UNIVERSITY OF PRISHTINA
"HASAN PRISHTINA"

FACULTY OF CIVIL ENGINEERING

DEPARTMENT HYDROTECHNICS – BSc.

2011 – 2012

9.3 Study Program for Hydrotechnics - Bachelor Level

Application Form for Study Program Accreditation

Institution Description (name)	**Faculty of Civil Engineering and Architecture** **Department of Civil Engineering**
Study Program Description (name)	**Study Program: Hydrotechnics**
KKK Level (with abbreviation BA, MA, PhD, doctorate program, university course, certificate professional degree)	**Level 6** **BA**
Academic Title, full and short Degree Name	**Civil Engineering Bachelor – Branch of Hydrotechnics** **Civil Engineering Bsc. arise**
Academic program Profile	**Hydrotechnics**
Target Group offered	**Secondary finished school candidates**
Minimum study time period	**Minimum three (3) years study**
Study type (regular, plus work, distance learning)	**Regular**
ECTS number (total and per year)	**180 ECTS ,** **60 ECTS per year**
Modules /Subjects	**Obligatory:** 1. Introduction to Civil Engineering 2. Mathematics I 3. Descriptive Geometry 4. Physics 5. Foreign Language 6. IT Basics 7. Mathematics II 8. Mechanics I 9. Construction Material I 10. Surveying Techniques in Geodesy 11. Material Resistance I 12. Mechanics II 13. Construction Material II 14. Numerical methods 15. Soil Mechanics 16. Structural Static

	17. Material Resistance II 18. Concrete Technology 19. Fluid Mechanics 20. Concrete Structures 21. Hydraulics 22. Hydrology 23. Water Power Use 24. Water Treatment 25. Water Resource Management 26. Water structures 27. Construction Organization and Technology 28. Degree work **Elective:** 1. Probability and Statistics 2. Construction Structures 3. Environment Protection 4. Construction Regulation 5. Civil Engineering Geology 6. Road Design 7. Engineering Geotechnics 8. Steel Structures 9. Low Construction Technology 10. Railways
Students number	485 students
Study program Chef	Prof.ass.dr. Naim Hasani
Permanent Academic Staff (scientific/artistic) (Number according to staff groups)	22 Lecturers and 16 assistants
Study Charge	According to PU tariffs, 50 Euro per semester

Goal and profile of Study Program: Hydrotechnics - Bachelor Level

- To recruit skilled students, that will understand, and know the civil engineering science concepts, including theoretical part as base, and practical part as necessary to complete theoretical part.
- To provide professional staff for Kosovo market and further, able to play the role of technical manager of private and public companies, basic elements of hidrotechnical works, as part of civil engineering.
- To provide knowledge, for continuouing studies or scientific research for Mrs. and PhD. level.

Learning outcomes

- To know concepts of civil engineering science
- To know to apply theoretical knowledge, on practical and experimental stage of civil engineering
- To know to read basic elements of calculation, and to analyze several problems of Water supply and Sewage.
- To know with his knowledge to assist process of construction and implementation of hidrotechnical works, according to ongoing standards and rules.

Study Program relation with leading principles of Institution

Hydrotechnical study program, contain important piece of study at Civil engineering Department, and is completely compact with determined mission for faculty development, or with leading Principe of institution.

Study program level

This study level, is program of level 6 according to NFQ, respectively Bachelor level.

Conditions for student admission and selection procedures

All applicants must enter admission test. Candidates election will be performed, according to following criteria:

- Previous results weight: max 20 points
- Government test weights: max 50 points
- Admission exam : max 30 points (admission examination on Mathematics field)
- Minimum admission condition: 30 % positive result on admission exam
- Ranging to the requested number, according to competition.

Title of academic degree

Civil Engineering Bachelor - Hidrotechnical study program

Exam Regulation

– is based on Regulation for Bachelor Study (ref.234/1, date of 10.03.2011) and for Master study Regulation (ref.1451/1 , date of 02.07.2010). Respectively resumes of those regulations, you can find to adjunct annex.

Diploma Supplement

– In PU, jet isn't implemented Diploma Supplement.

Study form, structure and duration

Studies of Hidrotechnical study program, on Bachelor Level, are regular studies, with continuous presence on lectures and exercise. Modules (subjects) are organized through semesters and years, while minimum duration of studies is 3 years.

International Comparation of study department and academic title

Hidrotechnical study program of Bachelor level is 85 % comparable with Civil Engineering Faculty of Zagreb University.

STUDY PLAN:

First year – First semester					
Nr.	**Subject**	**Hours**	**ECTS**	**Compulsory**	**Lecturer**
HI01.	Introduction to Civ. Engineering	2+0	3	O	Prof.ass.dr.Hajdar Sadiku
HI02	Mathematics I	3+2	9	O	Prof.dr.Isak Hoxha
HI03	Descriptive Geometry	2+2	6	O	Prof.ass.dr. Flamur Doli
HI04	Physics	2+2	6	O	Prof.dr.Rashid Maliqi (El.En.F.)
HI05	Foreign Language	2+0	3	O	Nedime Belegu
HI06	Information tech. basics	2+2	3	O	Prof.asoc.dr. Enver Hamiti (El.En.F.)
	total	**19**	**30**		
	Subject	**Hours**	**ECTS**	**Elective**	**Lecturer**

First year – Second semester					
Nr.	**Subject**	**Hours**	**ECTS**	**Compulsory**	**Lecturer**
HII01	Mathematic II	3+2	9	O	Prof.dr.Isak Hoxha
HII02	Mechanics I	3+2	6	O	Prof.ass.dr.Misin Misini
HII03	Construction material I	2+2	6	O	Prof.asoc.dr. Naser Kabashi
HII04	Surveying Techniques in Geodesy	2+2	6	O	Prof.ass.dr.Perparim Ameti (Msc Ilmi Zherka)
	total	**18**	**27**		
	Subject	**Hours**	**ECTS**	**Elective**	**Lecturer**
HII05	Probability and Statistics	2+1	3	Z	Prof.dr.Fevzi Berisha
HII06	Construction structures	2+2	3	Z	Prof.ass.dr. Violeta Nushi

Second year – Third semester					
Nr.	**Subject**	**Hours**	**ECTS**	**Compulsory**	**Lecturer**
HIII01	Material resistance I	3+2	9	O	Prof ass.dr. Misin Misini
HIII02	Mechanics II	2+2	6	O	Prof.ass.dr.Misin Misini
HIII03	Construction material II	2+2	6	O	Prof.asoc.dr. Naser Kabashi
HIII04	Numerical methods	2+2	6	O	Prof.dr.Abdullah Zejnullahu
	total	**17**	**27**		
Nr.	**Subject**	**Hours**	**ECTS**	**Elective**	**Lecturer**
HIII05	Environment protection	2+0	3	Z	Prof.dr. Fetah Halili (MNSF)
HIII06	Construction regulation	2+0	3	Z	Mr.sc.Ilir Rodiqi

Second year – Fourth semester					
Nr.	**Subject**	**Hours**	**ECTS**	**Compulsory**	**Lecturer**
HIV01	Soil mechanics	3+2	6	O	Prof.dr.Fikret Ahmedi
HIV02	Structure statics	3+2	6	O	Prof.ass.dr.Fatos Pllana
HIV03	Material resistance II	2+2	6	O	Prof.ass.dr.Misin Misini
HIV04	Concrete technology	2+2	6	O	Prof.asoc.dr.Naser Kabashi
HIV05	Fluid mechanics	2+2	3	O	Prof.ass.dr.Zekirija Idrizi
	total	**18**	**24**		
Nr.	**Subject**	**Hours**	**ECTS**	**Elective**	**Lecturer**
HIV5	Civil engineering geology	2+0	3	Z	Prof.ass.dr.Islam Fejza (MMF)
HIV6	Road design	2+2	3	Z	Prof.ass.dr.Naim Hasani

