Electrical Engineering BSc English language training

Valid:
from 2019/2020 school year

Full time training
Curriculum "É"

with weekly hours: lectures (lc), practices (pr), laboratory (lb); with requirements (re); with credits (cr)

Nr	Subject code	Subject name	C.	Week-ly hours	Credit	Semesters																																				Prerequisites				
						1.					2.					3.					4.					5.					6.					7.										
						lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	Nr	Subject code	C.	Nr	Subject code	C.
	Basics of Natural Science total:			32	40	5	7			15	5	3	1		10	2	1			4	6	1	1		11																					
1.	KEXTT5ABNE	Basics of natural science		3	4	0	3	0	a	4																																				
2.	KEXMA1ABNE NMXAN1ABNE	Mathematics I.		6	6	3	3	0	e	6																																				
3.	KEXMA2ABNE	Mathematics II.		6	6						3	3	0	e	6																										2.	KEXMA1ABNE	(1)		
4.	KMXIA5ABNE	Informatics I.		3	5	2	1	0	a	5																																				
5.	KHXIA6ABNE	Informatics II.		3	4																2	0	1	a	4																25.	KMXPR6ABNE			
6.	KEEVR5ABNE	Materials science for engineers		3	4						2	0	1	e	4																														
7.	KVXFI5ABNE	Physics I.		3	4											2	1	0	e	4																					3.	KEXMA2ABNE			
8.	KVXFI6ABNE	Physics II.		3	4																2	1	0	e	4																7.	KVXFI5ABNE			
9.	KEEMI5ABNE	Basics of safety technology, environment protection and quality		2	3																2	0	0	a	3																				
	Economical and Human Knowledge total:			12	14																					2	2			5	4	2			6	2				3					
10.	GVXME5EBNE	Basics of Management		2	3																					1	1	0	a	3																
11.	GGXKG6EBNE	Microeconomics		2	2																					1	1	0	a	2																
12.	GGXKG5EBNE	Macroeconomics		2	2																										2	0	0	a	2											
13.	GSXVG5EBNE	Enterprise Economics		4	4																										2	2	0	e	4											
14.	GGXJI5EBNE	Law		2	3																															2	0	0	a	3					
	Basics of Professional of Electrical Engineering total:			71	80	8	4	1		15	9	4	5		20	12		9		26	10	2	7		19																					
15.	KEXMD5ABNE	Technical documentation		2	2	2	0	0	a	2																																				
16.	KEXAM5ABNE	General engineering studies I.		2	3	0	1	1	a	3																																				
17.	KEXAM6ABNE	General engineering studies II.		1	2						0	1	0	a	2																										16.	KEXAM5ABNE			
18.	KAXDT5ABNE	Digital technics I.		3	4	3	0	0	e	4																																				
19.	KAXDT6ABNE	Digital technics II.		4	4						2	0	2	e	4																										18.	KAXDT5ABNE			
20.	KHXVT5ABNE	Electricity I.		6	6	3	3	0	e	6																																				
21.	KHXVT6ABNE	Electricity II.		7	6						3	3	1	e	6																										2.	KEXMA1ABNE		20.	KHXVT5ABNE
22.	KMXMT5ABNE	Measurements I.		3	4						2	0	1	a	4																										20.	KHXVT5ABNE			
23.	KMXMT6ABNE	Measurements II.		4	4											2	0	2	a	4																					22.	KMXMT5ABNE			
24.	KMXPR5ABNE	Programming I.		3	4						2	0	1	a	4																										4.	KMXIA5ABNE			
25.	KMXPR6ABNE	Programming II.		4	5											2	0	2	a	5																					24.	KMXPR5ABNE			
26.	KAXAU5ABNE	Automation I.		3	4											2	0	1	e	4																					18.	KAXDT5ABNE			
27.	KAXAU6ABNE	Automation II.		4	4																2	0	2	e	4																26.	KAXAU5ABNE			
28.	KEXEL5ABNE	Electronics I.		4	4											2	0	2	e	4																					20.	KHXVT5ABNE			
29.	KEXEL6ABNE	Electronics II.		3	4																2	0	1	e	4																28.	KEXEL5ABNE			
30.	KHXHI5ABNE	Communication technics I.	(2)	3	4											2	0	1	e	4																					21.	KHXVT6ABNE	(1)		
31.	KHXHI6ABNE	Communication technics II.	(2)	4	4																2	1	1	a	4																30.	KHXHI5ABNE	(1)		
32.	KVXVE5ABNE	Electrical energetics I.	(2)	3	5											2	0	1	e	5																					3.	KEXMA2ABNE		21.	KHXVT6ABNE
33.	KVXVE6ABNE	Electrical energetics II.	(2)	4	3																2	1	1	e	3																32.	KVXVE5ABNE			
34.	KEXET5ABNE	Electronics technology	(2)	4	4																2	0	2	e	4																6.	KEEVR5ABNE			

Electrical Engineering BSc English language training

Valid:
from 2019/2020 school year

Full time training
Curriculum "É"

with weekly hours: lectures (lc), practices (pr), laboratory (lb); with requirements (re); with credits (cr)

