

## License in Mathematics

### Speciality: Mathematics.

#### Brief

The study of mathematics at the University of Khemis Miliana is one of the main branches of the faculty of science and technology. This specialty is extremely broad and diverse with a few applications. Mathematics courses and tutorials are very important to students at all levels from the first year of a bachelor's degree to the last year of a master's degree, allowing students to understand the fundamental principles of other specialties. At the bachelor's level, all students are required to complete six semesters of coursework associated with practical work.

Field	Branch	Speciality
<b>Mathematics and computer science</b>	<i>Mathematics</i>	<i>Mathematics</i>

#### First Semester

Teaching unit	Matter	Credit	Coefficient	Course	TD	TP	HV
<b>Fundamental Unit</b>	Analysis 1	6	4	3h	3h		84h
	Algebra 1	5	3	1h	1h		42h
	Algorithms and data structure 1	6	4	3h	1h30	3h	105h
	Machine structure 1	5	3	1h30	1h30		42h
<b>Methodological unit</b>	Scientific Terminology and Written Expression	2	1	1h30			21h
	Foreign language 1	2	1	1h30			21h
<b>Discovery unit</b>	Physics 1 (point mechanics)	4	2	1h30	1h30		42h
<b>Transversale Unit</b>							

## Second Semester 2

Teaching unit	Matter	Credit	Coefficient	Courses	TD	TP	Volume (hour)
<b>Fundamental Unit</b>	Analysis 2	6	4	3h	1h30		63h
	Algebra 2	4	2	1h30	1h30		42h
	Algorithms and data structure 2	6	4	1h30	1h30	1h30	63h
	Machine structure 2	4	2	1h30	1h30		42h
<b>Methodological unit</b>	Introduction to probability and descriptive statistics	3	2	1h30	1h30		42h
	Information and Communication Technology	2	1	1h30			21h
	Programming tools for mathematics	2	1	1h30		1h30	42h
<b>Discovery unit</b>							
<b>Transversale Unit</b>	Physics 2 (general electricity)	3	2	1h30	1h30		42h

## Third Semester

Teaching unit	Matter	Credit	Coefficient	Courses	TD	TP	HV
<b>Fundamental Unit</b>	Algebra 3	5	3	1h30	1h30		42h
	Analysis 3	7	4	3h	1h30		63h
	Introduction to topology	6	3	3h	1h30		63h
<b>Methodological unit</b>	Numerical Analysis 1	4	3	1h30	1h30	1h30	63h
	Mathematical Logic	3	2	1h30	1h30		42h

Teaching unit	Matter	Credit	Coefficient	Courses	TD	TP	HV
	Programming Tools 2	3	1	1h30		1h30	42h
<b>Discovery unit</b>	History of Mathematics	2	1	1h30			21h
<b>Transversale Unit</b>							

#### Fourth semester

Teaching unit	Matter	Credit	Coefficient	Courses	TD	TP	HV
<b>Fundamental Unit</b>	Analysis 4	7	4	3h	3h		84h
	Algebra 4	5	3	1h30	1h30		42h
	Complex analysis	6	3	3h	1h30		63h
<b>Methodological unit</b>	Numerical Analysis 2	4	2	1h30	1h30	1h30	63h
	probabilities	4	2	1h30	1h30		42h
	Geometry	4	2	1h30	1h30		42h
<b>Discovery unit</b>	Application of mathematics to other sciences	2	1	1h30			21h
<b>Transversale Unit</b>							

#### Fifth semester

Teaching unit	Matter	Credit	Coefficient	Courses	TD	TP	HV
<b>Fundamental Unit</b>	Measurement and integration	6	4	3h	1h30		63h
	Normalized vector spaces	5	3	1h30	1h30		42h
	Differential equations	6	4	3h	1h30		63h
	Mathematical Physics Equations	5	2	1h30	1h30		42h
<b>Methodological unit</b>	Optimization without constraints	5	2	1h30	1h30	1h30	63h
<b>Discovery unit</b>	Introduction to mathematics education	3	1	1h30			21h

Teaching unit	Matter	Credit	Coefficient	Courses	TD	TP	HV
<b>Transversale Unit</b>							

### Six Semester

Teaching unit	Matter	Credit	Coefficient	Courses	TD	TP	HV
<b>Fundamental Unit</b>	Introduction to Linear Operator Theory	9	5	3h	3h		84h
	Partial Differential Equations	9	5	3h	3h		84h
<b>Methodological unit</b>	Integral transformations in $L^p$ spaces	5	2	3h	1h30		63h
	Differential geometry	5	2	3h	1h30		63h
<b>Discovery unit</b>							
<b>Transversale Unit</b>	Ethics and deontology of teaching and research	2	2	1h30			21h