Third year – fifth semester					
Nr.	**Subject**	**Hours**	**ECTS**	**Compulsory**	**Lecturer**
HV01	Concrete structures	3+2	6	O	G.E.C.E. Hamdi Sylejmani
HV02	Hidraulics	3+2	6	O	Prof.ass.dr.Naim Hasani
HV03.	Hidrology	3+2	6	O	Prof.ass.dr.Naim Hasani
HV04	Water power use	3+2	6	O	Prof.dr.Sylejman Daka
	total	**20**	**24**		
Nr.	**Subject**	**Hours**	**ECTS**	**Elective**	**Lecturer**
HV05	Engineering geotechnics	2+2	3	Z	Mr.sc.Qani Kadiri
HV06	Steel structures	2+0	3	Z	Mr.sc.Faik Hasani
HV07		2+0	3	Z	

Third year – sixth semester					
Nr.	**Subject**	**Hours**	**ECTS**	**Compulsory**	**Lecturer**
HVI01	Water treatment	3+2	6	O	Prof.dr.Sylejman Daka
HVI02	Water resource management	2+3	6	O	Prof.ass.dr.Naim Hasani
HVI03	Hidrotechnical structures	2+2	3	O	Prof.ass.dr. Zekirija Idrizi
HVI04	Construction Organization and Technology	2+2	3	O	Mr.sc.Ilir Rodiqi
	total	**18**	**18**		
Nr.	**Subject**	**Hours**	**ECTS**	**Compulsory**	**Lecturer**
HVI06	Railways	2+0	3	Z	
HVI07		2+0	3	Z	
HVI08	Diploma degree		9	O	

Subject (module) name: Introduction to civil engineering

Contain: Introduction with basic terms on construction science: basic requirements to be filled, for an engineering structure; structural units; construction – its importance in human life; construction materials, wood, concrete, steel structures, types of works and their importance, building site visits; working process in design office; projecting stages.

Aim of learning: To get know basic knowledge of construction science.

Subject learning outcomes: After finishing this curs (learning subject), student should be able to know, understand, and to use correctly basic terms of construction science, in order to stand as easy as possible, duties which are coming along basic studies.

Working necessary volume and amount: 2+0, 3 ECTS

Activity	Hour	Days	Weeks	Totally
Lectures	2		15	30
Theoretical/laboratorial exercise				
Practical work				10
Contact/consulting with lecturer				4
Field exercise				
Colloquium, workshops				8
Home works				14
Student own study time (library, home)				16
Final prepare of exam				10
Time spend in evaluation (test quiz, final exam)				8
Project, presentation, etc.				
Total				100

Forms/ Methods of teaching : Regular learning in group form, with individual home works and with construction site visits.

Proportion between theoretical and practical part of study:

Theoretical part	Practical part
90 %	10 %

Basic literature used on subject:

Musa Stavileci: Introduction to Civil Engineering – written lectures, FCE Prishtina
R.S. Narayanan, A.W. Beeby: Introduction to design for Civil Engineers, Spon Press, London 2001;
D. Doran: Eminent Civil Engineers Whitles Publishing Caithness 1999;

Subject (module) name: Mathematics I
Contain: Real and Comples numbers. Matrix, basics of metric calculation, matrix rang, Determinants, Inverse matrix. Systems of linear algebraic equations, Gauss and Crammer method, characteristic values and characteristic metric vectors. Vectors, vectorial calculation. Analytical space geometry. Functions, some basic functions, monotonic functions, function symmetry, compound function, inverse function, trigonometric functions and their inverse functions, hyperbolic and parametric functions. Numerical rows and series. Row limit. Limit and function continuity. Derivative and their rules. Function differential. Extremes, asymptotes, inflection points. Several variable functions. Limit. continuity and derivative
Aim of learning: To achieve necessary knowledge for bachelor level.
Subject learning outcomes: After finishing this curse, student should be able to:

1. understand and assum basic meanings, developed during semester
2. To be able with its independent work to solve problems, confirm the results, to do their comparison.
3. To be able to write problems similar with solved ones, and to describe and compare them.
4. To be able to assume key units of universal mathematical language, to win work strength, thinking preciosity, as well as to do systematization of problems.

Working necessary volume and amount:3+2, 9 ECTS

Activity	Hour	Days	Weeks	Totally
Lectures	3		15	45
Theoretical/laboratorial exercise	2		15	30
Practical work	-		-	
Contact/consulting with lecturer	1		15	15
Field exercise	-		-	-
Colloquium, workshops	2		15	30
Home works	1		15	15
Student own study time (library, home)	2		15	30
Final prepare of exam	1		15	15
Time spend in evaluation (test quiz, final exam)	-		-	-
Project, presentation, etc.	-		-	-
Total				180

Forms/ Methods of teaching : Curs will be organized in the form of lectures and exercise . As a rule, lectures will be hold by mean of presentation. Also, by discussion during lectures and exercise, will be able to get know deeply in the curs chosen topics.
Proportion between theoretical and practical part of study:

Theoretical part	Practical part
50 %	50 %

Basic literature used on subject:
Isak Hoxha, Mathematics I, Mathematics II, Basic mathematic, Prishtina
Annex literature: Lipchutz, Linear algebra, N. York, 1968, R.F. Larson, R.P. Hostetler, Calculus, 1994

Course: Descriptive Geometry

Content: Projection Methods. The projection of the point. Quadrants. Octants. The projection of the lines from any position, projection of lines with the special position. Projection of line through a point removing. The projection of two lines. Determination of traces of lines in flat projections. The projection of the plane. Traces of the plane. The projection of the plane in which lies line and a point. Projections of planes defined by two straights. Intersections of two plains. Intersection of plain with straight line. Point, line and geometric figure transformations. Object transformations. Point, line and object rotations. Projection method - the plane matching. Discontinuation of polyformic and rotary objects.

Learning objectives: basic preparation for professional and technical presentation of three-dimensional forms namely architectural projects and skill development for three-dimensional sense of space and spatial thinking in terms of articulating the basic notions of architecture.

Learning outcome of the course: The course is part of the preparatory group of subjects and provides basic knowledge for the benefit of further studies in the field of Civil Engineering and Architecture.

The required volume and amount of work (hours per semester 2+2, 6 ECTS)

Activity	Hour	Week	A total
Lectures	2	15	30
Theoretical exercises / laboratory	2	15	30
Tutorial (practical work)			
Contacts with the teacher / consultations	0.3	10	3
Field Exercises			
Midterms, seminars	1	15	15
Homeworks			
Self preparation time (at the library or at home)	1	15	15
Preparation for final exam	1	7	7
Time spent on assessment (tests, quizzes, final exam)			
Projects, presentations, etc.			
Total			**100**

Forms / Methods of teaching: Teaching method of Descriptive Geometry course consists of weekly lesson lecturing and holding exercises for specific unit, then the making of graphs and models for teaching certain units.

The relationship between theoretical and practical study:

The theoretical part	Part practical
50%	50%

Base literature for course:

(1) Flamur DOLI, Gjeometria Deskriptive, Prishtinë, 1990

Course: Physics

Content: SI system. Movement at a constant and variable speed. Newton's laws of mechanics. Elasticity. Hook's law. Gravity. Energy conservation laws. Dynamics of rotation. Fluids. Hydrostatics and hydrodynamics. Heat spreading. Heat and moisture flow across walls of buildings . harmonic oscillations. Waves. Sound waves. Propagation of sound and noise. Electrostatic magnetic field. Electromagnetic waves. The reflection and refraction of light. Mirrors and optical lenses. Interference, diffraction, polarization and dispersion of light. The laws of radiation. Lasers

Learning objectives:
-To introduce students with physical fundamentals of civil engineering sciences.
-To learn and know how to apply physical laws in technical sciences,
-Developing and deepening the competences of the physical sciences necessary for understanding the problems that are studying.

Learning outcome of the course:
-To train students to make connections between physical units and physical phenomena and apply them in solving technical problems
-To develop skills for independent work and can derive proper conclusions,
-To perform practical measurements in the laboratory, analyze them and make the results of interpreting them, etc.

