

International University of Sarajevo, Faculty of Engineering and Natural Sciences (FENS)

Undergraduate Curriculum - Mechanical Engineering Program (AY 2021-2022)

Click on the course code or title to see the syllabus.

Semester I						Semester II					
Code	Title	Prerequisites	T	P	ECTS	Code	Title	Prerequisites	T	P	ECTS
NS104 / NS103	General Chemistry / Biology		3	2/0	6	MATH102	Calculus II	MATH101	3	2	6
MATH101	Calculus I		3	2	6	ENS203	Electrical Circuits I	MATH101	3	2	6
NS102	Physics		3	3	6	ENS207	Engineering Graphics		1	2	6
ENS213 / CS103	Programming for Engineers / Introduction to Programming		3	2	6	MATH201	Linear Algebra	MATH101	3	2	6
ENS101	Introduction to Engineering		2	1	3	NS112	Understanding Science and Technology		3	0	3
xxx	Foreign Language Elective I See Table 1		0	2	3	xxx	Foreign Language Elective II See Table 1		0	2	3
Semester Total = 30						Semester Total = 30					
Semester III						Semester IV					
Code	Title	Prerequisites	T	P	ECTS	Code	Title	Prerequisites	T	P	ECTS
ENS208	Introduction to Manufacturing Systems		3	2	6	MATH205	Numerical Analysis	MATH202	3	0	6
ENS209	Statics	MATH101	3	2	6	ENS206	System Modeling	MATH202	3	2	6
ENS205	Materials Science		3	1	6	ME208	Dynamics and Vibrations	MATH202	3	2	6
MATH202	Differential Equations	MATH102	3	2	6	EE305	Instrumentation and Measurements	ENS203	3	0	6
MATH203	Introduction to Probability and Statistics	MATH101	3	0	6	ME210	Strength of Materials	ENS209	3	2	6
Semester Total = 30						Semester Total = 30					
Semester V						Semester VI					
Code	Title	Prerequisites	T	P	ECTS	Code	Title	Prerequisites	T	P	ECTS
ME312	Machine Elements	ME210	3	0	6	ME304	Fluid Mechanics I	MATH202	3	2	6
EE311	Control System Design	ENS206	3	2	6	SPS103	Law and Ethics	Junior standing	3	0	6
ME306	Heat and Mass Transfer	MATH202	3	2	6	ENS202	Thermodynamics	MATH202	3	2	6
ELIT100	Academic English and Effective Communication		2	1	6	ELIT200	Critical Reading and Writing		2	1	6
	Program Elective I See Table 2	Junior standing			6		Program Elective 2 See Table 2	Junior standing			6
Semester Total = 30						Semester Total = 30					
Semester VII						Semester VIII					
Code	Title	Prerequisites	T	P	ECTS	Code	Title	Prerequisites	T	P	ECTS
	Program Elective 3 See Table 2	Junior standing			6		Program Elective 6 See Table 2	Senior standing			6
	Program Elective 4 See Table 2	Junior standing			6		Program Elective 7 See Table 2	Senior standing			6
	Program Elective 5 See Table 2	Junior standing			6		Program Elective 8 See Table 2	Senior standing			6
	Free Elective 1				6		Free Elective 2				6
ME370	Work Placement / Internship	Junior Standing	0	14	6	ENS490	Graduation Project		2	2	6
Semester Total = 30						Semester Total = 30					
Abbreviations: T (Theory), P (Practice), ECTS credit											42
Total Credits Required for Graduation											240
Total Credits of Electives											66

7 Program Electives are taken from junior, senior or graduate level courses in ME, as seen in Table 2. Two program electives can be selected from other junior or senior level courses in FENS with consent of Program Coordinator.

Junior standing means the student has successfully completed at least 108 ECTS units in the program.

Senior standing means the student has successfully completed at least 168 ECTS units in the program.

3 University Electives for a total of 12 ECTS credits can be taken from Table 1: University Elective Courses List.

2 Language Elective courses are taken from the list of language courses provided (can not be the student's mother language).

2 Free Elective courses are taken from any faculty or program.

This new curriculum is being implemented for the new freshman students who entered the freshman class in the year 2017 or after.

For the existing sophomore, junior and senior students, the Faculty Board will make plans for proper adaptation to the new curriculum.

In exceptional cases only, Faculty Council may make a decision for a student bypass a prerequisite for any course.

Work placement/Internship is typically practiced in summer for a period of at least 25 work days, totalling at least 150 hours.

Table 1: University Electives

Code	Title	ECTS
IUS Pool of 3 ECTS University Courses		
	Foreign Language Elective I (8)	3
	Foreign Language Elective II (8)	3
(8) Scholarship students will take either Spoken Turkish I and II or Spoken Bosnian I and II.		

Table 2: Program Electives

Code	Title	Prerequisites	ECTS	Code	Title	Prerequisites	ECTS
ME301	Engineering Project I	Junior standing	6	EE201	Analog Electronics I	ENS203	6
ME302	Engineering Project II	Junior standing	6	EE202	Electrical Circuits II	ENS203	6
ME313	Mechanical Vibrations	Junior standing	6	EE221	Object Oriented Programming	ENS213 or CS103	6
ME401	Engineering Design I	Junior standing	6	EE325	Embedded Systems	ENS213 or CS103	6
ME402	Engineering Design II	Junior standing	6	ENS201	Electromagnetism I	MATH102	6
ME410	Unmanned Aerial Vehicles	Junior standing	6	IE305	Work Analysis and Design	Junior standing	6
ME411	Renewable Energy Technology	Junior standing	6	IE307	Quality and Reliability Engineering	Junior standing	6
ME412	Introduction to Computational Fluid Dynamics	Senior standing	6	IE309	Ergonomics	Junior standing	6
ME414	Energy Conversion Technology	Senior standing	6	IE318	Engineering Economics	Junior standing	6
ME415	Computational Methods	Senior standing	6	IE425	Computer Aided Design And Manufacturing	Senior standing	6
ME416	Turbomachinery	Senior standing	6	IE408	Project Management		6
ME430	Hydraulics and Pneumatics	Senior standing	6	MATH306	Statistical Modeling	MATH203	6
ME432	HVAC	Senior standing	6				
ME436	Plumbing System and Design	Senior standing	6				

Last update 7 September 2021