Nr	Subject code	Subject name	C.	Week-ly hours	Credit	Semesters																																				Prerequisites				
						1.					2.					3.					4.					5.					6.					7.									
						lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	Nr	Subject code	C.	Nr	Subject code	C.
	Optional Specialisation of Subjects total:			42	51																					7		9		20	8		8		20	7		3		11	3.	KEXMA2ABNE		21.	KHXVT6ABNE	
	Communication engineering specialisation		(5)	42	51																					7		9		20	8		8		20	7		3		11						
35.	KHXAT5ABNE	Circuit design		4	5																					2	0	2	e	5											29.	KEXEL6ABNE	(1)			
36.	KHXHE5ABNE	Communication theory		4	5																					2	0	2	e	5											31.	KHXHI6ABNE				
37.	KHXHI7ABNE	Communication technics III.		6	7																										3	0	3	e	7						35.	KHXAT5ABNE	(1)	36.	KHXHE5ABNE	(1)
38.	KHXIH5ABNE	Design and measurement of infocommunication networks		2	3																										2	0	0	e	3						30.	KHXHI5ABNE				
39.	KHXIR5ABNE	Operation and security of informatics systems		4	5																															4	0	0	e	5	5.	KHXIA6ABNE				
40.	KHPPM5ABNE	Project I.		2	4																					0	0	2	a	4																
41.	KHPPM6ABNE	Project II.		2	4																										0	0	2	a	4						40.	KHPPM5ABNE				
42.		Obligatory optional professional subject 1	(4)	3	3																					2	0	1	e	3																
43.		Obligatory optional professional subject 2	(4)	3	3																					1	0	2	e	3																
44.		Obligatory optional professional subject 3	(4)	3	3																										2	0	1	e	3											
45.		Obligatory optional professional subject 4	(4)	3	3																										1	0	2	e	3											
46.		Obligatory optional professional subject 5	(4)	3	3																															2	0	1	e	3						
47.		Obligatory optional professional subject 6	(4)	3	3																															1	0	2	e	3						
	Instrumentation and automation specialisation		(5)	42	51																					7		9		20	7		9		20	5	2	3		11						
48.	KMXBR5ABNE	Embedded systems		4	5																					2	0	2	e	5											19.	KAXDT6ABNE		29.	KEXEL6ABNE	
49.	KMXMA5ABNE	Instrumentation-automation I.		4	5																					2	0	2	e	5											19.	KAXDT6ABNE		29.	KEXEL6ABNE	
50.	KMXMA6ABNE	Instrumentation-automation II.		4	5																										2	0	2	e	5						23.	KMXMT6ABNE				
51.	KMXJK5ABNE	Signal processing I.		4	5																										2	0	2	e	5						23.	KMXMT6ABNE				
52.	KMXJK6ABNE	Signal processing II.		4	5																															2	2	0	e	5	51.	KMXJK5ABNE				
53.	KMPPM5ABNE	Project I.		2	4																					0	0	2	a	4																
54.	KMPPM6ABNE	Project II.		2	4																										0	0	2	a	4						53.	KMPPM5ABNE				
55.		Obligatory optional professional subject 1	(4)	3	3																					2	0	1	e	3																
56.		Obligatory optional professional subject 2	(4)	3	3																					1	0	2	e	3																
57.		Obligatory optional professional subject 3	(4)	3	3																										2	0	1	e	3											
58.		Obligatory optional professional subject 4	(4)	3	3																										1	0	2	e	3											
59.		Obligatory optional professional subject 5	(4)	3	3																															2	0	1	e	3						
60.		Obligatory optional professional subject 6	(4)	3	3																															1	0	2	e	3						
	Free Optional Subjects total:		(4)	6	10																					2				3	2				3	2				4						
61.		Free optional subject 1		2	3																					2	0	0	a	3																
62.		Free optional subject 2		2	3																										2	0	0	a	3											
63.		Free optional subject 3		2	4																															2	0	0	a	4						
	Subject of Thesis total:			6	15																																	6		15						
64.	KHDSD1ABNE KMDSD1ABNE	Thesis		6	15																															0	0	6	s	15	41. 54.	KHPPM6ABNE KMPPM6ABNE				
		Total:		169	210	13	11	1		30	14	7	6		30	14	1	9		30	16	3	8		30	11	2	9		28	14	2	8		29	11	0	9		33						
		Weekly hours total:				25					27					24					27					22					24					20										
		Number of Examinations (e):						3					4					5					5					4					5					3								
		Number of Assignments (a):						4					3					2					3					4					3					2								
		Number of Signatures (s):						0					0					0					0					0					0					1								

Electrical Engineering BSc English language training

Valid:
from 2019/2020 school year

Full time training
Curriculum "É"

with weekly hours: lectures (lc), practices (pr), laboratory (lb); with requirements (re); with credits (cr)

Nr	Subject code	Subject name	C.	Week-ly hours	Credit	Semesters																																				Prerequisites				
						1.					2.					3.					4.					5.					6.					7.										
						lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	Nr	Subject code	C.	Nr	Subject code	C.
	Criterion Requirement Subjects total:		(6)																																											
65.	KDIPT1ABNE	Patronage I.		1	0	1	0	0	s	0																															16.	KEXAM5ABNE	#			
66.	KDIPT2ABNE	Patronage II.		1	0						1	0	0	s	0																										17.	KEXAM6ABNE	#			
67.	GTSTESTNEV1	Physical education I.		2	0											0	2	0	s	0																										
68.	GTSTESTNEV2	Physical education II.		2	0																					0	2	0	s	0											67.	GTSTESTNEV1				

