TTF NEW TECHNOLOGIES AND MATERIALS 2012/2013

	FIRST SEMESTER			
Code	**Subject**	**Credits**	**Classes**	**Total**
2FI100112	Mathematics 1	8	3 + 2 + 2	216
2ZF107512	General and inorganic chemistry	8	3 + 2 + 2	216
UGD101312	Computer science	6	2 + 2 + 1	156
	Optional faculty subject 1	4	2 + 1 + 1	120
	Optional faculty subject 2	4	2 + 1 + 1	120
UGD102712	Sport and recreation	*	0 + 0 + 2	
	Total	**30**	**12 + 8 + 9**	**828**
	SECOND SEMESTER			
2TT100112	Introduction to chemical engineering	6	2 + 2 + 1	156
2TT106112	Introduction to materials science 1	6	2 + 2 + 1	156
2FI100412	Mathematics 2	8	3 + 2 + 2	216
	Optional faculty subject 3	4	2 + 1 + 1	120
	Optional university subject 1	6	2 + 2 + 1	216
	Total	**30**	**11 + 9 + 6**	**216**
	THIRD SEMESTER			
2TT106212	Introduction to materials science 2	8	3 + 2 + 2	216
2TT100512	Chemistry and physics of polymers	6	2 + 2 + 1	156
2ZF107812	Physical chemistry	8	3 + 2 + 2	216
	Optional faculty subject 4	4	2 + 1 + 1	120
	Optional faculty subject 5	4	2 + 1 + 1	120
	Total	**30**	**12 + 8 + 7**	**828**
	FOURTH SEMESTER			
2TT106312	Measurements and dimensional analysis	6	2 + 2 + 1	156
2MF100412	Strength of materials	8	3 + 2 + 2	216
2TT106512	Kinetics and transfer phenomena	6	2 + 2 + 1	156
	Optional faculty subject 6	4	2 + 1 + 1	120
	Optional university subject 2	6	2 + 2 + 1	156
	Total	**30**	**11 + 9 + 6**	**804**

	FIFTH SEMESTER			
2TT106812	New engineering materisla	6	2 + 2 + 1	156
2TT106912	Design of experiments	8	3 + 2 + 2	216
2TT107012	Production technologies	8	3 + 2 + 2	216
	Optional faculty subject 7	4	2 + 1 + 1	120
	Optional faculty subject 8	4	2 + 1 + 1	120
	Total	**30**	**12 + 8 + 7**	**828**
	SIXTH SEMESTER 1			
2TT107512	Composite materials 1	8	3 + 2 + 2	216

2TT107612	Testing of materials	6	2 + 2 + 1	156
2TT107712	Final exam	6	0 + 0 + 6	144
	Optional faculty subject 9	4	2 + 1 + 1	120
	Optional university subject 3	6	2 + 2 + 1	156
	Total	**30**	**9 + 7 +11**	**792**
	ШЕСТИ SEMESTER 2			
2TT107512	Composite materials 1	8	3 + 2 + 2	216
2TT107612	Testing of materials	6	2 + 2 + 1	156
2TT108012	Nano materials and nanotechnologies 1	6	2 + 2 + 1	156
	Optional faculty subject 9	4	2 + 1 + 1	120
	Optional university subject 3	6	2 + 2 + 1	156
	Total	**30**	**11 + 9 +6**	**804**
	SEVENTH SEMESTER			
2TT102612	High-performance fibers	8	3 + 2 + 2	216
2TT108112	Polymer composite materials	8	3 + 2 + 2	216
2TT108212	Nano materials and nanotechnologies 2	6	2 + 2 + 1	156
	Optional faculty subject 10	4	2 + 1 + 1	120
	Optional faculty subject 11	4	2 + 1 + 1	120
	Total	**30**	**12 + 8 + 7**	**828**
	ОСМИ SEMESTER			
2TT108712	Environment protection technologies	6	2 + 2 + 1	156
2TT108812	Principles of materials choice	6	2 + 2 + 1	156
2TT108912	Diploma project	8	0 + 0 + 8	192
	Optional university subject 4	6	2 + 2 + 1	156
	Optional faculty subject 12	4	2 + 1 + 1	120
	Total	**30**	**8 + 7 + 12**	**780**

LIST OF OBLIGATORY AND OPTIONAL SUBJECTS FOR STUDY PROGRAMME NEW TECHNOLOGIES AND MATERIALS

Obligatory subjects	Optional faculty subjects
Mathematics 1	I.sem. Graphics and design
General and inorganic chemistry	I.sem. Organic chemistry
Computer science	I.sem. Physics
Sport and recreation	I.sem. Mechanics
Introduction to chemical engineering	II.sem. Thermodynamics
Introduction to materials science 1	II.sem. Analytical chemistry
Mathematics 2	III.sem. Product development
Introduction to materials science 2	III.sem. Labor analysis
Chemistry and physics of polymers	III.sem. Introduction to management

Physical chemistry	III.sem. Business communications
Measurements and dimensional analysis	IV sem. Biomaterials
Strength of materials	IV sem. Mass transfer operations
Kinetics and transfer phenomena	V sem. Metals and alloys
New engineering materials	V sem. Introduction to automatics
Design of experiments	Vsem. Civil-engineering materials
Production technologies	V.sem. Plastics technologies
Composite materials 1	VI.sem. Ceramics
Testing of materials	VI.sem. Corrosion and protection
Final exam	VII.sem. Introduction to quality management
Nanomaterials and nanotechnologies 1	VII sem. Materials for protection
High-performance fibers	VII sem. Industrial management
Polymer composite materials	VII sem. Recycling of polymers
Nanomaterials and nanotechnologies 2	VIII sem. Intelligent materials
Environment protestion technologies	VIII sem. Technical textile
Principles of materials choice	
Diploma project	