



Major field of study: **Management and Production Engineering**

Level of education: First-cycle studies and full-time study

Educational profile: General academic

### Term 1

No.	Item code	Subjects	Lecture	Classes	Laboratory	Projects	Other	TOTAL	Exam.	ECTS
1.	Z-ZIP1-E-101	Foreign Language I			30			30		2
2.	Z-ZIP1-E-102	Linear Algebra	15	15				30		2
3.	Z-ZIP1-E-103	Calculus I	30	30				60		4
4.	Z-ZIP1-E-104	Statistics	20	20	20			60	1	5
5.	Z-ZIP1-E-105	Physics I	15	15				30		2
6.	Z-ZIP1-E-106	Engineering Graphics	20		15			35		3
7.	Z-ZIP1-E-107	Microeconomics	45	30				75	1	6
8.	Z-ZIP1-E-108	Fundamentals of Law	20	10				30	1	3
9.	Z-ZIP1-E-109	Information Technologies			30			30		2
10.	Z-ZIP1-E-110	Health and Safety at Work	15					15		1

**TOTAL: 180 120 95 0 0 395 3 30**

### Term 2

No.	Item code	Subjects	Lecture	Classes	Laboratory	Projects	Other	TOTAL	Exam.	ECTS
1.	Z-ZIP1-E-201	Foreign Language II			30			30		2
2.	Z-ZIP1-E-202	Calculus II	30	30				60	1	5
3.	Z-ZIP1-E-203	Financial Mathematics	15	15				30		2
4.	Z-ZIP1-E-204	Physics II	15	15	15			45		3
5.	Z-ZIP1-E-205	Macroeconomics	30	30				60	1	5
6.	Z-ZIP1-E-206a	Social Psychology	15					15		1
	Z-ZIP1-E-206c	Motivation and Effective Learning								
7.	Z-ZIP1-E-207	Economic Law	15	15				30		2
8.	Z-ZIP1-E-208	Materials Science	30	10	10			50	1	4
9.	Z-ZIP1-E-209	Engineering Graphics - SolidWorks			30			30		2
10.	Z-ZIP1-E-210	Fundamentals of Computer Science	15		30			45		3
11.	Z-ZIP1-E-211a	History of Mathematics	15					15		1
	Z-ZIP1-E-211b	History of Music								

**TOTAL: 180 115 115 0 0 410 3 30**



### Term 3

No.	Item code	Subjects	Lecture	Classes	Laboratory	Projects	Other	TOTAL	Exam.	ECTS
1.	Z-ZIP1-E-301	Foreign Language III			30			30		2
2.	Z-ZIP1-E-302	Differential Equations	15	15				30		2
3.	Z-ZIP1-E-303a	Logic	20	15				35		3
	Z-ZIP1-E-303b	Discrete Mathematics								
4.	Z-ZIP1-E-304	Mechanics for Engineers	15	15				30		2
5.	Z-ZIP1-E-305	Fluid Mechanics and Heat Transfer	30	15				45	1	4
6.	Z-ZIP1-E-306	Plastics and Composites	15					15		1
7.	Z-ZIP1-E-307	Production Processes	30					30		2
8.	Z-ZIP1-E-308	Manufacturing Techniques	30					30		2
9.	Z-ZIP1-E-309	Laboratory Testing Techniques			30			30		2
10.	Z-ZIP1-E-310	Accounting	30	30				60	1	5
11.	Z-ZIP1-E-311a	Informatics – Visual Basic Programming	15		30			45	1	4
	Z-ZIP1-E-311b	Informatics – Android Programming								
12.	Z-ZIP1-E-312a	History of Economic Thought	15					15		1
	Z-ZIP1-E-312b	History of Technology								
13.	Z-ZIP1-E-313	Physical Education		30				30		0

**TOTAL: 215 120 90 0 0 425 3 30**

### Term 4

No.	Item code	Subjects	Lecture	Classes	Laboratory	Projects	Other	TOTAL	Exam.	ECTS
1.	Z-ZIP1-E-401	Foreign Language IV			30			30	1	3
2.	Z-ZIP1-E-402	Mechanics	15	15				30		2
3.	Z-ZIP1-E-403	Materials Strength	30	20				50	1	4
4.	Z-ZIP1-E-404	Computerized Accounting			24			24		2
5.	Z-ZIP1-E-405	Metrology	20	10	15			45		3
6.	Z-ZIP1-E-406	Ecology and Environmental Management	20			15		35		2
7.	Z-ZIP1-E-407	Finance	30	15				45	1	4
8.	Z-ZIP1-E-408	Fundamentals of Management	30	15				45	1	4
9.	Z-ZIP1-E-409	Databases	15		24			39		3
10.	Z-ZIP1-E-410	Intellectual Property Protection	15					15		1
11.	Z-ZIP1-E-411a	HR Management	15		15			30		2
	Z-ZIP1-E-411b	Negotiations								
12.	Z-ZIP1-E-412	Physical Education		30				30		0

