

## Mechanical Engineering study plan

CPs	1st Semester	2nd Semester	3rd Semester	4th Semester	5th Semester	6th Semester	7th Semester	8th Semester
1	MATH110 Mathematics I 6 CP (6 UoL)	MATH120 Mathematics II 8 CP (8 UoL)	MECH210 Engineering Mechanics II (Dynamics) 4 CP (4 UoL)	EEEJ221 Measurement, Instrumentation and Control Basics 4 CP (4 UoL)	MECH310 Engineering Mechanics III (Mechanics of Materials) 4 CP (4 UoL)	MECH321 Engineering Mechanics IV (Machine Elements) 6 CP (6 UoL)	MECH410 Engineering Mechanics V (Dynamics of Machinery) 6 CP (6 UoL)	MECH420 Classifiers and Mixers + Coarse Comminution Machines 6 CP (6 UoL)
2								
3								
4								
5								
6								
7	CHEM110 Chemistry 5 CP (3 UoL, 2 UoLR)	MATS120 Materials Science 4 CP (4 UoL)	STAT210 Introduction to Statistic 4 CP (4 UoL)	CAD220 Computer Aided Design (CAD) 4 CP (4 UoL)	MECH311 Production Process Technology 6 CP (6 UoL)	MECH322 Virtual Product Design 4 CP (4 UoL)	MECH411 Structural Durability and System Reliability 4 CP (4 UoL)	PROJ420 Final Study Project 6 CP (6 UoL)
8								
9								
10								
11								
12								
13	GEOS110 Introduction to Geosciences 4 CP (4 UoL)	MECH120 Engineering Mechanics I (Statics) 4 CP (4 UoL)	THER210 Engineering Thermodynamics 4 CP (4 UoL)	FLME220 Fluid Mechanics 4 CP (4 UoL)	RMPE310 Mechanical Process Engineering I + Process Mineralogy 4 CP (4 UoL)	MECH323 Hydraulic and Pneumatic Drives 4 CP (4 UoL)	MECH412 Finite Element Method 4 CP (4 UoL)	THES420 Bachelor Thesis + Colloquium 12 CP
14								
15								
16								
17								
18								
19	EEEJ111 Algorithm and Programming 4 CP (4 UoL)	PHYS120 Physics 6 CP (1 UoL, 1 UoLR, 4 UoLab)	ELEC210 Introduction to Electrical Engineering 4 CP (4 UoL)	SCIM220 Scientific Methods 2 CP (2 UoL)	HAMT310 Heat and Mass Transfer 4 CP (4 UoL)	EEEJ321 Renewable Energy System 4 CP (4 UoL)	MECH413 Production and Process Simulation 4 CP (4 UoL)	
20								
21								
22								
23								
24								
25	ENGL110 Technical English 4 CP (4 UoL)	MINE210 Introduction to Mining 4 CP (4 UoL)	HSE220 Health-Safety-Environment 4 CP (4 UoL)	EEEM312 Mechatronics & Controllers 4 CP (4 UoL)	INTR320 Industrial Internship + Reflection 10 CP 14 weeks		MECH414 Open Pit Excavation + Underground Mining Machines 6 CP (6 UoL)	
26								
27								
28								
29								
30								
31	TIME110 Time Management 2 CP (2 UoL)	CHEM120 Chemistry Lab 3 CP (3 UoL)	LAW220 Law 2 CP (2 UoL)	INTR220 Basic Internship 2 CP			STWR410 Scientific Writing 4 CP (4 UoL)	
22								
23								
24								
25								
26								
Total CP	29	31	28	26	22	28	28	24

Legend:

CP =	Credit Points	Fundamentals	Specialization	General	Foreign Languages	Internship / Thesis	Electives
UoL =	Unit of Instruction (45 min. per unit)		UoLab =	Unit of Instruction Laboratory			
UoL =	Unit of Instruction Lecture		UoFt =	Unit of Instruction Field trip			
UoLR =	Unit of Instruction Recitation						

**\*\*Electives:** Every 3rd and 4th year student can choose professional engineering modules from the other programs as electives. Presupposed for participation and recognition of the elective module is that the required prerequisites of the chosen elective module already have been passed. Furthermore, the adjustment of the lecture times for attendance in the chosen elective modules can only be made by ASA in exceptional cases. The student must choose his subjects in such a way that participation in his program-related modules is not endangered or restricted.

**\*\*\*\* The total amount of CP's from Electives has to be minimum 24.**