h00		45h00	100%	
		Organization and maintenance methods	IGMF5.8	1	1	1h30			22h30		100%
		Preventive Maintenance	IGMF5.9	1	1	1h30			22h30		100%
	Discovery T.U Code : DTU 5.1 Credits : 1 Coefficients : 1	Recycling and recovery of waste	IGMF5.10	1	1	1h30			22h30		100%
	Transversal T.U Code : TTU 5.1 Credits : 1 Coefficients : 1	Technical English related to the specialty	IGMF5.11	1	1	1h30			22h30		100%
Total Hourly Volume of semester 5				30	19	15h00	10h30	3h00	427h30		

Semester 6

Semester	Teaching unit	Subject headings	code	Credits	Coefficients	Weekly Hourly Volume			VHS	Evaluation method	
						Course	TD	TP		Continuous assessment	Final exam
6	Fundamental T.U Code : FTU 6.1 Credits : 12 Coefficients : 7	Mechanical engineering1	IGMF6.1	4	2	1h30	1h30		45h00	40%	60%
		Rheology of materials	IGMF6.2	5	3	1h30	1h30	1h30	67h30	(20% GW+20%PW)	60%
		Thermal treatment	IGMF6.3	3	2	1h30		1h30	45h00	40%	60%
	Fundamental T.U Code : FTU 6.2 Credits : 13 Coefficients : 7	Dynamics of structures	IGMF6.4	4	2	1h30	1h30		45h00	40%	60%
		Theory of mechanisms	IGMF6.5	4	2	1h30	1h30		45h00	40%	60%
		Internal combustion engine	IGMF6.6	5	3	1h30	1h30	1h30	67h30	(20% GW+20%PW)	60%
	Methodological T.U Code : MTU 6.1 Credits : 2 Coefficients : 2	Personal Professional Project	IGME6.7	1	1	Hourly volume exceeding quota (average 100 hours) Tutoring: 1.5 hours of practical work per week				100%	
		Diagnostics and fault management	IGMF6.8	1	1	1h30			22h30		100%
	Discovery T.U Code : DTU 6.1 Credits : 1 Coefficients : 1	Logistics and inventory management	IGMF6.9	1	1	1h30			22h30		100%
	Transversal T.U Code : TTU 6.1 Credits : 2 Coefficients : 2	Entrepreneurship and business management	IGMF6.10	1	1	1h30			22h30		100%
		Introduction to Industrial Property	IGMF6.11	1	1	1h30			22h30		100%
Total Hourly Volume of semester 6				30	19	15h00	7h30	6h00	427h30		

Semester 7

Semester	Teaching unit	Subject headings	code	Credits	Coefficients	Weekly Hourly Volume			VHS	Evaluation method	
						Course	TD	TP		Continuous assessment	Final exam
7	Fundamental T.U Code : FTU 7.1 Credits : 9 Coefficients : 5	Finite elements method	IGMF7.1	5	3	1h30	1h30	1h30	67h30	(20% GW+20%PW)	60%
		Elasticity	IGMF7.2	4	2	1h30	1h30		45h00	40%	60%
	Fundamental T.U Code : FTU 7.2 Credits : 13 Coefficients : 7	Metal Cutting 1	IGMF7.3	4	2	1h30	1h30		45h00	40%	60%
		Shaping processes	IGMF7.4	4	2	1h30	1h30		45h00	40%	60%
		Mechanical manufacturing	IGMF7.5	5	3	1h30	1h30	1h30	67h30	(20% GW+20%PW)	60%
	Methodological T.U Code : MTU 7.1 Credits : 6 Coefficients : 5	Personal Professional Project	IGME7.6	2	1	Hourly volume exceeding quota (average 100 hours) Tutoring: 1.5 hours of practical work per week				100%	
		Measuring technique	IGMF7.8	2	2	1h30		1h30	45h00	40%	60%
		Fault detection techniques	IGMF7.6	2	2	1h30		1h30	45h00	40%	60%
	Discovery T.U Code : DTU 7.1 Credits : 1 Coefficients : 1	Industrial robotics	IGMF7.9	1	1	3h00			45h00		100%
	Transversal T.U Code : TTU 7.1 Credits : 1 Coefficients : 1	I.H.S in mechanical manufacturing	IGMF7.10	1	1	1h30			22h30		100%
Total Hourly Volume of semester 7				30	19	15h00	7h30	6h00	427h30		

