

3rd year

[NTF](#) › [OMM](#) › [Study](#) › [Bachelor's degree](#) › [Materials engineering \(University programme\)](#) › [Curriculum](#) › [3rd year](#)

Course	Hours					ECTS
	L	S	P	O	Σ	
5th semester	195	15	165	0	375	25
Optional professional course 2	45	0	30	0	75	5
Optional professional course 3	45	0	30	0	75	5
Optional professional course 4	45	0	30	0	75	5
Optional professional course 5	45	0	30	0	75	5
Practicals in energy and workability	15	15	45	0	75	5
6th semester	225	30	210	0	465	30
Company organization and management	45	15	15	0	75	5
Practicals in modelling	15	0	60	0	75	5
General optional course 2	45	0	30	0	75	5
Optional professional course 6	45	0	30	0	75	5
Diploma work	75	15	75	0	165	10
TOTAL	420	45	375	0	840	55

Optional courses	Hours					ECTS
	L	S	P	O	Σ	
Polymers - group B * Polymers chemistry must be selected obligatory	45	15	15	0	75	5
Ceramics - group B	45	0	30	0	75	5
Composites - group B	30	30	15	0	75	5
Materials recycling - group C	45	0	30	0	75	5
Measurements and regulations - group C	30	0	45	0	75	5
Special casting techniques - group C	45	0	30	0	75	5
Physico-chemical fundamentals of metal joining - group C	45	0	30	0	75	5
Corrosion and corrosion protection - group C	45	0	30	0	75	5
Archaeometallurgy - group C	45	15	15	0	75	5
Special forming techniques - group C	45	0	30	0	75	5
Electrotechnics - group C	45	0	30	0	75	5
Refractory materials - group C	45	0	30	0	75	5
Powder metallurgy - group C	30	15	30	0	75	5
Artistic forming of materials - group C	30	0	45	0	75	5
Industrial furnaces - group C	30	0	45	0	75	5
Technical English - group C	45	0	30	0	75	5
Steelmaking - group A	45	0	30	0	75	5
Process metallurgy of non-ferrous metals -group A	45	0	30	0	75	5
Casting - group A	45	0	30	0	75	5
Materials processing - group A	45	0	30	0	75	5
Thermal engineering - group A	30	15	45	0	90	5
Physical metallurgy of steel - group B	45	0	30	0	75	5
Physical metallurgy of non-ferrous metals - group B	45	0	30	0	75	5
Polymers chemistry - group B	45	15	15	0	75	5
Fundamentals of economic analysis - general course	45	0	45	0	90	6
Principles of marketing - general course	30	0	0	0	30	4
Fundamentals of corporate finance - general course	45	0	45	0	90	6
Economy of business in montanistic companies - general course	30	15	15	0	60	4
Environmental economics - general course	45	0	15	0	60	6

Project management - general course

30 0 15 0 45 4

Abbreviations used for the syllabus:

L – lectures

S – seminar

P – practice

O – other forms of educational activities (mainly project work)

ECTS – European Credits Transfer System (1 credit point equals a 30-hour student workload)

General Optional Course 1 worth 5 ECTS is selected by the student from the column **Optional Courses – general course**.

General Optional Course 2 worth 5 ECTS is selected by the student from the **Optional Courses** according to his or her choice; this includes any programme and any faculty or university.

The student selects **Optional professional courses 1, 2, 3 and 4** from the relevant **Optional Professional Courses** column, each worth 5 ECTS, i.e. jointly 20 ECTS. This is done in the following manner:

– all four professional courses must be selected from group A either from group B

The student selects **Optional professional course 5**, worth 5 ECTS, from the relevant **Optional Professional Courses** column. This is done in the following manner: if the optional professional courses 1, 2, 3, 4 are selected from Group A, the student selects one course from Group B and vice versa; if the optional professional courses 1, 2, 3, 4 are selected from Group B, the student selects one course from Group A. The same courses must not be selected more than once.

The student selects **Optional professional course 6**, worth 5 ECTS, from the relevant **Optional Professional Courses – Group C**. The selected course should be close to the theme of the student's industrial placement or undergraduate thesis.