**TOTAL: 190 105 108 15 0 418 4 30**



### Term 5

No.	Item code	Subjects	Lecture	Classes	Laboratory	Projects	Other	TOTAL	Exam.	ECTS
1.	Z-ZIP1-E-501	Specialist Foreign Language I			30			30		2
2.	Z-ZIP1-E-502	Materials Strength – Laboratory			15			15		1
3.	Z-ZIP1-E-503	Quality Management	30					30		2
4.	Z-ZIP1-E-504	Fundamentals of Recycling	20			15		35		2
5.	Z-ZIP1-E-505	Engineering Design	30			15		45		3
6.	Z-ZIP1-E-506	Fundamentals of Marketing	30	15				45	1	4
7.	Z-ZIP1-E-507	Production Management	30	30				60	1	5
8.	Z-ZIP1-E-508a	Programming Languages - C++	15		30			45		3
	Z-ZIP1-E-508b	Programming Languages - Python								
9.	Z-ZIP1-E-509a	Innovations in Technology	15					15		1
	Z-ZIP1-E-509b	Technology Transfer								
10.	Z-ZIP1-E-510	Operational Research	15		15			30		2
11.		Elective courses within specialization					60	60	1	5
<b>TOTAL:</b>			<b>185</b>	<b>45</b>	<b>90</b>	<b>30</b>	<b>60</b>	<b>410</b>	<b>3</b>	<b>30</b>

### Term 5 – Computer Science for Management and Modelling

No.	Item code	Subjects	Lecture	Classes	Laboratory	Projects	Other	TOTAL	Exam.	ECTS
1.	Z-ZIP1-E-521	Relational Database Design	15		15			30	1	3
2.	Z-ZIP1-E-522	Algorithms and Data Structures	15		15			30		2
<b>TOTAL:</b>			<b>30</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>60</b>	<b>1</b>	<b>5</b>

### Term 5 – Production and Innovation Management

No.	Item code	Subjects	Lecture	Classes	Laboratory	Projects	Other	TOTAL	Exam.	ECTS
1.	Z-ZIP1-E-531	Modelling in Production Engineering	15		15			30	1	3
2.	Z-ZIP1-E-532	Technological Documentation				15		15		1
3.	Z-ZIP1-E-533	Assessment of the Effectiveness of Investment Projects	15					15		1
<b>TOTAL:</b>			<b>30</b>	<b>0</b>	<b>15</b>	<b>15</b>	<b>0</b>	<b>60</b>	<b>1</b>	<b>5</b>



### Term 6

No.	Item code	Subjects	Lecture	Classes	Laboratory	Projects	Other	TOTAL	Exam.	ECTS
1.	Z-ZIP1-E-601	Specialist Foreign Language II			30			30		2
2.	Z-ZIP1-E-602	Computer-Aided Engineering	15		15			30		2
3.	Z-ZIP1-E-603	Fundamentals of Electrical Measuring	15		15			30		2
4.	Z-ZIP1-E-604	Fundamentals of Automation	30	15				45	1	4
5.	Z-ZIP1-E-605	Laboratory in Fundamentals of Automation			15			15		1
6.	Z-ZIP1-E-606	Logistics	30	15				45	1	4
7.	Z-ZIP1-E-607	Service Management	15	15				30		2
8.	Z-ZIP1-E-608	Costs Accounting for Engineers	15	30				45	1	4
9.	Z-ZIP1-E-609	Fundamentals of Research Methodology	15					15		1
10.	Z-ZIP1-E-610a	Basics of Entrepreneurship	15					15		1
	Z-ZIP1-E-610b	Basics of Lean Manufacturing								
	Z-ZIP1-E-610c	Organization of Warehouse Processes								
11.		Elective courses within specialization					105	105	1	7
<b>TOTAL:</b>			<b>150</b>	<b>75</b>	<b>75</b>	<b>0</b>	<b>105</b>	<b>405</b>	<b>4</b>	<b>30</b>

### Term 6 – Computer Science for Management and Modelling

No.	Item code	Subjects	Lecture	Classes	Laboratory	Projects	Other	TOTAL	Exam.	ECTS
1.	Z-ZIP1-E-621	Object Oriented Programming in RAD	15		30			45	1	3
2.	Z-ZIP1-E-622	Computer Aided Engineering Work	15					15		1
3.	Z-ZIP1-E-623	Engineering Modelling			15			15		1
4.	Z-ZIP1-E-624	Advanced Uses of Spreadsheets	10		20			30		2
<b>TOTAL:</b>			<b>40</b>	<b>0</b>	<b>65</b>	<b>0</b>	<b>0</b>	<b>105</b>	<b>1</b>	<b>7</b>