Comments:
Courses signed by character # can be started paralelly, if necessary.
(1) Sign of course makes necessary to fulfill prerequisites.
(2) The semester of the placement of the given subject is determined by the institution depending on the number of students.
(3) The subject is taught in an e-learning or blended learning system, and the detailed half-year requirement of the subject is the guide.
(4) List of obligatory optional professional subjects and free optional subjects are included on the next table.
(5) All subjects of the chosen subject group are required fulfilled.
(6) The criterion requirement is a mandatory requirement in the curriculum that does not have a credit point. (TVSZ. 35. § (4))

The condition for admission to the final exam - in addition to obtaining the above credit value - is the completion of an obligatory external internship during the training, the minimum total time of which is: 6 weeks

Electrical Engineering BSc English language training

Valid:
from 2019/2020 school year

Full time training
Curriculum "É"

with weekly hours: lectures (lc), practices (pr), laboratory (lb); with requirements (re); with credits (cr)

Nr	Subject code	Subject name C.	Weekly hours	Credit	Semesters																																				Prerequisites			
					1.					2.					3.					4.					5.					6.					7.									
					lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	Nr	Subject code C.	Nr	Subject code C.
	Obligatory Optional Professional Subjects 1-2																																											
69.	KMWAG5ABNE	Automatic manufacturing systems I.	3	3																					2	0	1	e	3															
70.	KMWER5ABNE	Electronic test and measurement systems I.	3	3																					2	0	1	e	3															
71.	KMWMR5ABNE	Mechatronic systems	3	3																					1	0	2	e	3															
72.	KMWEM5ABNE	Methods of electronic testing	3	3																					1	0	2	e	3															
73.	KMWSF5ABNE	Process control I.	3	3																					2	0	1	e	3															
74.	KMWPL5ABNE	Programmable logic controllers I.	3	3																					1	0	2	e	3															
75.	KMWFB5ABNE	Surveillance embedded systems	3	3																					1	0	2	e	3															
76.	KMWFV5ABNE	Surveillance informatics and electronic security systems I.	3	3																					2	0	1	e	3															
	Obligatory Optional Professional Subjects 3-4																																											
77.	KMWAG6ABNE	Automatic manufacturing systems II.	3	3																										2	0	1	e	3										
78.	KMWER6ABNE	Electronic test and measurement systems II.	3	3																										1	0	2	e	3										
79.	KMWIB5ABNE	Integrated embedded systems	3	3																										1	0	2	e	3										
80.	KMWOM5ABNE	Medical instruments	3	3																										2	0	1	e	3										
81.	KMWSF6ABNE	Process control II.	3	3																										2	0	1	e	3										
82.	KMWPL6ABNE	Programmable logic controllers II.	3	3																										1	0	2	e	3										
83.	KMWBS5ABNE	Security-critical software development	3	3																										1	0	2	e	3										
84.	KMWFV6ABNE	Surveillance informatics and electronic security systems II.	3	3																										2	0	1	e	3										
	Obligatory Optional Professional Subjects 5-6																																											
85.	KMWER7ABNE	Circuits for electronic test and measurement systems	3	3																															2	0	1	e	3					
86.	KMWIR5ABNE	Control systems	3	3																															2	0	1	e	3					
87.	KMWIF5ABNE	Design of integrated systems	3	3																															2	0	1	e	3					
88.	KMWLK5ABNE	Facility and utility automation	3	3																															1	0	2	e	3					
89.	KMWKO5ABNE	Imaging medical technology systems	3	3																															1	0	2	e	3					
90.	KMWIN5ABNE	Information systems	3	3																															2	0	1	e	3					
91.	KMWBF5ABNE	Security-critical surveillance systems	3	3																															1	0	2	e	3					
92.	KMWJF5ABNE	Vehicle onboard systems	3	3																															1	0	2	e	3					
	Recommended Free Optional Subjects (7)																																											
93.	KEVVI5ABNE	Fundamentals of lighting technology	2	3																					2	0	0	a	3															
94.	KMVMO1ABNE	Metrology	2	3																					2	0	0	a	3															
95.	KHVMT1ABNE	Media technology	2	3																										2	0	0	a	3										
96.	KHVAV1ABNE	Data and information security	2	4																															2	0	0	a	4					
97.	KHVMK1ABNE	Mobile communication	2	4																															2	0	0	a	4					
98.	KHVMH1ABNE	Mobile networks	2	4																															2	0	0	a	4					
99.	KMVOM1ABNE	Object oriented methodology	2	4																															2	0	0	a	4					
100.	KMVRO1ABNE	Real-time operating systems	2	4																															2	0	0	a	4					

Comments: (7) In addition to the items listed here, additional optional subjects can be found in the Neptun system.