Semester 8

Semester	Teaching unit	Subject headings	code	Credits	Coefficients	Weekly Hourly Volume			VHS	Evaluation method	
						Course	TD	TP		Continuous assessment	Final exam
8	Fundamental T.U Code : FTU 8.1 Credits : 11 Coefficients : 6	Machine Tool Elements	IGMF8.1	7	4	1h30	3h00	1h30	90h00	(20% GW+20%PW)	60%
		Metal Cutting 2	IGMF8.2	4	2	1h30	1h30		45h00	40%	60%
	Fundamental T.U Code : FTU 8.2 Credits : 14 Coefficients : 8	Welding Techniques	IGMF8.3	5	3	1h30	1h30	1h30	67h30	(20% GW+20%PW)	60%
		Corrosion and surface protection	IGMF8.4	5	3	1h30	1h30	1h30	67h30	(20% GW+20%PW)	60%
		Hydraulic and pneumatic systems and device	IGMF8.5	4	2	1h30	1h30	-	45h00	40%	60%
	Methodological T.U Code : MTU 8.1 Credits : 4 Coefficients : 4	Mechanical Properties of Material	IGMF8.6	2	2	1h30		1h30	45h00	40%	60%
		Internship 1	IGMF8.7	1	1	Hourly volume exceeding quota (average 100 hours) Tutoring: 1.5 hours of practical work per week				100%	
		Methods Office	IGMF8.8	1	1	1h30	1h30		45h00	40%	60%
	Transversal T.U Code : TTU 8.1 Credits : 1 Coefficients : 1	Compliance with standards and rules of ethics and integrity	IGMF8.9	1	1	1h30			22h30		100%
Total Hourly Volume of semester 8				30	19	12h00	10h30	6h00	427h30		

Semester 9

Semester	Teaching unit	Subject headings	code	Credits	Coefficients	Weekly Hourly Volume			VHS	Evaluation method	
						Course	TD	TP		Continuous assessment	Final exam
9	Fundamental T.U Code : UEF 9.1 Credits : 13 Coefficients : 7	High-speed machining	IGMF9.2	5	3	1h30	1h30	1h30	67h30	(20% GW+20%PW)	60%
		Installation of equipment	IGMF9.3	4	2	1h30	1h30		45h00	40%	60%
	Fundamental T.U Code : UEF 9.2 Credits : 11 Coefficients : 6	Dynamics of rotating machines	IGMF9.4	4	2	1h30	1h30		45h00	40%	60%
		Tribology and lubrication of mechanical systems	IGMF9.5	5	3	1h30	1h30	1h30	67h30	(20% GW+20%PW)	60%
		Ceramics	IGMF9.6	2	1	1h30			22h30		100%
	Methodological T.U Code : UEM 9.1 Credits : 4 Coefficients : 4	Tutored project	IGMF9.7	2	2		3h00		45h00	100%	
		Industrial computing (CMM)	IGMF9.8	2	2	1h30		1h30	45h00	40%	60%
	Discovery T.U Code : UED 9.1 credits : 1 Coefficients : 1	Introduction to I.A	IGMF9.9	1	1	1h30			22h30		100%
	Transversal T.U Code : UET 9.1 Credits : 1 Coefficients : 1	Documentary research and dissertation design	IGMF9.10	1	1	1h30			22h30		100%
Total Hourly Volume of semester 9				30	19	13h30	10h30	4h30	427h30		

Semester 10

Semester 10	Teaching unit	Subject headings	code	Credits	Coefficients	Weekly Hourly Volume	VHS	Evaluation method	
						Course TD TP		Continuous assessment	Final exam
	Fundamental T.U Code : UEF 10.1 Credits : 30 Coefficients : 19	End of Study Project	IGMF10.1	30	19				
	Total Hourly Volume of semester					28h30	427h30		100%