The required volume and amount of work (hours per semester 2+1+1, 6 ECTS)

Activity	Hour	Day	Week	A total
Lectures	2	1	15	30
Theoretical exercises / laboratory	1 +1	1	15	30
Tutorial (practical work)				
Contacts with the teacher / consultations	2	1	15	30
Field Exercises				
Midterms, seminars	3	5		15
Homeworks	2	5		10
Self preparation time (at the library or at home)	3	10		30
Preparation for final exam	10	1		10
Time spent on assessment (tests, quizzes, final exam)	3	3		9
Projects, presentations, etc.	2		15	30
Total	29	27	45	164

Forms / Methods of teaching: regular instruction in groups, lectures, numerical and laboratory exercises, seminars

The relationship between theoretical and practical study:

The theoretical part	Part practical
75%	25%

Base literature for course:

1. S.Skenderi dhe R. Maliqi, Fizika për studentët e Fakultetve teknike, ligjerata Prishtinë, 2005.
2. D. Halliday, R. Resnick, J. Walker, Fundamentalts of Physics, John Wiley& Sons, 2001.
3. D. Giancoli, Physics for Scientists and Engineers, Prentice Hall, New Jersey, 2000.

Course: Foreign (English) Language
Content: English language course develops skills of reading, speaking, listening and writing, presents grammar in a way which provides practice and overcome common problems in structure and application of times. It also develops and enriches the professional technical vocabulary of the three departments of Civil Engineering and Architecture. The subject contains various topics from everyday life, culture and authentic texts aimed at raising the level of reading and understanding written and oral communication skills through various activities. Presentations, essays, seminar papers, vocabulary, listening, discussion, etc.

Learning objectives:
Increases students' skills in reading, writing, listening and communication in speech. To increase students' ability to communicate in English in speaking and writing. To enrich their vocabulary through independent reading and listening in English. To gain insight into grammar by learning and practicing grammar in context. To enrich the vocabulary of technical terms by writing and using the written, transcribed and commented words in English and Albanian (their translations).

Learning outcome of the course:
Have the skills of speaking, listening. Reading and writing which enable efficient form of communication in the real situation of the academic level. Perceive the styles of English. To communicate with people of different profiles. Understand technical terminology of different topics such as constructive, Geodesy and Hydro. To be able to develop, design various technical projects in English.
The required volume and amount of work (hours per semester 2 +0, 3 ECTS)

Activity	Hour	Day	Week	A total
Lectures	2		15	30
Theoretical exercises / laboratory				
Tutorial (practical work)	2		5	10
Contacts with the teacher / consultations	1		15	15
Field Exercises				
Midterms, seminars				
Homework				
Self preparation time (at the library or at home)				
Preparation for final exam	1		15	15
Time spent on assessment (tests, quizzes, final exam)	2		2	4
Projects, presentations, etc.	1		1	1
Total				75

Forms /Methods of teaching
Develop practical working papers and seminar presentations. Examination is also held in the form of test.
The relationship between theoretical and practical study:

The theoretical part	Part practical
50%	50%

Base literature for course:

New Headway Advanced Student's Book (2007).Oxford University Press. Oxford UK. Oxford Dictionary.

Course: Introduction to Informatics

Content: The hardware and software of the computer, the Windows operating system, computer processing of textual documents, application for presentation and processing of tabular data, Internet, Web site researches, e-mail.

Learning objectives:

- Introducing students to the structure of computer system
- Training students to use current operating systems
- Training students to use software applications with special importance for their current affairs.

Learning outcome of the course:

1. To know the basic concepts about the structure of computer systems.
2. To explain the operating system options
3. To explain the opportunities provided by various software applications
4. Know how to implement the main functions of operating program
5. Know how to implement the main functions of software applications.

The required volume and amount of work (hours per semester 2 +2, 3 ECTS)

Activity	Hour	Day	Week	A total
Lectures	2	1	15	30
Theoretical exercises / laboratory	1	1	15	15
Tutorial (practical work)				
Contacts with the teacher / consultations	1	1	15	15
Field Exercises				
Midterms, seminars	1	1	2	2
Homework	2	1	15	30
Self preparation time (at the library or at home)	2	1	15	30
Preparation for final exam	6	1	1	6
Time spent on assessment (tests, quizzes, final exam)	2	1	1	2
Projects, presentations, etc.				
Total				130

Forms / Methods of teaching: Lectures, computer exercises, seminar, discussion, problem solving with computer.

The relationship between theoretical and practical study:

The theoretical part	Part practical
30%	70%

Base literature for course:

1. Enver Hamiti Bazat e Informatikës, Ligjërata kompjuterike të autorizuara, Prishtinë, 2001.

2. "Kompjuteri për të gjithë", autorë Dr. Agni Dika, Seb Rodiqi.

Course: Mathematics II

Content: Solving integral. The indefinite integral. The method of integration, the indefinite integral, Newton-Leibniz formula. Application of definite integral. Ordinary differential equations: method of integration by parts. Linear differential equation, linear differential equation of second and third order. Homogeneous differential equation. Scalar and vector fields, gradient divergence and rotor. Multiple integral: double and triple integral. Curve and surface integral.

Learning objectives: Achieving the necessary knowledge for bachelor level.

Learning outcome of the course: After the course the student will be able to:

- To understand and assimilate the basic concepts developed during the semester.
- To be able to work independently to solve its tasks, to verify the results and compare them.
- To be able to solve problems similar to previously solved ones and to describe and compare them.
- To be able to adopt key elements of universal mathematical language, to develop rigorist approach to work, precision of thought and make systematization of problems.

The required volume and amount of work (hours per semester 3+2, 9 ECTS)

Activity	Hour	Days / Week	A total
Lectures	3	15	45
Theoretical exercises / laboratory	2	15	30
Tutorial (practical work)	-	-	-
Contacts with the teacher / consultations	1	15	15
Field Exercises	-	-	-
Midterms, seminars	2	15	30
Homework	1	15	15
Self preparation time (at the library or at home)	2	15	30
Preparation for final exam	1	15	15
Time spent on assessment (tests, quizzes, final exam)	-	-	-
Projects, presentations, etc.	-	-	-
Total			180

Forms / methods of teaching: The course will be organized in the form of lectures and exercises. As a rule, lectures will be organized through presentations. Also, through conversation during lectures and exercises will be possible to deepen knowledge in certain themes of course.

The relationship between theoretical and practical study:

The theoretical part	Practical Part
50%	50%

Base literature for course:
Isak Hoxha, Matematika II, Prof.Dr. Abdullah Zejnullahu Matematika III, Prof.Dr. Sadri Shkodra Matematika III Prishtinë.
Additional literature: R.F. Larson, R. P. Hostetler, 1994, USA.

Course: Mechanics I

Content: In this course of mechanics the first part of the mechanics, in other words static problems are treated. For introduction of statics as natural science, the balance of the material objects by the action of forces is studied. Problems arise as two parts: static of rigid body in flat and static of rigid body in space.

Learning objectives: Introduction to the necessary basic knowledge of mechanics I (Statics) of the scientific disciplines of mechanics, for primary level, the scientific disciplines of mechanics.

Learning outcome of the course: After completing this course / subject / student will be able to recognize, understand and use basic concepts of statics, in order to more easily handle awaiting difficulties during and after these studies.

The required volume and amount of work (hours per semester 3+2, 6 ECTS)

Activity	Hour	Day	Week	A total
Lectures	3		15	45
Theoretical exercises / laboratory	2		15	30
Tutorial (practical work)				
Contacts with the teacher / consultations				6
Field Exercises				
Midterms, seminars				6
Homework				12
Self preparation time (at the library or at home)				22
Preparation for final exam				23
Time spent on assessment (tests, quizzes, final exam)				6
Projects, presentations, etc.				
Total				150

Forms / Methods of teaching: learning in the form of regular group with individual homework and seminar work.