Electrical Engineering BSc English language training

Valid:
from 2019/2020 school year

Full time training
Curriculum "É"

with weekly hours: lectures (lc), practices (pr), laboratory (lb); with requirements (re); with credits (cr)

Nr	Subject code	Subject name	C.	Week-ly hours	Credit	Semesters																									
						5.					6.					7.					8.					9.					
						lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr
	Cooperative Education total:			18	100					5	3				15	3				20	6				30	6				30
	KHOSG1ABNE KMOSG1ABNE	Practice in profession I.	(8)		5				a	5																				
	KHOSG2ABNE KMOSG2ABNE	Practice in profession II.	(8)		10									a	10															
	KHOSG3ABNE KMOSG3ABNE	Practice in profession III.	(8)		15														a	15										
	KHOSG4ABNE KMOSG4ABNE	Practice in profession IV.	(8)		20																			a	20					
	KHOSG5ABNE KMOSG5ABNE	Practice in profession V.	(8)		20																								a	20
		Optional professional subject I.		3	5						3	0	0	e	5															
		Optional professional subject II.		3	5											3	0	0	e	5										
		Optional professional subject III.		3	5																3	0	0	e	5					
		Optional professional subject IV.		3	5																3	0	0	e	5					
		Optional professional subject V.		3	5																					3	0	0	e	5
		Optional professional subject VI.		3	5																					3	0	0	e	5

(8) Weekly hours of practice in profession is given by the cooperative contract.

Conditions of Cooperative Education at Electrical Engineering BSc English language training:

1. Students have to fulfill minimum 120 credits before starting Cooperative Education.

2. Courses of Cooperative Education are fixed by Council of the Faculty year by year.

3. Based on the decision of the Faculty, students can participate in 1-5 semesters of Cooperative Education during their studies.

Final Exam subjects:

Subject code	Subject name
Exam 1 subject: Aggregate from the specalisation's obligatory professional subjects.	
Exam 2 subject: Aggregate from the specalisation's obligatory optional professional subjects.	

Óbuda University
Kandó Kálmán Faculty of Electrical Engineering

Electrical Engineering BSc English language training
Józsefváros site / Communication engineering specialisation
Full time training
Curriculum "E"

Valid:
from 2017/2018 school year

with weekly hours: lectures (lc), practices (pr), laboratory (lb); with requirements (re); with credits (cr)

Nr	Subject code	Subject name	C.	Week-ly hours	Credit	Semesters																																						Prerequisites				
						1.					2.					3.					4.					5.					6.					7.											
						lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	Nr	Subject code	C.	Nr	Subject code	C.
	Basics of Natural Science total:			31	40	7	5			15	3	3	3		10	2	1			4	2	1			4	2				3	2				4											
1.	NMXAN1EBNE	Mathematics I.		6	6	3	3	0	e	6																																					
2.	KEXMA2ABNE	Mathematics II.		6	6						3	3	0	e	6																										1.	NMXAN1EBNE	(1)			
3.	KMXIA1ABNE	Informatics I.		2	3	2	0	0	e	3																																					
4.	KMXIA2ABNE	Informatics I. laboratory		2	2						0	0	2	a	2																										23.	KMXPR1ABNE	#			
5.	KHXIA3ABNE	Informatics II.		2	3																					2	0	0	e	3											24.	KMXPR2ABNE				
6.	KEXFI1ABNE	Physics I.		3	4											2	1	0	e	4																					10.	KEXTT1ABNE				
7.	KEXFI2ABNE	Physics II.		3	4																2	1	0	e	4																6.	KEXFI1ABNE				
8.	KEXVR1ABNE	Materials science for engineers		2	3	2	0	0	e	3																																					
9.	KEXVR2ABNE	Materials science for engineers laboratory		1	2						0	0	1	a	2																										8.	KEXVR1ABNE				
10.	KEXTT1ABNE	Basics of natural science		2	3	0	2	0	a	3																																					
11.	KEXMI1ABNE	Basics of safety technology, environment protection and quality assurance		2	4																										2	0	0	e	4						7.	KEXFI2ABNE				
	Economical and Human Knowledge total:			14	16	2				2	1	1			2						2				2	1	1			2	5	1			8											
12.	GGXKG1FBNE	Macroeconomics		2	2	2	0	0	a	2																																					
13.	GGXKG2FBNE	Microeconomics		2	2						1	1	0	a	2																																
14.	GSXVG1FBNE	Enterprise economics I.		2	2																2	0	0	a	2																						
15.	GSXVG2FBNE	Enterprise economics II.		2	2																					1	1	0	a	2											14.	GSXVG1FBNE				
16.	GVXME1FBNE	Basics of management		2	3																										1	1	0	a	3												
17.	GGXJI1FBNE	Law		2	2																										2	0	0	a	2												
18.		Obligatory optional subject	(4)	2	3																										2	0	0	a	3												
	Basics of Professional total:			64	70	5	3			12	11	5	4		19	12		11		26	2		8		10	2	1			3																	
19.	KHXVT1ABNE	Electricity I.		3	4	3	0	0	e	4																																					
20.	KHXVT2ABNE	Electricity I. practice		3	4	0	3	0	a	4																															19.	KHXVT1ABNE	#			
21.	KHXVT3ABNE	Electricity II.		3	3						3	0	0	e	3																										1.	NMXAN1EBNE		20.	KHXVT2ABNE	
22.	KHXVT4ABNE	Electricity II. practice		4	3						0	3	1	a	3																										21.	KHXVT3ABNE	#			
23.	KMXPR1ABNE	Programming I.		2	2						2	0	0	a	2																										3.	KMXIA1ABNE				
24.	KMXPR2ABNE	Programming II.		5	5											2	0	3	a	5																					23.	KMXPR1ABNE				
25.	KEXMD1ABNE	Technical documentation		2	2																0	0	2	a	2																						
26.	KMXMT1ABNE	Measurements I.		4	4						2	0	2	e	4																										20.	KHXVT2ABNE				
27.	KMXMT2ABNE	Measurements II.		4	4											2	0	2	a	4																					26.	KMXMT1ABNE	(1)			
28.	KEXDT1ABNE	Digital technics I.		2	4	2	0	0	e	4																																					
29.	KEXDT2ABNE	Digital technics II.		3	3						2	1	0	e	3																										28.	KEXDT1ABNE				
30.	KEXDT3ABNE	Digital technics II. laboratory		2	2											0	0	2	a	2																					29.	KEXDT2ABNE				
31.	KEXEL1ABNE	Electronics I.		4	4						2	1	1	e	4																										20.	KHXVT2ABNE				
32.	KEXEL2ABNE	Electronics II.		4	4											2	0	2	e	4																					31.	KEXEL1ABNE				
33.	KMXAU1ABNE	Automation I.		4	5											2	0	2	e	5																					28.	KEXDT1ABNE				
34.	KHXHI1ABNE	Communication technics I.		2	3											2	0	0	e	3																					22.	KHXVT4ABNE				
35.	KHXHI2ABNE	Communication technics I. laboratory		2	2																0	0	2	a	2																34.	KHXHI1ABNE	#			
36.	KVXVE1ABNE	Electrical energetics		2	3											2	0	0	e	3																					22.	KHXVT4ABNE				
37.	KVXVE2ABNE	Electrical energetics laboratory		2	2																0	0	2	a	2																36.	KVXVE1ABNE	#			
38.	KEXET1ABNE	Electronics technology		4	4																2	0	2	e	4																8.	KEXVR1ABNE				
39.	KEXAM1ABNE	General engineering studies		3	3																					2	1	0	e	3											6.	KEXFI1ABNE				

