University **POLITEHNICA** of Bucharest
Faculty of **Industrial Engineering and Robotics**
Study programme **Industrial Engineering**

Academic year 2019- 2020

CURRICULUM

1st year — 1st semester

No.	Courses		Hours/week				ECTS	Evaluation
	Name	Code	C	S	L	P		
Compulsory courses (O)								
1	Technical Mechanics	UPB.06.D.01.O.001	2	0	2	0	5	E
2	General Chemistry	UPB.06.F.01.O.002	2	0	2	0	4	E
3	Mathematics 1	UPB.06.F.01.O.003	2	2	0	0	5	E
4	Computer Programming 1 (EPS)	UPB.06.F.01.O.004	2	0	2	2	5	V
5	Communication (EPS)	UPB.06.C.01.O.005	2	0	2	0	4	E
6	English language (EPS)	UPB.06.C.01.O.006	1	0	1	0	4	V
7	**A1.1**	UPB.06.C.01.A.007						
	Total: Compulsory courses (O)		**11**	**2**	**9**	**2**	**27**	
Optional courses (A)								
A1.1	Foreign Languages 1 - French	UPB.06.C.01.A.007	1	0	1	0	3	V
	Foreign Languages 1 - Romanian							V
	Total Optional courses (A)		1	0	1	0	3	
	Total: Compulsory and optional courses (O+A)		**12**	**2**	**10**	**2**	**30**	
T O T A L: HOURS / WEEK			**26**					
Elective courses (L)								
L1.1	Sport	UPB.06.C.01.L.001	0	1	0	0	2	V
L1.2	Ethics	UPB.06.C.01.L.002	2	2	0	0	5	V
L1.3	Psihologia educației	UPB.06.C.01.L.003	2	2	0	0	5	E
	Total: Elective courses (L)		**4**	**5**	**0**	**0**	**12**	

1st year — 2nd semester

No.	Courses		Hours/week				ECTS	Evaluation
	Name	Code	C	S	L	P		
Compulsory courses (O)								
1	Mechanics of Materials 1	UPB.06.D.02.O.001	2	2	2	0	6	E
2	Mathematics 2	UPB.06.F.02.O.002	2	2	0	0	6	E
3	General Physics	UPB.06.F.02.O.003	2	0	2	0	5	E
4	Materials Science	UPB.06.D.02.O.004	2	0	2	0	5	E
5	Computer Programming 2 (EPS)	UPB.06.F.02.O.005	2	0	2	2	5	V
6	**A1.2**	UPB.06.C.02.A.006						
	Total: Compulsory courses (O)		**10**	**4**	**8**	**2**	**27**	
Optional courses (A)								
A1.2	European Culture and Civilization	UPB.06.C.02.A.006	2	2	0	0	3	V
	European Integration							
	Total Optional courses (A)		2	2	0	0	3	
	Total: Compulsory and optional courses (O+A)		**12**	**6**	**8**	**2**	**30**	
T O T A L: HOURS / WEEK			**28**					
Elective courses (L)								
L1.5	Sport	UPB.06.C.02.L.001	0	1	0	0	2	V
L1.6	Practical stage (60 hours/2 weeks)	UPB.06.D.02.L.002	60 de ore				2	V
L1.7	Foreign Languages 2 - French	UPB.06.C.02.L.003	1	0	1	0	5	V
L1.8	Foreign Languages 2 - English	UPB.06.C.02.L.004	1	0	1	0	5	V
L1.9	Pedagogie 1	UPB.06.C.02.L.005	2	2	0	0	5	E
L1.10	Volunteering 1 (14weeksx5h/week=70h)	UPB.06.C.02.L.006	70 hours				3	V
	Total: Elective courses (L)		**4**	**3**	**2**	**0**	**22**	

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Study programme **Industrial Engineering**

Academic year 2019 - 2020

CURRICULUM

2nd year — 1st semester

No.	Courses		Hours/week				ECTS	Evaluation
	Name	Code	C	S	L	P		
Compulsory courses (O)								
1	Technical Drawing	UPB.06.F.03.O.001	2	2	2	0	6	V
2	Mechanics of Materials 2	UPB.06.D.03.O.002	2	2	2	0	7	E
3	Probability and Statistics	UPB.06.F.03.O.003	2	2	0	0	5	E
4	Computer Aided Design 1	UPB.06.D.03.O.004	2	0	2	1	6	E
5	Databases (EPS)	UPB.06.F.03.O.005	2	0	2	2	6	V
	Total: Compulsory courses (O)		**10**	**6**	**8**	**3**	**30**	
	Total: Compulsory and optional courses (O+A)		**10**	**6**	**8**	**3**	**30**	
T O T A L: HOURS / WEEK			**27**					
Elective courses (L)								
L2.1	Sport	UPB.06.C.03.L.001	0	1	0	0	2	V
L2.2	Foreign Languages 3 - French	UPB.06.C.03.L.002	2	0	2	0	5	V
L2.3	Foreign Languages 3 - English	UPB.06.C.03.L.003	2	0	2	0	5	V
L2.4	Pedagogie 2	UPB.06.U.03.L.004	2	2	0	0	5	E
	Total: Elective courses (L)		**6**	**3**	**4**	**0**	**17**	

