

ECTS School of Rural and Surveying Engineering

1st SEMESTER

I. Mandatory Courses

A/A	Code	Courses	Hours	ECTS
1.	6209	Linear Algebra and Analytical Geometry	4	4,0
2.	6210	Analysis	5	4,5
3.	6211	Introduction to Informatics	4	4,0
4.	6003	General Geology	4	4,5
5.	6212	Descriptive and Prescriptive Geometry	4	4,0
6.	6176	Technical and Topographic Drawings	4	4,0
7.	6029	Physical Geography and Environment	4	4,5
		Summation	29	29,5

II. Compulsory subject with exemption ability

A/A	Code	Courses	Hours	ECTS
1.	6053	English Language	2	0
2.	6054	French Language	2	0
3.	6055	German Language	2	0
4.	6060	Italian Language	2	0

2nd SEMESTER

I. Mandatory Courses

A/A	Code	Courses	Hours	ECTS
1.	6004	Differential Equations and Complex Functions	4	4,0
2.	6042	Probability Theory and Statistics	4	4,0
3.	6143	Geodesy I (Introduction to Geodesy)	4	4,5
4.	6009	Physics I (Mechanics)	5	4,5
5.	6032	Cartography I (General Cartography)	4	4,5
6.	6213	Programming Techniques	4	4,0
7.	6178	Projective Geometry	3	4,0
8.		Summation	28	29,5

II. Compulsory subject with exemption ability

A/A	Code	Courses	Hours	ECTS
1.	6110	English Language	2	0
2.	6111	French Language	2	0
3.	6112	German Language	2	0
4.	6113	Italian Language	2	0

3rd SEMESTER**I. Mandatory Courses**

A/A	Code	Courses	Hours	ECTS
1.	6085	Numerical Analysis	4	4,0
2.	6106	Differential Geometry	4	4,0
3.	6010	Physics II (Electromagnetic and Optics)	5	4,5
4.	6215	Database Systems	4	4,5
5.	6027	Geodesy II (Surveying Instruments and Procedures)	4	4,5
6.	6216	Technical Mechanics	6	4,5
		Summation	27	26,0

II. Compulsory subject with exemption ability

A/A	Code	Courses	Hours	ECTS
1.	6057	English Language	2	0
2.	6058	French Language	2	0
3.	6094	German Language	2	0
4.	6095	Italian Language	2	0

4th SEMESTER**I. Mandatory Courses**

A/A	Code	Courses	Hours	ECTS
1.	6102	Principles of Geo-information and Geographical Information	4	4,50
2.	6090	Geodesy III (Land Surveying)	5	4,50
3.	6091	Photo-interpretation and Remote Sensing	5	4,50
4.	6193	Cartography II (Analytical Cartography)	4	4,50
5.	6083	Road Design I (Geometrical Features)	4	4,50
6.	6174	Geotechnical Engineering	4	4,50
7.		Languages (choose one)	2	3,00
	6114	English Language		
	6115	French Language		
	6116	German Language		
	6117	Italian Language		
		Summation	28	30

II. Mandatory Summer Course (17 days / 8 hours)

A/A	Code	Courses	Hours	ECTS
8.	6013	Summer Field Course in Geodesy I	5	

5th SEMESTER**I. Mandatory Courses**

A/A	Code	Courses	Hours	ECTS
1.	6214	Introduction to Economical Analysis	4	4,00
2.	6018	Geodesy IV (Higher Geodesy)	4	4,50
3.	6043	Theory of Errors and Adjustments I	4	4,50
4.	6031	Photogrammetry I (Introduction to	5	4,50
5.	6025	Geography and Spatial Analysis	4	4,50
6.	6044	Fluid Mechanics	3	4,50
7.	6188	Designing of Transportation Projects (Economical	3	4,50
		Summation	27	31

**II. Courses of humanities
(one selection)**

A/A	Code	Courses	Hours	ECTS
1.	6138	History of Civilization	2	2
2.	6103	Sociology of Space	2	2
3.	6170	Philosophy of Sciences	2	2

6th SEMESTER**I. Mandatory Courses**

A/A	Code	Courses	Hours	ECTS
1.	6217	Geodesy V (Satellite Geodesy)	4	4,50
2.	6122	Photogrammetry II (Analytical Photogrammetry)	4	4,50
3.	6099	Applied Hydraulics	3	4,50
4.	6076	Engineering Hydrology	4	4,50
		Summation	15	18

II Elective Courses

A/A	Code	Courses	Hours	ECTS	S1M	S1S	S2M	S2S	UM	US	TM	TS	WM
1	6088	Geodetic Astronomy	4	4,5	E								
2	6028	Special Geodetic Surveys	4	4,5	E		E						
3	6223	Fundamentals of Digital Signal Processing	4	4,5	E		E						
4	6190	Photographic Data Acquisition	3	4,5			E						
5	6092	Urban Geography	4	4,5					Y	Y			
6	6006	Thematic Cartography	4	4,5		E	E		E				
7	6218	Εισαγωγή στην Πολεοδομία & Οικιστικά Δίκτυα	4	4,5					E	E			
8	6219	Construction Materials	4	4,5							E		E
9	6180	Geographical Information Systems	4	4,5				E	Y	E			
10	6151	Theory of Errors and Adjustments II	4	4,5	Y		Y						
11	6118	Introduction to Environmental Technologies	2	4,5									E
12	6107	Transport Systems	3	4,5							Y	Y	