The relationship between theoretical and practical study:

The theoretical part	Part practical
100%	0%

Base literature for course:

F. Jagxhiu: Mekanika II (kinematika), Prishtinë,1996.
F. Jagxhiu: MekanikaIII (dinamika), Prishtinë,1996.
Hajdin Berisha: Përmbledhje detyrash të zgjedhura nga Mekanika II, 2002.
EUROCODE-8: Design of Structures for earthquake resistance, CEN, Bruxelles, 2004.
Fajfar P., Osnove dinamike, FAGG, Ljubljana, 1980
http://www.answers.com/topic/mecanics

Course: Building Materials I

Content: General knowledge of properties: physical, mechanical, physic-mechanical and chemical properties of construction materials in general. Usage of the materials that are used as basic materials: stone, aggregate, clay materials and binders. Laboratory examinations of the construction materials properties. The application of specific materials and properties of these materials.

Learning objectives: Students are introduced to the first step of the application of building materials in construction engineering.
-To make students familiar with basic concepts of building materials in construction engineering
-To provide opportunity to students to fulfill their knowledge of the properties of construction materials in laboratory.

Learning outcome of the course:
-To know the relevant construction materials used in different periods of time.
-To recognize the physical, mechanical, physic-mechanical and chemical properties of building materials.
-To know how to use proper constructions materials in certain situations of building.
-To be able to approach the issue of technological developments in construction materials
-To know to instruct manufacturers of building materials to meet the conditions foreseen by the various standards.

The required volume and amount of work (hours per semester 2+2, 6 ECTS)

Activity	Hour	Day	Week	A total
Lectures	2	1	15	30
Theoretical exercises / laboratory	2	1	15	30
Tutorial (practical work)	8	2	1	8
Contacts with the teacher / consultations	1	1	15	15
Field Exercises	8	1	1	8
Midterms, seminars	2	2	2	4
Homework	1	8	8	8
Self preparation time (at the library or at home)	2	15	15	30
Preparation for final exam	8	3	3	24
Time spent on assessment (tests, quizzes, final exam)	2	2	2	4
Projects, presentations, etc.	2	1	1	2
Total	**38**	/	/	**163**

Forms / Methods of teaching
Regular teaching, in groups in lectures and in small groups in laboratory exercises and group work in workshops or the home office.

The relationship between theoretical and practical study:

The theoretical part	Part practical
60%	40%

Base literature for course:
1. N.Kabashi, Materialet Ndërtimore I, (ligjerata të autorizuara) FNA, Prishtinë.
2. F. Kadiu: Teknologjia e Materialeve të Ndërtimit, FIN, Tiranë.
3. Neil Jackson and Ravindra K. Dhir: Civil Enginering Materials.

Course: Measurement Techniques in Geodesy

Content: The classification of geodesy, the principles of geodesy, the linear geodetic measurements, angular geodetic measurements, geodetic measurements of height, accuracy of measurement and reconciliations, the coordinate system – projections, state geodetic networks, geodetic measurements of soil, geodetic data - cadastral plans.

Learning objectives: Tasks of geodesy in the implementation of construction works, preparation of geodesic foundations prior to beginning of the facility construction design, monitoring of changes in buildings over time.

Learning outcome of the course: To get knowledge for the bases of geodesy in the field, plans - maps, to know how to use instruments used in geodesy – theodelite, level, GPS etc. To know modern computerized techniques of drawing - AutoCAD and calculation - Excel. To learn techniques of following the objects from natural plans, to follow the deformation of objects during and after construction.

The required volume and amount of work (hours per semester 2 +2, 6 ECTS)

Activity	Hour	Day	Week	A total
Lectures	2	1	15	30
Theoretical exercises / laboratory	2	1	15	30
Tutorial (practical work)	4	2	2	8
Contacts with the teacher / consultations	1	1	15	15
Field Exercises	4	1	2	8
Midterms, seminars	2	2	2	4
Homework	1	7	7	7
Self preparation time (at the library or at home)	2	10	10	20
Preparation for final exam	8	3	3	24
Time spent on assessment (tests, quizzes, final exam)	2	2	2	4
Projects, presentations, etc.	2	1	1	2
Total	30			152

Forms / Methods of teaching: Regular teaching, in lectures, in groups,

The relationship between theoretical and practical study:

The theoretical part	Part practical
50%	50%

Base literature for course: Kamer Nela, Gjeodezia për Ndërtimtari, Damir Medak, Geodezija was Gradevinarsku, www. surveying for civil engineering.

Course: Probability and Statistics

Content: The course deals with the knowledge of probability theory and mathematical statistics, serving for help in gaining knowledge and prosecute the cases and the application of statistical knowledge in engineering.

Learning objectives: to acquire knowledge of probability and mathematical statistics necessary for applying mathematical concepts in the field of engineering.

Learning outcome of the course: After completing this course / subject / student will be able to use and to understand the notions of probability and mathematical statistics, so that they know how to get help from this aid apparatus in other cases where the probability and mathematical statistics needs to be used and then to apply it to concrete problems, especially when dealing with problems in the field of engineering.

The required volume and amount of work (hours per semester 2 +1, 3 ECTS))

Activity	Hour	Day	Week	A total
Lectures	2	15	15	30
Theoretical exercises / laboratory	1	15	15	15
Tutorial (practical work)				
Contacts with the teacher / consultations				8
Field Exercises				
Midterms, seminars				10
Homework				10
Self preparation time (at the library or at home)				25
Preparation for final exam				20
Time spent on assessment (tests, quizzes, final exam)				8
Projects, presentations, etc.				
Total				125

Forms / methods of teaching: lecture.

-The relationship between theoretical and practical study

The theoretical part	Part practical
66.66%	33.33%

Base literature for course: Zejnullahu A., F. Berisha, Mathematics III, 1997, Prishtinë. Sh. SOLO - The theory of probability and statistics.

Course: Building Structures

Contents: Relevant knowledge that will lead students to the solution of concrete problems and needs for building constructions that will develop student's skills for understanding and developing implementation plans for various types of the building objects based on standards and building codes, such as introduction to construction technology, projects, elementary constructive holders, constructive systems, constructive elements (foundation, wall, flat slab, stairs, roof), insulation, etc.

- **Learning objectives:**
-To provide students with basic knowledge about the concept of construction.
-Their ability to think constructively about buildings and
-Training to develop implementation plans for a construction.

Learning outcome of the course: Students- gain knowledge of architectural constructions and applicability of standards and codes in construction, - gain the ability to constructively think in devising and implementing plans during their implementation; - able to apply architectural projects and stable constructive, etc.

The required volume and amount of work (hours per semester 2 +2, 3 ECTS)

Activity	Hour	Day	Week	A total
Lectures	2	1	15	30
Theoretical exercises / laboratory	-	-	-	-
Tutorial	-	-	-	-
Contacts with the teacher / consultations	1	1	15	15
Field Exercises	-	-	-	-
Midterms, seminars	2	1	1	2
Homework	2	1	15	30
Self preparation time (at the library or at home)	9	1	3	27
Preparation for final exam	6	1	1	6
Time spent on assessment (tests, quizzes, final exam)	6	1	2	12
Projects, presentations, etc.	3	1	1	3
Total				125

Forms / Methods of teaching
Learning is regularly and lectures done in groups.

The relationship between theoretical and practical study:

The theoretical part	Part practical
60%	40%

Base literature for course: Ekstaktet e secilës teme të ligjeruar– skripta e Mësimdhënëses, Ilija Papanikolla, Konstruksionet Arkitektonike, 1&2, Tiranë dhe Djuro Peuliq, Konstruktivni Elementi Zgrada, Zagreb.

Course: Resistance of Materials I

Content: In this course of resistance general part (analysis of deformation and strain and link between them) and the analytical part (cutting force, among axial, geometric characteristics of plane figures, twisting and bending) will be addressing.

