

Curriculum for Academic Year 2013/2014

Mechatronics

Semester 1

MBEM0011	Mathematical Analysis I	2+2+0	E	5	cr.
MBEM0081	Linear Algebra, Analytical and Differential Geometry	3+1+0	E	5	cr.
MBMM0011	Descriptive Geometry and Technical Drawing	2+0+2	C	4	cr.
MBEK0011	Chemistry	1+0+1	C	2	cr.
MBEF0021	Physics I	2+1+1	E	4	cr.
MBMT0031	Material Science and Engineering	2+0+1	E	3	cr.
MBEI0101	Programming I	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	1	cr.
----------	----------------------	-------	---	---	-----

Facultative Courses:

MBHM0011	History of Culture I	2+0+0	C	2	cr.
MBEM0031	Mathematical Basics of Computer Science	2+1+1	C	4	cr.
MBEM0181	Special Chapters of Mathematics	1+2+0	C	2	cr.
MBHP0321	Applied Psychology	1+0+0	C	1	cr.

Semester 2

MBEM0012	Mathematical Analysis II	2+2+0	E	5	cr.
MBEI0391	Computer Aided Graphics	1+0+2	C	4	cr.
MBEF0022	Physics II	2+1+1	C	5	cr.
MBMM0021	Mechanics	3+2+0	E	5	cr.
MBMV0011	Electrotechnics	2+1+1	E	4	cr.
MBEI0102	Programming II	2+1+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.
----------	-----------------------	-------	---	---	-----

Facultative Courses:

MBMX0011	History of Science and Technique	2+0+0	C	2	cr.
MBHM0012	History of Culture II	2+0+0	C	2	cr.
MBEI0371	Special Chapters of Informatics	1+2+0	C	2	cr.
MBHP0321	Applied Psychology	1+0+0	C	1	cr.

Semester 3

MBMS0021	Computer Aided Design	2+0+2	C	4	cr.
MBEM0091	Special Mathematics	2+2+0	E	4	cr.
MBMT0032	Material Science and Engineering II	2+0+1	E	4	cr.
MBMM0031	Strength of Materials	4+2+0	E	6	cr.
MBME0051	Electronic Devices and Analogical Electronics	2+0+2	E	4	cr.
MBMM0161	Fundamental Elements of Processing and Form Generation	3+0+1	V	5	cr.
MBHX0013	English Language III	0+2+0	C	2	cr.

Other Compulsory Courses:

MBSX0013	Physical Education III	0+1+0	A	1	cr.
----------	------------------------	-------	---	---	-----

Facultative Courses:

MHM0013	The history of culture III.	2+0+0	C	2	cr.
---------	-----------------------------	-------	---	---	-----

MBHX0031	German Language I	0+2+0	C	2	cr.
MBHX0021	French Language I	0+2+0	C	2	cr.

Semester 4

MBEM0101	Numerical Analysis	2+0+2	C	4	cr.
MBMM0051	Mechanisms	3+0+1	E	4	cr.
MBMV0021	Electric Measuring. Sensors and Transducers	3+0+1	E	4	cr.
MBME0031	Power Electronics	2+0+1	C	3	cr.
MBMR0061	Fundamentals of Mechatronical Systems	2+0+1	C	3	cr.
MBMS0031	Systems Theory I	2+1+1	E	4	cr.
MBME0041	Digital Electronics	2+0+2	C	4	cr.
MBHX0014	English Language IV	0+2+0	E	2	cr.
MBMR0011	Practice in Mechatronics I	0+0+6	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.
MBHX0022	French Language II	0+2+0	C	2	cr.

Semester 5

MBMM0181	Kinematics and Dynamics of Robots	2+0+2	E	5	cr.
MBMR0041	Termotechnics and Termic Machines	2+1+1	E	4	cr.
MBMM0071	Machine Elements I	2+0+1	E	5	cr.
MBMS0032	Systems Theory II	2+1+1	E	4	cr.
MBMM0061	Theory of Tolerances and Dimensional Control	2+0+2	C	4	cr.
MBMR0131	Technical Optics and Optical Devices	2+0+2	C	4	cr.
MBMS0041	Computer Architecture	2+0+2	E	4	cr.

Facultative Courses:

MBHX0033	German Language III	0+2+0	C	2	cr.
MBHX0023	French Language III	0+2+0	C	2	cr.
MBHX0015	English Language V	0+2+0	C	2	cr.

Semester 6

MBMS0111	Control Engineering	2+0+2	E	4	cr.
MBMM0072	Machine Elements II	2+0+1	E	4	cr.
MBMV0031	Electrical Machines and Drives	2+0+2	E	4	cr.
MBMM0191	Fundamentals of Hydraulic Drive of Robots	2+0+1	E	3	cr.
MBMR0181	Finite Element Analysis of Mechatronical Systems	2+0+1	C	3	cr.
MBMR0012	Practice in Mechatronics II	0+0+6	C	2	cr.
MBMY0101	Optional Course 1	2+0+1	C	3	cr.
MBMY0102	Optional Course 2	2+0+2	E	4	cr.
MBMY0103	Optional Course 3	2+0+1	C	3	cr.

Optional Discipline Packet 1

MBMR0191	Aquisition and Processing of Experimental Data	2+0+1	C	3	cr.
MBEI0311	Transmission of Data	2+0+1	C	3	cr.

Optional Discipline Packet 2

MBMV0041	Microprocessors	2+0+2	E	4	cr.
MBMR0051	Micromechanics	2+0+2	E	4	cr.

Optional Discipline Packet 3

MBEI0111	Artificial Intelligence	2+0+1	C	3	cr.
MBMS0051	Image Processing	2+0+1	C	3	cr.

Semester 7

MBMR0111	CNC Driving	2+0+2	E	4	cr.
MBMM0121	Hidraulic and Pneumatic Machines	2+0+1	E	4	cr.
MBMR0121	Robot Control Systems	2+0+2	E	4	cr.
MBMR0131	Technical Optics and Optical Devices	2+0+1	C	4	cr.
MBMM0131	Manufacturing Technologies	2+0+1	E	4	cr.

MBMY0104 Optional Course 4	2+1+0 C 3 cr.
MBMY0105 Optional Course 5	3+0+1 E 5 cr.
MBMY0106 Optional Course 6	2+0+0 C 2 cr.

Optional Discipline Packet 4

MBJJ0061 Commercial Law	2+1+0 C 3 cr.
MBJJ0051 Labour Law	2+1+0 C 3 cr.

Optional Discipline Packet 5

MBMM0151 Metal Cutting Tools	3+0+1 E 5 cr.
MBMM0141 Cutting Tools for Fine Mechanics	3+0+1 E 5 cr.

Optional Discipline Packet 6

MBMT0041 Engineering of Modern Materials	2+0+0 C 2 cr.
MBMT0051 Surface Engineering	2+0+0 C 2 cr.

Semester 8

MBMR0151 Mechatronical Systems	3+0+0 E 5 cr.
MBGM0011 Management	2+1+0 C 2 cr.
MBMS0111 Control Engineering	2+0+2 E 3 cr.
MBML0011 Practice for Graduation Project	0+0+5 C 7 cr.
MBML0012 Editing of the Graduation Project	0+0+5 E 11 cr.
MBMY0107 Optional Course 7	2+0+1 C 2 cr.

Optional Discipline Packet 7

MBMV0121 Computer Peripherals and Interfaces	2+0+1 C 2 cr.
MBMV0131 Microprocessors	2+0+1 C 2 cr.