### Term 6 – Production and Innovation Management

No.	Item code	Subjects	Lecture	Classes	Laboratory	Projects	Other	TOTAL	Exam.	ECTS
1.	Z-ZIP1-E-631	New Products Prototyping	15			15		30		2
2.	Z-ZIP1-E-632	Product Development in an Enterprise	15			15		30	1	2
3.	Z-ZIP1-E-633a	Firm in the Competitive Market	15					15		1
	Z-ZIP1-E-633b	Some Aspects of Materials Strength								
4.	Z-ZIP1-E-634	Computer Aided Production Management	10		20			30		2
<b>TOTAL:</b>			<b>55</b>	<b>0</b>	<b>20</b>	<b>30</b>	<b>0</b>	<b>105</b>	<b>1</b>	<b>7</b>



### Term 7

No.	Item code	Subjects	Lecture	Classes	Laboratory	Projects	Other	TOTAL	Exam.	ECTS
1.	Z-ZIP1-E-701a	Self-Presentation and Public Speaking		15				15		1
	Z-ZIP1-E-701b	Career Coaching								
2.	Z-ZIP1-E-702d	Business Ethics	15					15		1
	Z-ZIP1-E-702b	Spatial Information Systems								
	Z-ZIP1-E-702c	Public Relations								
3.	Z-ZIP1-E-703	Elective courses	15					15		1
4.	Z-ZIP1-E-704	Seminar					30	30		2
5.	Z-ZIP1-E-705	Diploma Thesis								15
6.	Z-ZIP1-E-706	Occupational Practice								4
7.		Elective courses within specialization					90	90		6
<b>TOTAL:</b>			<b>30</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>120</b>	<b>165</b>		<b>30</b>

### Term 7 – Computer Science for Management and Modelling

No.	Item code	Subjects	Lecture	Classes	Laboratory	Projects	Other	TOTAL	Exam.	ECTS
1.	Z-ZIP1-E-721	Computer Networks and Network applications	15		15			30		2
2.	Z-ZIP1-E-722	Internet Technologies	15		15			30		2
3.	Z-ZIP1-E-723	Data Visualisation	15		15			30		2
	Z-ZIP1-E-724	Contemporary Computer Systems								
<b>TOTAL:</b>			<b>45</b>	<b>0</b>	<b>45</b>	<b>0</b>	<b>0</b>	<b>90</b>	<b>0</b>	<b>6</b>

### Term 7 – Production and Innovation Management

No.	Item code	Subjects	Lecture	Classes	Laboratory	Projects	Other	TOTAL	Exam.	ECTS
1.	Z-ZIP1-E-731	Technological Entrepreneurship	10			20		30		2
2.	Z-ZIP1-E-732	Marketing Management and Market Research	15	15				30		2
3.	Z-ZIP1-E-733	Ecological Engineering	15			15		30		2
<b>TOTAL:</b>			<b>40</b>	<b>15</b>	<b>0</b>	<b>35</b>	<b>0</b>	<b>90</b>	<b>0</b>	<b>6</b>



### *Computer Science for Management and Modelling*

No.	Term	Lecture	Classes	Laboratory	Projects	Other	TOTAL	ECTS
1.	Term 1	180	120	95			395	30
2.	Term 2	180	115	115			410	30
3.	Term 3	215	120	90			425	30
4.	Term 4	190	105	108	15		418	30
5.	Term 5	215	45	120	30		410	30
6.	Term 6	190	75	140			405	30
7.	Term 7	75	15	45	0	30	165	30
<b>Total:</b>		<b>1245</b>	<b>595</b>	<b>713</b>	<b>45</b>	<b>30</b>	<b>2628</b>	<b>210</b>

### *Production and Innovation Management*

No.	Term	Lecture	Classes	Laboratory	Projects	Other	TOTAL	ECTS
1.	Term 1	180	120	95			395	30
2.	Term 2	180	115	115			410	30
3.	Term 3	215	120	90			425	30
4.	Term 4	190	105	108	15		418	30
5.	Term 5	215	45	105	45		410	30
6.	Term 6	205	75	95	30		405	30
7.	Term 7	70	30		35	30	165	30
<b>Total:</b>		<b>1255</b>	<b>610</b>	<b>608</b>	<b>125</b>	<b>30</b>	<b>2628</b>	<b>210</b>