Electrical Engineering BSc English language training
Józsefváros site / Communication engineering specialisation
Full time training
Curriculum "E"

with weekly hours: lectures (lc), practices (pr), laboratory (lb); with requirements (re); with credits (cr)

Nr	Subject code	Subject name	C.	Week-ly hours	Credit	Semesters																																								Prerequisites					
						1.					2.					3.					4.					5.					6.					7.														
						lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	Nr	Subject code	C.	Nr	Subject code	C.
	Common Courses of Speciality total:			31	41																8		4		15	6		7		18			2		4	4				4	2.	KEXMA2ABNE		21.	KHXVT3ABNE	
40.	KHXAT1ABNE	Circuit design		6	7																4	0	2	e	7																34.	KHXHI1ABNE		35.	KHXHI2ABNE	#
41.	KHXHI3ABNE	Communication technics II.		6	8																4	0	2	e	8																34.	KHXHI1ABNE		35.	KHXHI2ABNE	#
42.	KHXHI4ABNE	Communication technics III.		6	8																					3	0	3	e	8											40.	KHXAT1ABNE		41.	KHXHI3ABNE	
43.	KHXIH1ABNE	Infocommunication networks		5	6																					3	0	2	e	6											41.	KHXHI3ABNE				
44.	KHPPM1ABNE	Project I.		2	4																					0	0	2	a	4											42.	KHXHI4ABNE	#	43.	KHXIH1ABNE	#
45.	KHPPM2ABNE	Project II.		2	4																										0	0	2	a	4						44.	KHPPM1ABNE				
46.	KHXIR1ABNE	Operation and security of informatics systems		4	4																															4	0	0	e	4	43.	KHXIH1ABNE				
	Obligatory Optional Groups (Module) of Subjects total:			14	18																					4				5	4		3		9			3		4						
	Telecommunication informatics		(5)																																												
47.	KHWTI1ABNE	Telecommunication informatics I.		4	5																					4	0	0	e	5											42.	KHXHI4ABNE	#	43.	KHXIH1ABNE	#
48.	KHWTI2ABNE	Telecommunication informatics I. laboratory		3	4																										0	0	3	a	4						47.	KHWTI1ABNE				
49.	KHWTI3ABNE	Telecommunication informatics II.		4	5																										4	0	0	e	5						47.	KHWTI1ABNE				
50.	KHWTI4ABNE	Telecommunication informatics II. laboratory		3	4																															0	0	3	a	4	48.	KHWTI2ABNE		49.	KHWTI3ABNE	
	Free Optional Courses total:		(4)	6	10																					2				3	2				3	2				4						
51.		Free optional subject 1		2	3																					2	0	0	a	3																
52.		Free optional subject 2		2	3																										2	0	0	a	3											
53.		Free optional subject 3		2	4																															2	0	0	a	4						
	Subject of Thesis total:			6	15																																	6		15						
54.	KHDSD1ABNE	Thesis		6	15																															0	0	6	s	15	45.	KHPPM2ABNE				
	Criterion Courses total:		(6)	4								2					2																														
55.	GTSTESTNEV1	Physical education I.		2	0						0	2	0	s	0																																
56.	GTSTESTNEV2	Physical education II.		2	0											0	2	0	s	0																					55.	GTSTESTNEV1	#			
		Total:		170	210	14	8	0		29	15	11	7		31	14	3	11		30	14	1	12		31	17	2	7		34	13	1	5		28	6	0	9		27						
		Weekly hours total:				22					33					28					27					26					19					15											
		Examination (e):							5					5					5					4					5					2					1								
		Assignment (a):							3					5					3					4					3					6					2								
		Signature (s):							0					1					1					0					0					0					1								