Learning objectives: Students will be introduced with necessary fundamentals of Resistance of Materials for level the first cycle of the scientific disciplines of Resistance of Materials I.

Learning outcome of the course: After completing this course / subject / student will be able to recognize, understand and use basic concepts and problems to the kinematics and dynamics, in order to handle much easier awaiting difficulties during and after this studies.

The required volume and amount of work (hours per semester 3+2, 7 ECTS)

Activity	Hour	Day	Week	A total
Lectures	*3*		*15*	*45*
Theoretical exercises / laboratory	*2*	-	*15*	*30*
Tutorial (practical work)	-	-	-	-
Contacts with the teacher / consultations				*7*
Field Exercises	-	-	-	-
Midterms, seminars				*9*
Homework				*20*
Self preparation time (at the library or at home)				*28*
Preparation for final exam				*28*
Time spent on assessment (tests, quizzes, final exam)				*8*
Projects, presentations, etc.				
Total				*175*

Forms / Methods of Teaching: Regular instruction in group form, with individual homework and seminar work.

The relationship between theoretical and practical study:

The theoretical part	Part practical
100%	0%

Base literature for course:

F. Jagxhiu: Rezistenca materialeve pjesa e parë, 1995.

F. Jagxhiu: Karakteristikat gjeometrike të figurave plane dhe të masës, Prishtinë 1978.
Williem A. Nash: Strength of Materials, Mc Graw-Hill, 1997.
Sherif Dunica: Otpornost materiala, Beograd, 1994.

Course: Mechanics II

Content: In this course of the mechanics will be covered the second part mechanics – kinematics and the third part - dynamics. For the presentation of kinematics, will be examined kinematics of the material point and kinematics of the material body. Dynamics course will be divided into: the dynamics of material point, the system dynamics and rigid body dynamics.

Learning objectives: Necessary knowledge of the kinematics and dynamics basis, for the level of the first cycle for the scientific disciplines of mechanics.

Learning outcome of the course: After completing this course / subject / student will be able to recognize, understand and use basic concepts and problems of the kinematics and dynamics, in order to handle difficulties much easier during and after these studies.

The required volume and amount of work (hours per semester 2 +2, 6 ECTS)

Activity	Hour	Day	Week	In total
Lectures	*2*		*15*	*30*
Theoretical exercises / laboratory	*2*		*15*	*30*
Tutorial (practical work)				
Contacts with the teacher / consultations				*6*
Field Exercises				
Midterms, seminars				*9*
Homework				*12*
Self preparation time (at the library or at home)				*28*
Preparation for final exam				*28*
Time spent on assessment (tests, quizzes, final exam)				*7*
Projects, presentations, etc.				
Total				*150*

Forms / Methods of teaching: Learning in the form of regular group, with individual homework and seminar work.

The relationship between theoretical and practical study:

The theoretical part	Part practical
100%	0%

Base literature for course: F. Jagxhiu: Mechanics II (Kinematika), Prishtinë, 1996.
F. Jagxhiu: Mekanika III (Dinamika) Prishtinë, 1996.
Hajdin Berisha: Përmbledhje detyra te zgjidhura nga Mekanika II, 2002.
Eurocode-8: Design of Structures for Earthquake Resistance, CEN, Bruxelles, 2004.
Fajfar P., Osnove dynamic, FAGG, Ljubljana, 1980.
http://www.answers.com/topic/mecanics

Course: Building Materials II

Content: General knowledge of integral components of concrete as a material. Concrete as building material, and its properties and characteristics. Mortar and its' properties and applications in constructions. Steel as construction material, its' properties and application. Light Metals. Timber as construction material. Thermal insulation and waterproofing materials. Bituminous materials.

Learning objectives: To introduce students with the basic properties of construction materials in construction engineering.
-To fulfill their knowledge of the properties of construction materials in laboratory with practical work
-To have information on the application of these materials in certain situations in facility construction.
Learning outcome of the course:
-To know the relevant construction materials used in different periods of time.
-To recognize the physical, mechanical, physic-mechanical and chemical properties of building materials
-To know how to use proper constructions materials in certain situations of building.
-To be able to approach the issue of technological developments in construction materials
-To know to instruct manufacturers of building materials to meet the conditions foreseen by the various standards.
The required volume and amount of work (hours per semester 2+2, 6 ECTS)

Activity	Hour	Day	Week	A total
Lectures	2	1	15	30
Theoretical exercises / laboratory	2	1	15	30
Tutorial (practical work)	8	2	1	8
Contacts with the teacher / consultations	1	1	15	15
Field Exercises	8	1	1	8
Midterms, seminars	2	2	2	4
Homework	1	8	8	8
Self preparation time (at the library or at home)	2	15	15	30
Preparation for final exam	8	3	3	24
Time spent on assessment (tests, quizzes, final exam)	2	2	2	4
Projects, presentations, etc.	2	1	1	2
Total	**38**	/	/	**163**

Forms / Methods of teaching: Regular teaching, in group lectures and in small groups in laboratory exercises and group work on work side or the home office.

The relationship between theoretical and practical study:

The theoretical part	Part practical
60%	40%

Base literature for course:
1. N.Kabashi, Materialet Ndertimore I, (ligjerata të autorizuara) FNA, Prishtinë.
2. F. Kadiu: Teknologjia e Materialeve të Ndërtimit, FIN, Tiranë.
3. Neil Jackson and Ravindra K. Dhir: Civil Enginering Materials.

Course: Numerical Methods

Content: The subject contains the following main parts: computer arithmetic, approximate methods for solving equalizations with one variable, numerical linear algebra, approximate methods for solving systems of linear equations, solving numeric derivatives and numeric integration.

Learning objectives: Acquisition of techniques for approximate solving of the equations with one variable, the approximate solution of systems of linear equations, solving numeric derivatives and numeric integration of the functions which in the practice are obtained in tabular form.

Learning outcome of the course: After completing this course / subject / student will be able to solve the various one variable equations with numerical methods, to solve systems of equations with numerical methods, to do numerical differentiation and numerical integration and to use them in specific problems related to the field of engineering.

The required volume and amount of work (hours per semester 2 +2, 6 ECTS)

Activity	Hour	Day	Week	A total
Lectures	2	15	15	30
Theoretical exercises / laboratory	2	15	15	30
Tutorial (practical work)				
Contacts with the teacher / consultations				8
Field Exercises				
Midterms, seminars				10
Homework				15
Self preparation time (at the library or at home)				25
Preparation for final exam				24
Time spent on assessment (tests, quizzes, final exam)				8
Projects, presentations, etc.				
Total				150

Forms / Methods of teaching: lecture

The relationship between theoretical and practical study:

The theoretical part	Part practical
50%	50%

Base literature for course: Qirko Margarita, Syti Hysko; Numerical Analysis, 2004, Tirana.

Subject (module) name: Environment Protection

Contain: The term environment and its compounds: the air, water soil and their pollution; Biodiversity and its risk. Threats and pressures: urbanism, noise, solid waste and chemicals, recycle – environmental dimensions. Human activity: energy, transport, industry, forestry and truism; Global challenge, climate changes, ozone layer weaknessing, acidification, impacts on material goods and on human health.

Aim of learning: - To inform students, with basic environmental, chemical, physical and environmental geological terms

- To implement steps and criteria of environmental protection, during design, reconstruction, space using and work means using (natural-climatic, producing technologic, design urbanity, criteria, etc.).
- To create new models of individual conduction to environment, to save it, as well as to actively participate, on solution of environmental problems, at local, regional and further level (think globally, act locally)

Subject learning outcomes:

- To collect and process relevant scientific data, from different sources, for actual environmental problems, at local and global level
- To explain human-environment relation (rural, urban, industrial), and list reasons of causing environmental crises, as well as solid waste management
- To implement urban environment principles, at human communities, kosovar environmental legislation as well as International convents on biodiversity, climate changes, etc.

