Master's degree program in Electronics

as of 2020/2021 academic year

CURRICULUM

ECTS Subject code **T p E SN**

- **T** – type of course: **B** for BEng, **M** for MEng
- **p** – for Plovdiv branch
- **E** –Electronics
- **SN** – subsequent number of the subject

Lectures (L), Tutorials (Tut.), Labs (Lab.), Auditorium Total (AT), Self-Study (SS), Exam (E), Continuous Assessment (CA), Semester Project (SP), Semester Assignment (course work) (SA)

No	SUBJECT	Semester Load						Assessment				ECTS code	ECTS credits
		L	Tut.	Lab.	AT	SS	Total	E	CA	SP	SA		
SEMESTER I													
1	Circuitry for impulse and mixed signals	30	15	30	75	105	180	1				**MpE41**	**6**
2	Microprocessor techniques	30	15	30	75	105	180	1				**MpE42**	**6**
3	Power supplies	30	15	30	75	135	210	1		1		**MpE43**	**7**
4	Electronics circuits	30	0	30	60	120	180	1			1	**MpE44**	**6**
5	Electronic measurement systems	30	0	30	60	90	150		1			**MpE45**	**5**
Total		**150**	**45**	**150**	**345**	**555**	**900**	**4**	**1**	**1**	**1**		**30**
SEMESTER II													
6	Power electronics	30	0	30	60	90	150	1		1*		**MpE46**	5
7	Analog electronics	30	15	30	75	135	210	1		1*		**MpE47**	7
8	Quality and reliability in electronics	30	15	15	60	90	150		1			**MpE48**	5
9	Control Theory	30	0	15	45	75	120	1				**PpE41**	4
10	Electronic regulators	30	0	30	60	90	150	1			1	**MpE50**	**5**
11	Optoelectronic and Sensor Devices	30	0	15	45	75	120	1				**MpE51**	**4**
Total		**180**	**30**	**135**	**345**	**555**	**900**	**5**	**1**	**1**	**1**		**30**

* One SP should be chosen.

SEMESTER III

12	Artificial intelligence and neural networks	30	0	30	60	60	120		1			**MpE01**	**4**
13	Computer networks and communications	30	0	30	60	60	120		1		1	**MpE02**	**4**
14	Electronic development	30	0	30	60	90	150	1				**MpE03**	**5**
15	Medical systems for remote monitoring, storage and data processing	30	0	30	60	90	150		1			**MpE04**	**5**
16	Electronic energy converters	30	0	30	60	90	150	1				**MpE05**	**5**
17	CAD systems in microelectronics	30	0	30	60	90	150		1			**MpE06**	**5**
18	Semester project (according to subject chosen from 14-17)					60	60			1*		**MpE07**	**2**
Total		**180**	**0**	**180**	**360**	**540**	**900**	**2**	**4**	**1**	**1**		**30**

* One SP should be chosen.

SEMESTER IV

19	Design of embedded systems	20	0	20	40	50	90		1			**MpE08**	**3**
20	Optional Subject (List OS - 1)**	20	0	20	40	50	90		1			**MpE09**	**3**
21	Optional Subject (List OS - 2)**	20	0	20	40	50	90		1			**MpE10**	**3**
22	Optional Subject (List OS - 3)	20	0	20	40	50	90		1			**MpE11**	**3**
23	Optional Subject (List OS - 4)	20	0	20	40	50	90		1			**MpE12**	**3**
	Diploma Project					450	450	Diploma Thesis Defense				**MpE13**	**15**
Total		**100**	**0**	**100**	**200**	**700**	**900**		**5**				**30**

** Subjects MpE09.1, MpE10.1 form “Industrial Electronics” Master program.
** Subjects MpE09.2, MpE10.2 form “Electronic information processing systems” Master program.

LIST OF OPTIONAL SUBJECTS

	List OS 1 – MpE09 (ECTS =3)	
1	Electronic converters for controlling of electric motors	**MpE09.1**
2	Programming of embedded systems	**MpE09.2**

	List OS 2 – MpE10 (ECTS =3)	
1	Programmable Logic Controllers	**MpE10.1**
2	Mathematical methods for digital signal processing	**MpE10.2**

	List OS 3 – MpE11 (ECTS =3)	
1	Optical communication systems	**MpE11.1**
2	Telecommunications	**MpE11.2**

	List OS 4 – MpE12 (ECTS =3)	
1	Project Management	**MpE12.1**
2	Industrial legislation	**MpE12.2**

LIST OF FACULTATIVE SUBJECTS

No	SUBJECT	Semester Load						Assessment				ECTS code	ECTS credits
		L	Tut.	Lab.	AT	SS	Total	E	CA	SP	SA		
SEMESTER I													
1	Computer aided design in electronics	30	0	30	60	60	120		1			**FaMpE01**	**4**
2	Power supplies	30	0	30	60	60	120		1			**FaMpE02**	**4**
SEMESTER II													
3	Intelligent sensor-actuator-systems	30	0	30	60	60	120		1			**FaMpE03**	**4**

Note:

1. The contents of the lists of optional courses and their names are subject to update before the start of the academic year.
2. The schedule of the facultative courses in accordance with the interests of the students will be announced by the faculty office.