Master in Branch Mechanical engineering

Speciality Mechanical Construction

Brief

Mechanical Engineering at Khemis Miliana University is one of the major branches of engineering. The mechanicalconstruction specialty is extremely broad and diverse with a broad base of applications. Training in this speciality provides students with an understanding of the fundamental principles of mechanicalconstruction. At the Master's level, all students are required to follow three semesters of different courses on energy and engins and a final project that will be defended at the end of the fourth semester.

Field	Branch	Speciality
Sciences and Technologies	**Mechanical engineering**	Mechanical Construction

First Semester

Teaching unit	Matter	Credit	Coefficient	C	TD	TP	Volume (hour)
Fundamental Unit	Mechanics of continuous media	6	3	3h00	1h30		67h30
	Advanced Strength of Materials	4	2	1h30	1h30		45h00
	Internal combustion engines	4	2	1h30	1h30		45h00
	Applied fluid mechanics	4	2	1h30	1h30		45h00
Methodological unit	TP MDF/RDM	2	1			1h30	22h30
	Conventional and advanced manufacturing techniques	4	2	1h30		1h30	45h
	Automation of industrial systems	3	2	1h30		1h	37h30
Discovery unit	Course of choice	1	1	1h30			22h30

Teaching unit	Matter	Credit	Coefficient	C	TD	TP	Volume (hour)
	Course of choice	1	1	1h30			22h30
Transversale Unit	Technical English and terminology	1	1	1h30			22H30

Second Semester 2

Teaching unit	Matter	Credit	Coefficient	Courses	TD	Practical Work	Volume (hour)
Fundamental Unit	Finite element method	6	3				
	Advanced structural dynamics	4	2				
	Articulated mechanical systems and robotics	4	2				
	Design of mechanical systems	4	2				
Methodological unit	TP Finite Elements	2	1				
	CFAO	3	2				
	Optimization	4	2				
Discovery unit	Course of choice	1	1				
	Course choice	1	1				
Transversale Unit	Ethics, deontology and intellectual property	1	1				

Third Semester

Teaching unit	Matter	Credit	Coefficient	C	TD	TP	Volume (hour)
Fundamental Unit	Materials	4	2				
	Dynamics of rotating machines	4	2				
	Metal frame	2	1				
	Composite materials	4	2				
	Fracture mechanics and fatigue	4	2				
Methodological unit	Methods Office	4	2				
	Turbomachinery	2	2				
	Numerical simulation software in mechanics	2	1				
Discovery unit	Course of choice	1	1				
	Course choice	1	1				
Transversale Unit	Literature search and brief design	1	1				

Semester 4

Internship in a company sanctioned by a thesis and a defense.

	VHS	Coeff	Crédits
Personal Work	550	09	18
Internship in a company	100	04	06
Seminars	50	02	03
Other (Supervision)	50	02	03
Total Semester 4	750	17	30