Working necessary volume and amount:3+2, 9 ECTS

Activity	Hour	Days	Weeks	Totally
Lectures	2		15	30
Theoretical/laboratorial exercise				
Practical work				
Contact/consulting with lecturer	10			10
10	10		-	10
Colloquium, workshops	1			1
Home works				
Student own study time (library, home)	3		15	45
Final prepare of exam	12			12
Time spend in evaluation (test quiz, final exam)	4		-	4
Project, presentation, etc.	1		-	1
Total				113

Forms/ Methods of teaching :Traditional lecturing, interactive learning with student in center, working groups, discussions, debates, etc.

Evaluation forms: Traditionally, and after Bologna (intermediate evaluation)

Proportion between theoretical and practical part of study:

Theoretical part	Practical part
100 %	0 %

Basic literature used on subject:

1. D.A.Rozhaja, M. Jablanovic: Pollution and living environmental protection, Prishtina
2. F. Halili, A. Gashi & H. Ibrahimi (2007): Ecology of poluted environments
3. Group of authors & Halili F. (2010) "Green pack", Compound from field of environment education and sustainable development

Course: Construction Regulations

Content: Introduction to construction regulations. Construction projects and legal structure, documentation needed in building projects, contracts and contract terms; standardization of work and materials; construction law.

Learning objectives:

- Lessons on the regulations which are used in the field of construction and architecture.
- To inform students about the building regulation.
- To be able to see the practical implementation of building regulations.

Learning outcome of the course:
-Identify elements of the legal system in construction;
-Realize the importance of regulation in construction;
-To get familiar with laws and regulations necessary in construction projects;
-To access the issue of application of building regulations.

The required volume and amount of work (hours per semester 2+0, 3 ECTS)

Activity	Hour	Day	Week	A total
Lectures	2	1	15	30
Theoretical exercises / laboratory				
Tutorial (practical work)	8	2	1	8
Contacts with the teacher / consultations	1	1	15	15
Field Exercises	8	1	1	8
Midterms, seminars	2	2	2	4
Homework	1	8	8	8
Self preparation time (at the library or at home)	1	15	15	15
Preparation for final exam	4	2	2	8
Time spent on assessment (tests, quizzes, final exam)	2	2	2	4
Projects, presentations, etc.	2	1	1	2
Total	31			102

Forms / Methods of teaching
Regular instruction, lectures and groups in small groups on exercises and group work in seminars or homework.

The relationship between theoretical and practical study:

The theoretical part	Part practical
60%	40%

Base literature for course:

1 Rodiqi, Ilir (2004):'Menaxhimi i ndërtimit', FNA, UP.
2 Ligji i ndërtimit (2004).
3 Ligji i ndërtimit (2009, propozim).

Course: Soil mechanics

Contents: Classification and identification of soil quality, soil material phase, soil compaction, soil resistance to sliding, the strain distribution in soil, soil consolidation, soil holding capacity, stability of the descent.

Learning objectives - Introducing test of geomechanic and laboratory examinations and tests of the soil on the site "in situ" and enabling application of the concepts and basic techniques for designing and implementing applications of soil mechanics.

Learning outcome of the course: To know the execution of laboratory tests and tests of the evidence on the site, To know the interpretation of laboratory data reviews and field surveys, to know all methods of calculating used in the stability analysis, to know how to use geo-mechanical analyze software for **"Geo-mechanical Elaboration"** of the object in field.

The required volume and amount of work (hours per semester 3+2, 6 ECTS)

Activity	Hour	Day	Week	A total
Lectures	3		15	45
Theoretical exercises / laboratory	2		15	30
Tutorial (practical work)				
Contacts with the teacher / consultations	1		15	15
Field Exercises				
Midterms, seminars	2		2	4
Homework	1		15	15
Self preparation time (at the library or at home)	3		15	45
Preparation for final exam				15
Time spent on assessment (tests, quizzes, final exam)	1		10	10
Projects, presentations, etc.				
Total				179

Forms / Methods of teaching

Learning is the regular discourse shaped and midterms in groups. The classes with lectures, laboratory exercises and numerical, contacts with teacher, homework and self study.

The relationship between theoretical and practical study

The theoretical part	Part practical
60%	40%

Base literature for course: Ahmedi, F., Mekanika e Dherave, Universiteti i Prishtinës, Prishtinë, 1997, Nonweiller, E., TLA is temeljenje Mehanika Gradjevina, Zagreb, 1985, Braj, MD, Shallow Foundations, Bearing Capacity and settlement, Sacramento, 1999.

Course: Statics of Structures I

Content: The course of study of this subject analyzes full and truss holders under the influence of statistically certain static loads. In particular, special attention is given to construction of diagrams MTN. Construction of the impact lines with static and kinetic methods are studied. Construction of diagrams of displacement and determination of generalized displacement is analyzed. At the end of course, affecting lines of the generalized displacement for the two types of containers are studied.

Learning objectives: This course is of particular importance in enabling the student for further work on professional subjects. The base of knowledge which is gained in this course allows the student to be more effective in the dimensioning and construction of steel and concrete.

Learning outcome of the course: Special base of course is the "rapid" construction of MTN impacts and that made him to be perfect in the profession itself. As a special lesson is the application of knowledge to the influential lines that apply mostly to constructions of bridges. Other educational entities such as generalized displacements, impact lines for the generalized displacements are also presented. All those have great importance for the engineering constructions which in the context of this course a student takes the basis for further work at his own as the construction engineer.

The required volume and amount of work (hours per semester, ECTS)

Activity	Hour	Day	Week	A total
Lectures	3	1	15	45
Theoretical exercises / laboratory				
Tutorial (practical work)				
Contacts with the teacher / consultations	2	2	15	60
Field Exercises				
Midterms, seminars				2
Homework				5
Self preparation time (at the library or at home)				
Preparation for final exam				
Time spent on assessment (tests, quizzes, final exam)	4	2		8
Projects, presentations, etc.				
Total				128

Format / Methods of teaching: The study of this course is intensive where lecture held once a week while the exercises are held in groups and each group of not more than 25 students.

The relationship between theoretical and practical study:

The theoretical part	Part practical
100%	

Base literature for course:

- Skripta "Statika e Kontruksioneve II", Fatos Pllana.
- "Statika e Ndërtimit" I, II and II, Skender Skender.
- "Teoria e Strukturave", Niko Lako.
- "Matricna analysis konstrukcije us," Vladimir Simonce.

Course: Resistance of Materials II

Content: This course Resistance of Materials II, will deal with (1) the problem of stability of pressed bars, (2) the problems of composed strain, (3) eccentric pressure, (4) with identification of the nucleus of transverse cutting, (5) the problem of the theory of second order. Tensor calculus is presented. The work of internal forces, deformation energy is analyzed. The application of energy methods for all cases of strains will also be analyzed.

Learning objectives: Students will be introduced with necessary fundamentals of Resistance of Materials for level the first cycle of the scientific disciplines of Resistance of Materials.

Learning outcome of the course: After completing this course / subject / student will be able to recognize, understand and use basic concepts and problems to the kinematics and dynamics, in order to handle much easier awaiting difficulties during and after this studies.

The required volume and amount of work (hours per semester 2+2, 6 ECTS)

Activity	Hour	Day	Week	A total
Lectures	2		15	30
Theoretical exercises / laboratory	2		15	30
Tutorial (practical work)				
Contacts with the teacher / consultations				6
Field Exercises				
Midterms, seminars				9
Homework				12
Self preparation time (at the library or at home)			]	28
Preparation for final exam				28
Time spent on assessment (tests, quizzes, final exam)				7
Projects, presentations, etc.				
Total				150

Forms / Methods of teaching: learning in the form of regular group with individual homework and seminar work.

The relationship between theoretical and practical study:

The theoretical part	Part practical
100%	0%

Base literature for course:

F. Jagxhiu: Rezistenca materialeve pjesa e parë, 1995.

F. Jagxhiu: Rezistenca e materialeve pjesa e dytë, 2000.

Williem A. Nash: Strength of Materials, Mc Graw-Hill, 1997.

