

Bachelor in Branch: Mechanical engineering

Speciality: Mechanical construction

Brief

Mechanical Engineering at Khemis Miliana University is one of the major branches of engineering. This specialty is extremely broad and diverse with a broad base of applications. Mechanical construction training provides students with an understanding of the fundamental principles design, build and maintain mechanical systems and structure. At the Bachelor's level, all students are required to follow six semesters of different courses on design principles, building codes and regulations, and the use of various tools and equipment.

Field	Branch	Speciality
<i>Sciences and Technology</i>	Mechanical engineering	Mechanical Construction

First Semester

Teaching unit	Matter	Credit	Coefficient	Course	TD	TP	HV
Fundamental Unit	Mathematics 1	6	3	3h00	1h30		67h30
	Physics 1	6	3	3h00	1h30		67h30
	Structure of matter	6	3	3h00	1h30		67h30
Methodological unit	TP Phisic 1	2	1			1h30	22h30
	TP Chemistry 1	2	1			1h30	22h30
	Computer science 1	4	2	1h30		1h30	45h00
	Writing methodology	1	1	1h00			15h00
Discovery unit	Careers in science and technology	1	1	1h30			22h30
Transversale Unit	Ethical and deontological dimension (the foundations)	1	1	1h30			22h30
	Foreign language 1 (French	1	1	1h30			22h30

Teaching unit	Matter	Credit	Coefficient	Course	TD	TP	HV
	or English)						

Second Semester 2

Teaching unit	Matter	Credit	Coefficient	Courses	TD	Practical Work	Volume (hour)
Fundamental Unit	Mathematics 2	6	3	3h00	1h30		67h30
	Physics 2	6	3	3h00	1h30		67h30
	Thermodynamics	6	3	3h00	1h30		67h30
Methodological unit	TP physics 2	2	1			1h30	22h30
	TP chemistry 2	2	1			1h30	22h30
	Computer science 2	4	2	1h30		1h30	45h00
	Methodology of presentation	1	1	1h00			15h00
Discovery unit	Careers in science and technology 2	1	1	1h30			22h30
Transversale Unit	Foreign language 2 (French or English)	2	2	3h00			45h00

Third Semester

Teaching unit	Matter	Credit	Coefficient	C	TD	TP	HV
Fundamental Unit	Mathematics 3	6	3	3h00	1h30		67h30
	Waves and vibrations	4	2	1h30	1h30		45h00
	Fluid mechanics	4	2	1h30	1h30		45h00
	Rational mechanics	4	2	1h30	1h30		45h00
Methodological unit	Probability and statistics	4	2	1h30	1h30		45h00
	Computer science 3	2	1			1h30	22h30
	Technical drawing	2	1			1h30	22h30
	TP waves and vibrations	1	1			1h00	15h00

Teaching unit	Matter	Credit	Coefficient	C	TD	TP	HV
Discovery unit	Basic technology	1	1	1h30			22h30
	Metrology	1	1	1h30			22h30
Transversale Unit	Technical English	1	1	1h30			22h30

Fourth semester

Teaching unit	Matter	Credit	Coefficient	C	TD	TP	HV
Fundamental Unit	Thermodynamics 2	4	2	1h30	1h30		45h00
	Mechanical manufacturing	2	1	1h30			22h30
	Mathematics 4	4	2	1h30	1h30		45h00
	Numerical methods	4	2	1h30	1h30		45h00
	Resistance of materials	4	2	1h30	1h30		45h00
Methodological unit	Computer Aided Design	2	1			1h30	22h30
	TP Fluid Mechanics	2	1			1h30	22h30
	TP Numerical Methods	2	1			1h30	22h30
	TP Strength of materials	1	1			1h00	15h00
	TP Mechanical Manufacturing	2	1			1h30	22h30
Discovery unit	Industrial electricity	1	1	1h30			22h30
	Materials Science	1	1	1h30			22h30
Transversale Unit	Expression, information and communication techniques	1	1	1h30			22h30

Fifth semester

Teaching unit	Matter	Credit	Coefficient	C	TD	TP	HV
Fundamental Unit	Analytical mechanics	6	3	3h00	1h30		67h30
	Mechanical Engineering1	4	2	1h30	1h30		45h00
	Resistance of materials 2	4	2	1h30	1h30		45h00
	Elasticity	4	2	1h30	1h30		45h00
Methodological unit	Industrial Design	4	2			3h00	45h00
	Computer Aided Design and Manufacturing	4	2			3h00	45h00
	TP Metrology	1	1			1h00	15h00
Discovery unit	Control and regulation	1	1	1h30			22h30
	Maintenance	1	1	1h30			22h30
Transversale Unit	Environment and sustainable development	1	1	1h30			22h30

Six Semester

Teaching unit	Matter	Credit	Coefficient	C	TD	TP	HV
Fundamental Unit	Mechanical Engineering2	6	3	3h00	1h30		67h30
	Theory of mechanisms	4	2	1h30	1h30		45h00
	Heat transfer	4	2	1h30	1h30		45h00
	Dynamics of structures	4	2	1h30	1h30		45h00
Methodological unit	End of Cycle Project	4	2			3h00	45h00
	Internal combustion engine	4	2	1h30	1h30		45h00
	TP Thermal Transfers	1	1			1h00	15h00
Discovery unit	Hydraulic and pneumatic systems	1	1	1h30			22h30
	Non-metallic materials	1	1	1h30			22h30
Transversale Unit	Entrepreneurship and company management	1	1	1h30			22h30

