

# **Curriculum for Academic Year 2013/2014**

## **Computer Science**

### **Semester 1**

MBEM0011	Mathematical Analysis I	3+2+0	E	4	cr.
MBEM0081	Linear Algebra, Analytical and Differential Geometry	2+1+0	E	5	cr.
MBEF0011	Physics I	2+1+1	E	5	cr.
MBEI0401	Programming I	2+0+2	E	4	cr.
MBEI0391	Computer Aided Graphics	2+0+1	C	4	cr.
MBEM0131	Probability and Statistics	2+0+2	E	4	cr.
MBHX0011	English Language I	0+2+0	C	2	cr.

#### ***Other Compulsory Courses:***

MBSX0011	Physical Education I	0+1+0	A	2	cr.
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#### ***Facultative Courses:***

MBHM0011	History of Culture I	2+0+0	C	2	cr.
MBEM0181	Special Chapters of Mathematics	1+2+0	C	2	cr.

### **Semester 2**

MBEI0402	Programming II	2+0+2	E	5	cr.
MBEF0012	Physics II	2+1+1	C	4	cr.
MBME0131	Electronic Devices	2+1+2	E	5	cr.
MBEI0041	Data Structures and Algorithms	2+0+2	E	4	cr.
MBMV0011	Electrotechnics	2+1+1	E	5	cr.
MBEM0101	Numerical Analysis	2+0+2	E	4	cr.
MBHX0012	English Language II	0+2+0	C	2	cr.

#### ***Other Compulsory Courses:***

MBSX0012	Physical Education II	0+1+0	A	1	cr.
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#### ***Facultative Courses:***

MBEI0371	Special Chapters of Informatics	1+2+0	C	2	cr.
MBHM0012	History of Culture II	2+0+0	C	2	cr.

### **Semester 3**

MBEM0111	Special Mathematics	2+2+0	E	4	cr.
MBME0101	Logical Design	2+1+2	E	5	cr.
MBEI0381	Shell programming and UNIX utilization	2+0+2	E	5	cr.
MBEI0131	Databases	2+0+2	E	4	cr.
MBEI0141	Object Oriented Programming	2+0+2	E	5	cr.
MBEI0151	Theory of Graphs	2+0+2	C	4	cr.
MBHX0013	English Language III	0+2+0	C	2	cr.

#### ***Other Compulsory Courses:***

MBSX0013	Physical Education III	0+1+0	A	1	cr.
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#### ***Facultative Courses:***

MHM0013	The history of culture III.	2+0+0	C	2	cr.
MBHX0031	German Language I	0+2+0	C	2	cr.

### **Semester 4**

MBEI0123	Operating Systems	2+0+2	E	4	cr.
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MBME0041	Digital Electronics	3+0+2	E	4	cr.
MBMS0031	Systems Theory I	2+1+1	E	5	cr.
MBMV0021	Electric Measuring. Sensors and Transducers	3+0+2	E	4	cr.
MBEI0161	Advanced Programming Methods	2+0+2	E	5	cr.
MBME0171		1+0+2	C	4	cr.
MBHX0014	English Language IV	0+2+0	C	2	cr.
MBMS0012	Professional Practice I	0+6+0	C	2	cr.

***Facultative Courses:***

MHM0014	The history of culture IV.	2+0+0	C	2	cr.
MBHX0032	German Language II	0+2+0	C	2	cr.

**Semester 5**

MBEI0172	Formal Languages and Compilers	2+0+2	E	4	cr.
MBMS0191	Computer Architecture	2+0+2	E	4	cr.
MBMS0032	Systems Theory II	2+1+1	E	4	cr.
MBMS0151	Program Engineering	2+0+1	E	4	cr.
MBMS0091	Computer Networks	2+0+1	E	5	cr.
MBMV0061	Modelling and Simulation	2+0+2	C	4	cr.
MBMS0131	Optimization	2+0+2	C	5	cr.

***Facultative Courses:***

MBHX0015	English Language V	0+2+0	C	2	cr.
MBHX0033	German Language III	0+2+0	C	2	cr.
MBMV0181	Telecommunication Networks	2+0+2	C	3	cr.

**Semester 6**

MBEI0132	Databases II	2+0+2	C	4	cr.
MBMS0161	Design with Microprocessors	2+0+2	E	4	cr.
MBEI0111	Artificial Intelligence	2+0+2	E	4	cr.
MBEI0211	Web Technology	2+0+1	E	4	cr.
MBMS0141	Distributed Systems	2+0+1	E	4	cr.
MBMS0013	Professional Practice II	0+6+0	C	2	cr.
MBSY0101	Optional Course 1	2+0+2	C	4	cr.
MBSY0102	Optional Course 2	2+0+1	E	4	cr.

***Facultative Courses:***

MBHX0016	English Language VI	0+2+0	C	2	cr.
MBHX0034	German Language IV	0+2+0	C	2	cr.
MBMV0211	IP Telephone Networks	2+0+2	C	3	cr.

***Optional Discipline Packet 1***

MBEI0221	Assembly Programming Languages	2+0+2	C	4	cr.
MBEI0261	Combinatorial Methods in Networks	2+0+2	C	4	cr.

***Optional Discipline Packet 2***

MBEI0241	Coding Theory	2+0+1	E	4	cr.
MBMS0231	Computer Controlled Systems	2+0+1	E	4	cr.

**Semester 7**

MBEI0361	Artificial Intelligence	2+0+2	C	4	cr.
MBMS0051	Image Processing	2+0+2	E	5	cr.
MBEI0271	Java Technology	2+0+2	E	4	cr.
MBMV0201	Parallel and Distributed Algorithms	2+0+2	E	5	cr.
MBSY0103	Optional Course 3	2+0+1	E	4	cr.
MBSY0104	Optional Course 4	2+0+2	E	4	cr.
MBSY0105	Optional Course 5	2+0+2	C	4	cr.

***Optional Discipline Packet 3***

MBME0061	Digital Circuits	2+0+1	E	4	cr.
MBMV0141	SCADA Systems and Industrial Communications	2+0+1	E	4	cr.

***Optional Discipline Packet 4***

MBMV0111	Programable Logic Controllers	2+0+2	E	4	cr.
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MBMR0161 Robotics	2+0+2 E 4 cr.
<i>Optional Discipline Packet 5</i>	
MBEI0191 Logical and Functional Programming	2+0+2 C 4 cr.
MBEI0201 Computer Graphics	2+0+2 C 4 cr.

**Semester 8**

MBEI0231 Cryptography and Information Security	2+0+2 E 4 cr.
MBMS0201 Testing of Computer Systems	2+0+2 E 5 cr.
MBML0011 Practice for Graduation Project	0+0+5 C 7 cr.
MBGM0061 Project Management	0+0+0 C 3 cr.
MBSY0106 Optional Course 6	2+0+2 E 4 cr.
MBSY0107 Optional Course 7	2+1+0 C 3 cr.
MBSY0108 Optional Course 8	2+0+2 E 4 cr.

***Optional Discipline Packet 6***

MBMS0101 Digital Signal Processing	2+0+2 E 4 cr.
MBMS0081 Interface Desing	2+0+2 E 4 cr.

***Optional Discipline Packet 7***

MBGM0021 Quality Assurance Systems	2+1+0 C 3 cr.
MBGM0011 Management	2+1+0 C 3 cr.

***Optional Discipline Packet 8***

MBMV0171 Computer Peripherals and Interfaces	2+0+2 E 4 cr.
MBMV0151 Reliability	2+0+2 E 4 cr.