Sherif Dunica: Otpornost materiala, Beograd, 1994.

Course: Concrete Technology

Content: General knowledge about constituent concrete components: aggregate, cement, water, chemical additives, mineral supplements. Meeting the requirements for use on concrete, in particular aggregate. Design of various mixtures of concrete by class and other requirements. Properties of wet concrete. Properties of hardened concrete. Deformable properties and specific properties of concrete. Influence of conditions and factors in the longevity of concrete. Specific types.

Learning objectives: To introduce students with the integral components of concrete and conditions that should be met by them. Mix design of concrete based on EN 206-1. Mechanical, elastic deformable and reologic properties. Transportation, seasoned in action and maintenance of concrete. Special concretes their features and application.

Learning outcome of the course:

- Know how to recognize the constituent components of concrete and the conditions they must meet
- To know about the design of concrete based on the requirements set
- Know how to make examinations of the wet and hardened concrete and interpret the results
- Know to guide the manufacturers of concrete for the general and specific conditions of concrete production based on the standard.

The required volume and amount of work (hours per semester 2 +2, 6 ECTS)

Activity	Hour	Day	Week	A total
Lectures	3	1	15	45
Theoretical exercises / laboratory				30
Tutorial (practical work)				
Contacts with the teacher / consultations				
Field Exercises				
Midterms, seminars	3	1	3	9
Homework	2	1	15	30
Self preparation time (at the library or at home)	2	1	15	30
Preparation for final exam	2	7	1	14
Time spent on assessment (tests, quizzes, final exam)	4	2	2	8
Projects, presentations, etc.	2	1	1	2
Total				168

Forms / Methods of teaching: of intensive combination of regular teaching (lectures and exercises 15 weeks 8 weeks) - combined with videoprojection.

The relationship between theoretical and practical study:

The theoretical part	Part practical
60%	40%

Base literature for course:

- Bazat e betonit të armuar, Hamdi Sylejmani, Nejazi Hoxha dhe Kadri Morina
- EC1, EC2
- Rregulloret për kontruksionet prej betoni.
- Tekstet për Konstruksionet prej betoni në të gjitha gjuhët botërore (numri i pakufizuar)

Subject name: Fluid mechanics

Contain: In first chapter will be explore fluids dimensions and features. Second chapter, will focus on fluid statics, especially on Pascal low and hydrostatic equation of fluids, than hydrostatic forces on straight and curved area, as well as intensity, orientation and direction of hydrostatic pressure force. Fluid cinematic with flow classification, continuity equation (on one, two and three dimensions), velocity measurement. On fluid dynamics, will explore Euler and Bernoulli equations, and application of Bernouli equation for real fluid. Flow measurement, laminar and turbulent flows, as well as Darcy-Weisbach formula. Also Moody diagram will be given.

Aim of learning: The aim of subject is to introduce students with fluid definition and its properties. Students will learn to calculate hydrostatic pressure, intensity, direction and its position on different surfaces. Further, they will be introduced to fluid cinematic and dynamic principles, and their application on practical problems.
Subject learning outcomes: student will know fluids properties and its application. Also students will be able to apply Bernoulli Equation, in order to solve fluid mechanics problems as well as solution of many practical problems able to know, understand, and to use correctly basic terms of construction science, in order to stand as easy as possible, duties which are coming along basic studies.

Working necessary volume and amount: 2+2, 5 ECTS

Activity	Hour	Days	Weeks	Totally
Lectures	2		15	30
Theoretical/laboratorial exercise	2		15	30
Practical work	1		1	1
Contact/consulting with lecturer	1		5	5
Field exercise	2		2	4
Colloquium, workshops	2		3	6
Home works	2		4	8
Student own study time (library, home)	2		15	30
Final prepare of exam				
Time spend in evaluation (test quiz, final exam)	2		3	6
Project, presentation, etc.	1		1	1
Total				100

Forms/ Methods of teaching : Regular learning with theoretical and laboratorial part. Also, there are planned exercise and home work, which will be considered on final student evaluation
Proportion between theoretical and practical part of study:

Theoretical part	Practical part
70 %	30 %

Basic literature used on subject:
Prof. Dr. Zekirija Idrizi "Fluid mechanics"
Potter, Merle and Wiggert, David, "Mechanics of Fluids", Second Edition, Prentice Hall.,1997
Mott, Robert M., "Applied Fluid Mechanics", Fifth Edition, Prentice Hall., 2000

Subject name: Civil Engineering Geology

Contain: Overall knowledge, for The Earth Solar system. Minerals and rocks – their classification. Geo chronology – Geological Ages. Epyrogenic and oregenic movements. Geological ground structures. Plates tectonic. Tectonic disorders of rocks. Ground waters and their impacts on civil engineering. Geological research for needs of engineering works implementation and for other structures. Rocks geological-engineering classification. Basic characteristics of several types of rocks and soils in relation with construction.

Aim of learning: With different methods of geological researches, are achieved results, which afford civil engineers, on easy and overall way of solving problems during construction of: dams, tunnels, roads and other water structures. Therefore, the aim of this curs, is to introduce to civil engineers students, phenomena and geological processes that happened on Earth surface and crust.

Subject learning outcomes: At the end of curs, students will be able to: explain overall geodesic, geophysical and geochemical ground characteristics; to explain for phenomena of geological endogen and exogenous processes; to identify and classify minerals and rocks, on base of: their physic-chemical properties, structures, textures, etc., to classify rocks and soil on geologic-engineering aspects.

Working necessary volume and amount: 2+2, 5 ECTS

Activity	Hour	Days	Weeks	Totally
Lectures	2		15	30
Theoretical/laboratorial exercise				
Practical work				
Contact/consulting with lecturer	1		10	10
Field exercise	6		1	6
Colloquium, workshops	1		3	3
Home works				
Student own study time (library, home)	1		12	12
Final prepare of exam	10			10
Time spend in evaluation (test quiz, final exam)	1		3	3
Project, presentation, etc.	1		1	1
Total				75

Forms/ Methods of teaching : Regular learning

Lectures – power point presentation, discussions; work groups, test, workshops

Proportion between theoretical and practical part of study:

Theoretical part	Practical part
80 %	20 %

Basic literature used on subject:

1. Islam Fejza., 2006. Civil engineering geology (authorized script lectures)
2. A.E.KEHEW, 2006, "Geology for Engineers & Environmental Scientist" 3rd Edition Prentice Hall, ISB
3. Hamblin, W.K, and Christiannsen, E.H, 2004. Earth's Dynamic systems, 10-th edition, Edition Prentice

Course name: Road design

Contain: Basics of road design
Aim of learning: Obtaining of basic knowledge, for planning, designing and managing of roads
Subject learning outcomes: At the end of curs, students will know process of road planning, designing and managing

Working necessary volume and amount: 2+2, 3 ECTS

Activity	Hour	Days	Weeks	Totally
Lectures	2		15	30
Theoretical/laboratorial exercise	2		15	30
Practical work				
Contact/consulting with lecturer	0.3		10	3
Field exercise				
Colloquium, workshops	2		15	30
Home works				
Student own study time (library, home)	3		15	30
Final prepare of exam	1		7	7
Time spend in evaluation (test quiz, final exam)				
Project, presentation, etc.	0.5		5	5
Total				135

Forms/ Methods of teaching : Regular learning , group work

Proportion between theoretical and practical part of study:

Theoretical part	Practical part
60 %	40 %

Basic literature used on subject:
Prof. Dr. Naim Hasani "Technical guidance for road engineering, Prishtine 2008
Prof Dr. Naim Hasani, Road design, Prishtine 2010

Course name: Concrete structures

Introduction, physical-mechanical properties of reinforcement concrete composing materials, theoretical basis of calculation, dimensioning: sections under bending, sections under central pressure, sections under central pull; sections that works under eccentric pressure (big and small eccentricity); sections that works under eccentric pull (big and small eccentricity), sections that work under shear forces (transversal forces); sections that work under torsion, short element, dimensioning on penetration, local stress

Aim of learning: Introduction concrete and reinforcement concrete contain, concrete structures section treatment and calculation.