III. Elective Summer Course (20 days / 10 hours)

A/A	Code	Courses	Hours	ECTS	S2M	S2S	UM	US	TM	TS	W M	WS
1	6134	Summer Field Course in Geodesy II	4,5	E	E	E						

7th SEMESTER**I. Mandatory Courses**

A/A	Code	Courses	Hours	ECTS
1.	6049	Cadastre	4	4,50
2.	6153	Digital Image Analysis for Remote Sensing	4	4,50
3.	6120	Urban Planning	4	4,50
4.	6166	Hydraulic Works	4	4,50
		Summation	16	18

II Elective Courses

A/A	Code	Courses	Hours	ECTS	S1M	S1S	S2M	S2S	UM	US	TM	TS	WM
1	6228	Satellite Geodesy and Navigation	4	4,50	Y		E	Y					
2	6071	Special Topics of Remote Sensing	4	4,50		E	E	Y					
3	6182	Introduction to the Earth Gravity Field	3	4,50	Y								
4	6204	Photogrammetry III (Digital Photogrammetry)	4	4,50	E		Y	E					
5	6165	Digital Mapping	4	4,50		Y	Y	E					
6	6127	Applied Optics	4	4,50	E		E						
7	6224	Regional Policy and Regional Development	3	4,50					E				
8	6146	Soil Mechanics - Foundations	3	4,50							E	E	E
9	6023	Architectural Design Primer	4	4,50					E		E		
10	6140	Economic Geography	4	4,50					Y	Y			
11	6095	Structure Engineering – Work-Field Management	4	4,50							E		E
12	6158	Road Design II (Traffic Flow)	3	4,50							Y	Y	
13	6121	Groundwater Hydrology	3	4,50									Y
14	6079	Applications to Natural Resources Management	4	4,50					E				

2	6172	Summer Course in Remote Sensing		4,50		E	E	E				
3	6164	Summer Field Course in Photogrammetry		4,50		E	E	E				

9th SEMESTER**I. Mandatory Courses**

A/A	Code	Courses	Hours	ECTS
1.	6177	Business Administration	3	4
2.	6125	Introduction to the Legal System and Elements of	3	4
		Summation	6	8

II Elective Courses

A/A	Code	Courses	Hours	ECTS	S1M	S1S	S2M	S2S	UM	US	TM	TS	WM
1	6203	Real Estate Valuation and Land Management	3	4,5	E	E	E		E				
2	6208	Special Topics of Satellite Geodesy	3	4,5	E								
3	6131	Marine Geodesy	4	4,5	E		E						
4	6205	Metrology	3	4,5	E								
5	6200	Theory and Methods of Town Planning	4	4,5					E	E			
6	6220	Methods & Applications in Spatial Planning	4	4,5					E	E			
7	6077	Sanitary Engineering and Environment	3	4,5									E
8	6033	River Engineering	3	4,5							E		E
9	6094	Operational Research	3	4,5							E	E	E
10	6189	Road Design IV (Elements of construction)	3	4,5							E	E	
11	6015	Infrastructures	4	4,5							E	E	E
12	6229	Water Resources Management and Protection	4	4,5									E

III. Project Courses**(One selection)**

A/A	Code	Courses	Hours	ECTS	S1	S2	U	T	W
1	6230	Development and Management of Land information Systems	4	10	E	E	E		
2	6197	Monument Recording	4	10	E	E			
3	6221	Applications of Higher and Satellite Geodesy	4	10	E				
4	6198	Applications of Photo-interpretation and Remote Sensing	4	10		E			
5	6132	Engineering Geodesy	4	10	E	E			
6	6199	Environmental Planning	4	10			E		
7	6201	Designing - Study - Operation of Road Works	4	10				E	

8	6202	Designing Water Resources Systems	4	10					E
9	6222	Fundamental of Digital Systems Communication	4	10	E	E	E	E	E

Courses required	ECTS
• 47 Mandatory courses	204
• 1 elective course on humanities	2
• 6 elective courses on the major specilization area	27
• 1 project course on the major specilization area	10
• 4 elective courses on the minor specilization area	18
• 2 free selections	9
• Diploma Thesis	30
<u>Σύνολο</u> (61 courses (270 ects and Diploma Thesis(30 ECTS) :	300

Major and secondary specilization area

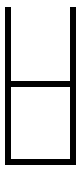
- S1M** Survey engineering 1 Major
- S1S** Survey engineering 1 Secondary
- S2M** Survey engineering 2 Major
- S2S** Survey engineering 2 Secondary
- UM** Urban and Regiona Planning and Development Major
- US** Urban and Regiona Planning and Development Secondary
- TM** Transportation Engineering Major
- TS** Transportation Engineering Secondary
- WM** Water Resource Management Major
- WS** Water Resource Management Secondary

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