Comments:
Courses signed by character # can be started paralelly, if necessary.
(1) Sign of course makes necessary to fullfill prerequisites.
(2) The semester of the placement of the given subject is determined by the institution depending on the number of students.
(3) The subject is taught in an e-learning or blended learning system, and the detailed half-year requirement of the subject is the guide.
(4) List of obligatory optional courses and free optional courses are included on the next table.
(5) All subjects of the chosen subject group are required.
(6) The criterion requirement is a mandatory requirement in the curriculum that does not have a credit point. (TVSZ. 35. § (4))

Electrical Engineering BSc English language training
Józsefváros site / Communication engineering specialisation
Full time training
Curriculum "E"

with weekly hours: lectures (lc), practices (pr), laboratory (lb); with requirements (re); with credits (cr)

Nr	Subject code	Subject name	C.	Week-ly hours	Credit	Semesters																																				Prerequisites				
						1.					2.					3.					4.					5.					6.					7.										
						lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	Nr	Subject code	C.	Nr	Subject code	C.
	Obligatory Optional Courses of Branch Economical and Human Knowledge																																													
57.	GGWUK1FBNE	Business communication		2	3																										2	0	0	a	3											
58.	GGWSZ1FBNE	Sociology		2	3																										2	0	0	a	3											
	Free Optional Courses		(7)																																											
59.	KHVMT1ABNE	Media technology		2	3																										2	0	0	a	3											
60.	KHVMH1ABNE	Mobile networks		2	4																															2	0	0	a	4						
61.	KHVMK1ABNE	Mobile communication		2	4																															2	0	0	a	4						
62.	KHVAV1ABNE	Data and information security		2	4																															2	0	0	a	4						

Comments: (7) In addition to the items listed here, additional optional subjects can be found in the Neptun system.

Electrical Engineering BSc English language training
Józsefváros site / Communication engineering specialisation
Full time training
Curriculum "E"

with weekly hours: lectures (lc), practices (pr), laboratory (lb); with requirements (re); with credits (cr)

Nr	Subject code	Subject name	C.	Week-ly hours	Credit	Semesters																				
						5.					6.					7.					8.					
						lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr
	Cooperative Education total:			8	60					12					12					12	8				24
	KHOSG1ABNE	Practice in profession I.	(8)		12				a	12															
	KHOSG2ABNE	Practice in profession II.	(8)		12									a	12										
	KHOSG3ABNE	Practice in profession III.	(8)		12														a	12					
	KHOSG4ABNE	Practice in profession IV.	(8)		12																			a	12
		Optional special subject I.		2	3																2	0	0	e	3
		Optional special subject II.		2	3																2	0	0	e	3
		Optional special subject III.		2	3																2	0	0	e	3
		Optional special subject IV.		2	3																2	0	0	e	3

Comments: (8) Weekly hours of practice in profession is given by the cooperative contract.

Conditions of cooperative education at Electrical Engineering BSc English language training:

1. Students have to fulfill minimum 120 credits before starting cooperative education.
2. Courses of Practical (cooperative) Education are fixed by Council of the Faculty year by year.

Subjects at Closing Examination:

Subject code	Subject name
Telecommunication informatics module:	
1. exam subject: Aggregate from the Common Courses of Speciality	
KHXHI3ABNE	Communication technics II.
KHXIH1ABNE	Infocommunication networks
2. exam subject: Aggregate from the Obligatory Optional Groups (Module) of Subjects	

Óbuda University
Kandó Kálmán Faculty of Electrical Engineering

Electrical Engineering BSc English language training
Józsefváros site / Instrumentation and automation specialisation
Full time training
Curriculum "E"

Valid:
from 2017/2018 school year

with weekly hours: lectures (lc), practices (pr), laboratory (lb); with requirements (re); with credits (cr)