2nd year — 2nd semester

No.	Courses		Hours/week				ECTS	Evaluation
	Name	Code	C	S	L	P		
Compulsory courses (O)								
1	Tolerances Design	UPB.06.D.04.O.001	2	0	2	0	5	E
2	Materials Technology	UPB.06.D.04.O.002	2	0	2	0	5	E
3	Economics	UPB.06.S.04.O.003	2	2	0	0	4	E
4	Computer Aided Design 2	UPB.06.D.04.O.004	2	0	2	2	6	V
5	Machine elements	UPB.06.D.04.O.005	2	0	2	2	6	E
6	A2.1	UPB.06.D.04.A.006						
	Total: Compulsory courses (O)		**10**	**2**	**8**	**4**	**26**	
Optional courses (A)								
A2.1	Modelling and simulation Mechanical Vibrations	UPB.06.D.04.A.006	2	0	2	0	4	E
	Total Optional courses (A)		2	0	2	0	4	
	Total: Compulsory and optional courses (O+A)		**12**	**2**	**10**	**4**	**30**	
T O T A L: HOURS / WEEK			**28**					
Elective courses (L)								
L2.5	Sport	UPB.06.C.04.L.001	0	1	0	0	2	V
L2.6	Practical Stage (60 hours/2weeks)	UPB.06.D.04.L.002	0	0	0	0	2	V
L2.7	Foreign Languages 4 - French	UPB.06.C.04.L.003	2	0	2	0	5	V
L2.8	Foreign Languages 4 - Romanian	UPB.06.C.04.L.004	2	0	2	0	5	V
L2.9	Didactica specialitatii	UPB.06.C.04.L.005	2	2	0	0	5	E
L2.10	Volunteering 2 (14weeksx5h/week=70h)	UPB.06.C.04.L.006	70 hours				3	V
	Total: Elective courses (L)		**6**	**3**	**4**	**0**	**19**	

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Academic year 2019 - 2020

CURRICULUM

3rd year — 1st semester

No.	Courses		Hours/week				ECTS	Evaluation
	Name	Code	C	S	L	P		
Compulsory courses (O)								
1	Mechanical Systems Design	UPB.06.D.05.O.001	2	0	2	0	4	E
2	Instrumentation and Measurement	UPB.06.S.05.O.002	2	0	2	0	4	E
3	System and Project Management (EPS)	UPB.06.S.05.O.003	2	0	0	2	6	E
4	Manufacturing Processes 1	UPB.06.S.05.O.004	2	0	2	0	6	E
5	Computer Aided Engineering	UPB.06.S.05.O.005	2	0	2	2	6	V
6	**A3.1**	UPB.06.S.05.A.006						
	Total: Compulsory courses (O)		**10**	**0**	**8**	**4**	**26**	
Optional courses (A)								
A3.1	Biomechanical Structures Finite Element Analysis of Solids	UPB.06.S.05.A.006	2	0	2	0	4	E
	Total Optional courses (A)		2	0	2	0	4	
	Total: Compulsory and optional courses (O+A)		**12**	**0**	**10**	**4**	**30**	
T O T A L: HOURS / WEEK			**26**					
Elective courses (L)								
L3.1	Foreign Languages 5 - French	UPB.06.C.05.L.001	2	0	2	0	5	V
L3.2	Foreign Languages 5 - Romanian	UPB.06.C.05.L.002	2	0	2	0	5	V
L3.3	Instruire asistata de calculator	UPB.06.C.05.L.003	1	1	0	0	2	V
L3.4	Practica pedagogica in invatamantul preuniversitar obligatoriu (1)	UPB.06.C.05.L.004	0	3	0	0	3	V
L3.5	Psychology	UPB.06.C.05.L.005	2	0	2	0	5	V
	Total: Elective courses (L)		**7**	**4**	**6**	**0**	**20**	

