



**UNIVERSITY of  
DEBRECEN**

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**FACULTY OF INFORMATICS**

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# **Computer Science Engineering MSc curriculum – 2017**

**Debrecen  
2018/2019.**



## COMPUTER SCIENCE ENGINEERING MSc CURRICULUM

### Qualification requirements

General requirements of the diploma are regulated by The Rules and Regulations of The University of Debrecen.

### Diploma credit requirements:

Natural Science:	22 credits
Humane and Economic Knowledge:	10 credits
Compulsory topics:	28 credits
Differentiated knowledge topics:	24 credits
Thesis work:	30 credits
Free choice:	6 credits
Work and Fire Safety Training:	0 credit
Physical Education (1 semester):	0 credit
<b>Total</b>	<b>120 credits</b>

### Natural Science – needed 22 credits

Code	Subject name	Credit	Type and number			Asses-ment	Prerequisites	Period	Semester
			lec.	practice					
				sem.	lab				
INMMA0101E INMMA0101L	Introduction the new network communication technologies	6	2		2	E S		2	1
INMMA0102E INMMA0102L	Mathematics and information theory for engineers	6	2		2	E S		2	1
INMMA0103E INMMA0103L	System security techniques and solutions	6	2		2	E S		2	1
INMMA0206E	Computer science in engineering applications	4	2			E		1	2

### Humane and Economic Knowledge – needed 10 credits

Code	Subject name	Credit	Type and number			Asses-ment	Prerequisites	Period	Semester
			lec.	practice					
				sem.	lab				
INMMA0207E INMMA0207G	Introduction to Economics and Law	5	2	2		PM		1	2
INMMA0208E INMMA0208L	Management and organizational knowledges	5	2		2	PM		1	2

### Compulsory topics – needed 28 credits

Code	Subject name	Credit	Type and number			Assessment	Prerequisites	Period	Semester
			lec.	practice					
				sem.	lab				
INMMA0104E INMMA0104G	Performance Evaluation of Infocommunication Networks	6	2	2		E S		2	1
INMMA0105E INMMA0105L	System architectures	6	2		2	E S		2	1
INMMA0209E INMMA0209L	Logic design using hardware description language	6	2		2	PM		1	2
INMMA0210E INMMA0210L	Paralell image processing and pattern recognition	6	2		2	E S		1	2
INMMA0211E	Internet of Things systems and technologies	4	2			E		1	2

### Thesis work – needed 30 credits

Code	Subject name	Credit	Type and number			Assessment	Prerequisites	Period	Semester
			lec.	practice					
				sem.	lab				
INMMA0312L	Thesis 1	15			10	PM		2	3
INMMA0413L	Thesis 2	15			10	PM		1	4

### Differentiated knowledge topics – needed 24 credits

Code	Subject name	Credit	Type and number			Assessment	Prerequisites	Period	Semester
			lec.	practice					
				sem.	lab				
INMMA9914E INMMA9914L	Advanced switching and routing 1 (CCNP1)	6	2		2	E S	INMMA0211	2	3
INMMA9915E INMMA9915L	Intelligent sensor networks	6	2		2	PM	INMMA0101	2	3
INMMA9916E INMMA9916L	Multimedia networks	6	2		2	PM	INMMA0211	2	3
INMMA9917E INMMA9917L	Reconfigurable embedded systems	6	2		2	PM	INMMA0209	2	3
INMMA9918E INMMA9918L	Data mining for engineers	6	2		2	E S	INMMA0102	1	4
INMMA9919E INMMA9919L	Cloud service architectures and services	6	2		2	PM	INMMA0101	1	4

Code	Subject name	Credit	Type and number			Assessment	Prerequisites	Period	Semester
			lec.	practice					
				sem.	lab				
INMMA9920E INMMA9920L	Advanced switching and routing 2 (CCNP2)	6	2		2	E S	INMMA0211	1	4
INMMA9921L	Hardware-software codesign	6			4	PM	INMMA0209	1	4
INMMA9922E INMMA9922L	Microcontroller applications technology	6	2		2	PM	INMMA0105	1	4

**Free choice – needed 6 credits**

Code	Subject name	Credit	Type and number			Assessment	Prerequisites	Period	Semester
			lec.	practice					
				sem.	lab				