Nr	Subject code	Subject name	C.	Week-ly hours	Credit	Semesters																																				Prerequisites					
						1.					2.					3.					4.					5.					6.					7.											
						lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	Nr	Subject code	C.	Nr	Subject code	C.
	Basics of Natural Science total:			31	40	7	5			15	3	3	3		10	2	1			4	2	1			4	2				3	2				4											
1.	NMXAN1EBNE	Mathematics I.		6	6	3	3	0	e	6																																					
2.	KEXMA2ABNE	Mathematics II.		6	6						3	3	0	e	6																										1.	NMXAN1EBNE	(1)			
3.	KMXIA1ABNE	Informatics I.		2	3	2	0	0	e	3																																					
4.	KMXIA2ABNE	Informatics I. laboratory		2	2						0	0	2	a	2																										23.	KMXPR1ABNE	#			
5.	KMXIA3ABNE	Informatics II.		2	3																					2	0	0	e	3											24.	KMXPR2ABNE				
6.	KEXFI1ABNE	Physics I.		3	4											2	1	0	e	4																					10.	KEXTT1ABNE				
7.	KEXFI2ABNE	Physics II.		3	4																2	1	0	e	4																6.	KEXFI1ABNE				
8.	KEXVR1ABNE	Materials science for engineers		2	3	2	0	0	e	3																																					
9.	KEXVR2ABNE	Materials science for engineers laboratory		1	2						0	0	1	a	2																										8.	KEXVR1ABNE				
10.	KEXTT1ABNE	Basics of natural science		2	3	0	2	0	a	3																																					
11.	KEXMI1ABNE	Basics of safety technology, environment protection and quality assurance		2	4																										2	0	0	e	4						7.	KEXFI2ABNE				
	Economical and Human Knowledge total:			14	16	2				2	1	1			2						2				2	1	1			2	5	1			8											
12.	GGXKG1FBNE	Macroeconomics		2	2	2	0	0	a	2																																					
13.	GGXKG2FBNE	Microeconomics		2	2						1	1	0	a	2																																
14.	GSXVG1FBNE	Enterprise economics I.		2	2																2	0	0	a	2																						
15.	GSXVG2FBNE	Enterprise economics II.		2	2																					1	1	0	a	2											14.	GSXVG1FBNE				
16.	GVXME1FBNE	Basics of management		2	3																										1	1	0	a	3												
17.	GGXJI1FBNE	Law		2	2																										2	0	0	a	2												
18.		Obligatory optional subject	(4)	2	3																										2	0	0	a	3												
	Basics of Professional total:			64	70	5	3			12	11	5	4		19	12		11		26	2		8		10	2	1			3																	
19.	KHXVT1ABNE	Electricity I.		3	4	3	0	0	e	4																																					
20.	KHXVT2ABNE	Electricity I. practice		3	4	0	3	0	a	4																															19.	KHXVT1ABNE	#			
21.	KHXVT3ABNE	Electricity II.		3	3						3	0	0	e	3																										1.	NMXAN1EBNE		20.	KHXVT2ABNE	
22.	KHXVT4ABNE	Electricity II. practice		4	3						0	3	1	a	3																										21.	KHXVT3ABNE	#			
23.	KMXPR1ABNE	Programming I.		2	2						2	0	0	a	2																										3.	KMXIA1ABNE				
24.	KMXPR2ABNE	Programming II.		5	5											2	0	3	a	5																					23.	KMXPR1ABNE				
25.	KEXMD1ABNE	Technical documentation		2	2																0	0	2	a	2																					
26.	KMXMT1ABNE	Measurements I.		4	4						2	0	2	e	4																										20.	KHXVT2ABNE				
27.	KMXMT2ABNE	Measurements II.		4	4											2	0	2	a	4																					26.	KMXMT1ABNE	(1)			
28.	KEXDT1ABNE	Digital technics I.		2	4	2	0	0	e	4																																					
29.	KEXDT2ABNE	Digital technics II.		3	3						2	1	0	e	3																										28.	KEXDT1ABNE				
30.	KEXDT3ABNE	Digital technics II. laboratory		2	2											0	0	2	a	2																					29.	KEXDT2ABNE				
31.	KEXEL1ABNE	Electronics I.		4	4						2	1	1	e	4																										20.	KHXVT2ABNE				
32.	KEXEL2ABNE	Electronics II.		4	4											2	0	2	e	4																					31.	KEXEL1ABNE				
33.	KMXAU1ABNE	Automation I.		4	5											2	0	2	e	5																					28.	KEXDT1ABNE				
34.	KHXHI1ABNE	Communication technics I.		2	3											2	0	0	e	3																					22.	KHXVT4ABNE				
35.	KHXHI2ABNE	Communication technics I. laboratory		2	2																0	0	2	a	2																34.	KHXHI1ABNE	#			
36.	KVXVE1ABNE	Electrical energetics		2	3											2	0	0	e	3																					22.	KHXVT4ABNE				
37.	KVXVE2ABNE	Electrical energetics laboratory		2	2																0	0	2	a	2																36.	KVXVE1ABNE	#			
38.	KEXET1ABNE	Electronics technology		4	4																2	0	2	e	4																8.	KEXVR1ABNE				
39.	KEXAM1ABNE	General engineering studies		3	3																					2	1	0	e	3											6.	KEXFI1ABNE				

Electrical Engineering BSc English language training
Józsefváros site / Instrumentation and automation specialisation
Full time training
Curriculum "E"

with weekly hours: lectures (lc), practices (pr), laboratory (lb); with requirements (re); with credits (cr)