3rd year — 2nd semester

No.	Courses		Hours/week				ECTS	Evaluation
	Name	Code	C	S	L	P		
Compulsory courses (O)								
1	Production and Operation Management	UPB.06.S.06.O.001	2	0	2	2	5	V
2	Machine Tools	UPB.06.D.06.O.002	2	0	1	2	4	V
3	Robotics	UPB.06.S.06.O.003	2	0	2	0	4	V
4	Manufacturing Processes 2	UPB.06.S.06.O.004	2	0	1	2	4	V
5	Engineering Economics	UPB.06.S.06.O.005	2	0	2	0	4	V
6	Practical Stage (300 hours/10 weeks)	UPB.06.D.06.O.006	0	0	0	0	6	V
7	**A3.2**	UPB.06.S.06.A.007						
	Total: Compulsory courses (O)		**10**	**0**	**8**	**6**	**27**	
Optional courses (A)								
A3.2	Supply Chain Management Industrial Management	UPB.06.S.06.A.007	2	0	0	2	3	V
	Total Optional courses (A)		2	0	0	2	3	
	Total: Compulsory and optional courses (O+A)		**12**	**0**	**8**	**8**	**30**	
T O T A L: HOURS / WEEK			**28**					
Elective courses (L)								
L3.6	Foreign Languages 6 - French	UPB.06.C.06.L.001	2	0	2	0	5	V
L3.7	Foreign Languages 6 - Romanian	UPB.06.C.06.L.002	2	0	2	0	5	V
L3.8	Mangementul clasei de elevi	UPB.06.C.06.L.003	1	1	0	0	3	E
L3.9	Practica pedagogica in invatamantul preuniversitar obligatoriu (2)	UPB.06.C.06.L.004	0	3	0	0	2	V
L3.10	Examen absolvire, Nivel I	UPB.06.C.06.L.005	0	0	0	0	5	E
L3.11	Volunteering 3 (14weeksx5h/week=70h)	UPB.06.C.06.L.006	70 hours				3	V
	Total: Elective courses (L)		**5**	**4**	**4**	**0**	**20**	

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Academic year 2019 - 2020

CURRICULUM

4th year — 1st semester

No.	Courses		Hours/week				ECTS	Evaluation
	Name	Code	C	S	L	P		
Compulsory courses (O)								
1	Computer Aided Manufacturing	UPB.06.S.07.O.001	2	0	2	2	6	E
2	Industrial Logistics	UPB.06.S.07.O.002	2	0	2	2	7	E
3	Product Design and Development (EPS)	UPB.06.D.07.O.003	2	0	2	2	7	E
4	Integrated Production Systems	UPB.06.S.07.O.004	2	0	2	2	7	E
6	A4.1	UPB.06.S.07.A.001						
	Total: Compulsory courses (O)		**8**	**0**	**8**	**8**	**27**	
Optional courses (A)								
A4.1	Leadership Lab Internship Lab	UPB.06.S.07.A.001	0	0	2	0	3	V
	Total Optional courses (A)		0	0	2	0	3	
	Total: Compulsory and optional courses (O+A)		**8**	**0**	**10**	**8**	**30**	
T O T A L: HOURS / WEEK			**26**					
Elective courses (L)								
L4.1	Foreign Languages 7 - French	UPB.06.C.07.L.001	2	2	0	0	5	V
L4.2	Foreign Languages 7 - Romanian	UPB.06.C.07.L.002	2	2	0	0	5	V
L4.3	Intercultural Cooperation	UPB.06.C.07.L.003	2	2	0	0	5	V
	Total: Elective courses (L)		**6**	**6**	**0**	**0**	**15**	

4th year — 2nd semester

No.	Courses		Hours/week				ECTS	Evaluation
	Name	Code	C	S	L	P		
Compulsory courses (O)								
1	Entrepreneurship and Innovation (EPS)	UPB.06.D.08.O.001	4	0	0	2	6	V
2	Technology Strategy	UPB.06.S.08.O.002	2	0	0	4	7	V
3	Quality Assurance	UPB.06.D.08.O.003	2	0	2	2	7	V
4	Graduate project	UPB.06.S.08.O.004	0	0	0	8	10	V
	Total: Compulsory courses (O)		**8**	**0**	**2**	**16**	**30**	
	Total: Compulsory and optional courses (O+A)		**8**	**0**	**2**	**16**	**30**	
T O T A L: HOURS / WEEK			**26**					
Elective courses (L)								
L4.4	Practical Stage (120 hours/4 weeks)	UPB.06.D.08.L.001	0	0	0	0	2	V
L4.5	Foreign Languages 8 - French	UPB.06.C.08.L.002	2	0	2	0	5	V
L4.6	Foreign Languages 8 - Romanian	UPB.06.C.08.L.003	2	0	2	0	5	V
L4.7	Organizational Management	UPB.06.C.08.L.004	2	2	0	0	5	V
L4.8	Volunteering 4 (14weeksx5h/week=70h)	UPB.06.C.08.L.005	70 hours				3	V
L4.9	*Interdisciplinary project (EPS)*	UPB.06.S.08.O.006	0	0	0	10	20	V
EPS	*Computer Programming (EPS)*	UPB.06.F.02.O.005	2	0	2	2	5	V
L4.11	*Production and Operation Management (EPS)*	UPB.06.S.06.O.001	2	0	2	2	5	V
	Total: Elective courses (L)		**6**	**2**	**8**	**14**	**50**	

	Diploma Exam						**10**	E

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