Nr	Subject code	Subject name	C.	Week-ly hours	Credit	Semesters																																				Prerequisites					
						1.					2.					3.					4.					5.					6.					7.										
						lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	Nr	Subject code	C.	Nr	Subject code	C.
	Common Courses of Speciality total:			28	39																9		3		16	5		8		16			2		4	1				3	2.	KEXMA2ABNE		21.	KHXVT3ABNE	
40.	KMXAZ1ABNE	Automatics I.		4	6																3	0	1	e	6																33.	KMXAU1ABNE				
41.	KMXAZ2ABNE	Automatics II.		3	4																					0	0	3	a	4											40.	KMXAZ1ABNE				
42.	KMXBR1ABNE	Embedded systems		5	6																3	0	2	e	6																29.	KEXDT2ABNE		32.	KEXEL2ABNE	
43.	KMXJK1ABNE	Signal processing I.		5	5																					2	0	3	e	5											27.	KMXMT2ABNE				
44.	KMXJK2ABNE	Signal processing II.		1	3																															1	0	0	e	3	43.	KMXJK1ABNE				
45.	KMXMA1ABNE	Instrumentation-automation I.		3	4																3	0	0	e	4																29.	KEXDT2ABNE		32.	KEXEL2ABNE	
46.	KMXMA2ABNE	Instrumentation-automation II.		3	3																					3	0	0	e	3											27.	KMXMT2ABNE				
47.	KMPPM1ABNE	Project I.		2	4																					0	0	2	a	4											33.	KMXAU1ABNE		45.	KMXMA1ABNE	
48.	KMPPM2ABNE	Project II.		2	4																										0	0	2	a	4						47.	KMPPM1ABNE				
	Obligatory Optional Groups (Module) of Subjects total:			17	20																					4		3		6	4		3		8	3				6						
	Automatic manufacturing systems		(5)																																												
49.	KMWGY1ABNE	Automatic manufacturing systems I.		7	6																					4	0	3	e	6											42.	KMXBR1ABNE				
50.	KMWGY2ABNE	Automatic manufacturing systems II.		7	8																										4	0	3	e	8						49.	KMWGY1ABNE				
51.	KMWIN1ABNE	Information systems		3	6																															3	0	0	e	6	50.	KMWGY2ABNE				
	Free Optional Courses total:		(4)	6	10																					2				3	2				3	2				4						
52.		Free optional subject 1		2	3																					2	0	0	a	3																
53.		Free optional subject 2		2	3																										2	0	0	a	3											
54.		Free optional subject 3		2	4																															2	0	0	a	4						
	Subject of Thesis total:			6	15																																	6		15						
55.	KMDSD1ABNE	Thesis		6	15																															0	0	6	s	15	48.	KMPPM2ABNE				
	Criterion Courses total:		(6)	4								2					2																														
56.	GTSTESTNEV1	Physical education I.		2	0						0	2	0	s	0																																
57.	GTSTESTNEV2	Physical education II.		2	0											0	2	0	s	0																					56.	GTSTESTNEV1	#			
		Total:		170	210	14	8	0		29	15	11	7		31	14	3	11		30	15	1	11		32	16	2	11		33	13	1	5		27	6	0	6		28						
		Weekly hours total:				22					33					28					27					29					19					12											
		Examination (e):							5					5					5					5					5					2					2								
		Assignment (a):							3					5					3					4					4					5					1								
		Signature (s):							0					1					1					0					0					0					1								

Comments:

Courses signed by character # can be started paralelly, if necessary.
(1) Sign of course makes necessary to fullfill prerequisites.
(2) The semester of the placement of the given subject is determined by the institution depending on the number of students.
(3) The subject is taught in an e-learning or blended learning system, and the detailed half-year requirement of the subject is the guide.
(4) List of obligatory optional courses and free optional courses are included on the next table.
(5) All subjects of the chosen subject group are required.
(6) The criterion requirement is a mandatory requirement in the curriculum that does not have a credit point. (TVSZ. 35. § (4))

Electrical Engineering BSc English language training
Józsefváros site / Instrumentation and automation specialisation
Full time training
Curriculum "E"

with weekly hours: lectures (lc), practices (pr), laboratory (lb); with requirements (re); with credits (cr)

Nr	Subject code	Subject name	C.	Weekly hours	Credit	Semesters																																			Prerequisites				
						1.					2.					3.					4.					5.					6.					7.									
						lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	Nr	Subject code	C.	Nr	Subject code	C.
	Obligatory Optional Courses of Branch Economical and Human Knowledge																																												
58.	GGWUK1FBNE	Business communication		2	3																										2	0	0	a	3										
59.	GGWSZ1FBNE	Sociology		2	3																										2	0	0	a	3										
	Free Optional Courses		(7)																																										
60.	KMVMO1ABNE	Metrology		2	3																					2	0	0	a	3															
61.	KMVOM1ABNE	Object oriented methodology		2	4																															2	0	0	a	4					
62.	KMVRO1ABNE	Real-time operating systems		2	4																															2	0	0	a	4					

Comments: (7) In addition to the items listed here, additional optional subjects can be found in the Neptun system.

Electrical Engineering BSc English language training
Józsefváros site / Instrumentation and automation specialisation
Full time training
Curriculum "E"

with weekly hours: lectures (lc), practices (pr), laboratory (lb); with requirements (re); with credits (cr)

Nr	Subject code	Subject name	C.	Week-ly hours	Credit	Semesters																				
						5.					6.					7.					8.					
						lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr	lc	pr	lb	re	cr
	Cooperative Education total:			8	60					12					12					12	8				24
	KMOSG1ABNE	Practice in profession I.	(8)		12				a	12															
	KMOSG2ABNE	Practice in profession II.	(8)		12									a	12										
	KMOSG3ABNE	Practice in profession III.	(8)		12														a	12					
	KMOSG4ABNE	Practice in profession IV.	(8)		12																			a	12
		Optional special subject I.		2	3																2	0	0	e	3
		Optional special subject II.		2	3																2	0	0	e	3
		Optional special subject III.		2	3																2	0	0	e	3
		Optional special subject IV.		2	3																2	0	0	e	3

Comments: (8) Weekly hours of practice in profession is given by the cooperative contract.

Conditions of cooperative education at Electrical Engineering BSc English language training:

1. Students have to fulfill minimum 120 credits before starting cooperative education.
2. Courses of Practical (cooperative) Education are fixed by Council of the Faculty year by year.

Subjects at Closing Examination:

Subject code	Subject name
Automatic manufacturing systems module:	
1. exam subject: Aggregate from the Common Courses of Speciality	
KMXAU1ABNE	Automation I.
KMXBR1ABNE	Embedded systems
2. exam subject: Aggregate from the Obligatory Optional Groups (Module) of Subjects	