Subject learning outcomes:

- To know to analyse, elements reaction, under action of different forces;
- To know to dimensioning concrete elements, under load acting
- To know to dimensioning concrete elements, under shear forces & torsion

Working necessary volume and amount: 3+2, 6 ECTS

Activity	Hour	Days	Weeks	Totally
Lectures	3	1	15	45
Theoretical/laboratorial exercise				30
Practical work				
Contact/consulting with lecturer				
Field exercise				
3	3	1	3	9
Home works	2	1	15	30
Student own study time (library, home)	2	1	15	30
Final prepare of exam	2	7	1	14
Time spend in evaluation (test quiz, final exam)	4	2	2	8
Project, presentation, etc.	2	1	1	2
Total				168

Forms/ Methods of teaching : Combination of regular intensive lecturing 8 weeks, plus exercise 15 weeks, also combined with presentation

Proportion between theoretical and practical part of study:

Theoretical part	Practical part
60 %	40 %

Basic literature used on subject:

- Basics of reinforcement concrete, Hamdi Sylejmani, Njazi Hoxha and Kadri Morina
- EC 1, EC 2
- Regulation for concrete structures
- Books for Concrete structures, on all world languages

Course name: Hydraulics

Contain: Hydrostatic Lows, Hydro-dynamic lows, Open and closed channel flow, water structures and ground waters.
Aim of learning: Basic of lows of static and moving water

Subject learning outcomes: means and evaluate hydrostatic problems at water structures, calculate hydrostatic pressure, means and evaluate hydro dynamic problems, calculate: flows, water movement velocity at water structures and their dimensioning (channels, waterworks, weirs and groundwater).

Working necessary volume and amount: 3+2, 6 ECTS

Activity	Hour	Days	Weeks	Totally
Lectures	3	1	14	45
Theoretical/laboratorial exercise	2	1	14	30
Practical work	3	5	1	15
Contact/consulting with lecturer	0.1	5	14	14
Field exercise				
Colloquium, workshops	1	1	3	3
Home works	2	1	14	28
Student own study time (library, home)	3	1	14	42
Final prepare of exam	3	7	1	21
Time spend in evaluation (test quiz, final exam)	1	1	3	3
Project, presentation, etc.	1	1	1	1
Total				200

Forms/ Methods of teaching : Regular learning , group work

Proportion between theoretical and practical part of study:

Theoretical part	Practical part
60 %	40 %

Basic literature used on subject:
Lectures from book Hidraulics, Isuf Reçi, Tirana
ROOSSERT,. R. Hydraulik im Wasserbau, Verlag Oldenbourg

Course name: Hydrology

Contain: Water balance elements analyse, Precipitation, Flows, Evapotranspiraion, Hydrometry, Correlative relation, Hydrological Prediction.

Aim of learning: Basic of Hydrology

Subject learning outcomes: To know hydrological measurement equipment, to select measurement equipment and methods, to select methods of data estimation, and to process hydrological data for determined problems.

Working necessary volume and amount: 3+2, 6 ECTS

Activity	Hour	Days	Weeks	Totally
Lectures	2	1	14	28
Theoretical/laboratorial exercise	2	1	14	28
Practical work	3	5	1	15
Contact/consulting with lecturer	0.1	5	14	14
Field exercise				
Colloquium, workshops	1	1	3	3
Home works	1	1	14	14
Student own study time (library, home)	2	1	14	28
Final prepare of exam	2	7	1	14
Time spend in evaluation (test quiz, final exam)	1	1	3	3
Project, presentation, etc.	1	1	1	1
Total				150

Forms/ Methods of teaching : Regular learning , group work

Proportion between theoretical and practical part of study:

Theoretical part	Practical part
60 %	40 %

Basic literature used on subject:

Dr. Naim Hasani: Lecturers and exercise from Hydrology
B. Shehu dhe K. Karanxha: Engineering Hydrology I, edited in Tirana
Maniak: Hydrologie und Wasserwirtschaft

Course name: Water power use

Contain:

1- Introduction to water power use course
2- Basic theoretical meanings of Water power use course
3- Hydrological analysis of useful water resources and energetic potential, chronographs, duration curve, weekly, monthly, seasonally, yearly and multiyear flow balance; analytic and graphic methods of flow calculation
4- Calculation and dimensioning of projected water bodies.

Aim of learning: Evaluation of water energetic resources, of cachment area; Calculation of river water power, and of water power plant; Preliminary design of water power system

Subject learning outcomes: - Student should know to estimate water resources
- Student should calculate energetic source of river basin
- Student should design a water power use system

Working necessary volume and amount: 3+2, 6 ECTS

Activity	Hour	Days	Weeks	Totally
Lectures	3	1	15	45
Theoretical/laboratorial exercise	2	1	15	30
Practical work			1	
Contact/consulting with lecturer	1	1	15	15
Field exercise	4	1	1	4
Colloquium, workshops	0	0	0	0
Home works	4	5	5	20
Student own study time (library, home)	2	15	15	30
Final prepare of exam	4	5	5	20
Time spend in evaluation (test quiz, final exam)	2	2	2	4
Project, presentation, etc.	1	2	2	2
Total				150

Forms/ Methods of teaching : Regular learning , group lectures and exercise work, sight visits, workshops

Proportion between theoretical and practical part of study:

Theoretical part	Practical part
70 %	30 %

Basic literature used on subject:

Lecturers script of Prof. Dr. Sylejman Daka
Water power use I, II, Prof. Dr. Branislav Georgevich

Course name: Geotechnics of water structures

Contain: Introduction, rocks mechanics, deformable rocks properties, determination of deformable characteristics, Shear resistance rock test, Laboratorial tests of shear resistance, Condition of secondary stress, on plasticity zone, Calculation of supporting ability of rock body, Program of geological researches, Rocks injection

Aim of learning: Basic of Hydrology

Subject learning outcomes: To know determination of deformable rock body parameters, with laboratorial test and field test "in situ", To know to calculate supporting ability, primary stress and extension of secondary stress of rock body, to know to select proper injection of rock body, on case of water structures foundation.

Working necessary volume and amount: 2+2, 3 ECTS

Activity	Hour	Days	Weeks	Totally
Lectures	2		15	30
Theoretical/laboratorial exercise	1		15	15
Practical work				
Contact/consulting with lecturer	1		10	10
Field exercise	1		10	10
Colloquium, workshops	2		5	10
Home works	2		10	20
Student own study time (library, home)	2		15	30
Final prepare of exam				20
Time spend in evaluation (test quiz, final exam)	1		15	15
Project, presentation, etc.				
Total				150

Forms/ Methods of teaching : Regular learning , group lecturing and colloquiums. Lecturers, numerical exercise and laboratorial work, conversation with lecturer, home works as well as self study.

Proportion between theoretical and practical part of study:

Theoretical part	Practical part
60 %	40 %

Basic literature used on subject:

- Orana, Xh: Geotechnical works – script, 2000/2011
- Nonveiler, E.: Soil injection – Theory and practice, Scholl Book Zagreb, 1989

Course name: Metallic structures I

Contain: Method of steel production, steel and fabricated articles types. Basics of metal structures calculation. Unit connection tools of metallic structures, connection with simple bolts, connection with high quality bolts, connections with welding. Calculation and construction of unit connections with bolts and welding. Calculation and construction of truss bar connection, with bolts and welding. Calculation of bars loaded with axial pulling or pushing force. Dimensioning and construction of welded beams.

Aim of learning: Student should obtain overall knowledge for metallic structures units. Student should obtain sufficient knowledge to design a metallic structure as a whole.

Student should know well dimensioning of units – pieces of metallic structure, as well as calculation of connections of these units with proper connectors (bolts or welding)

Subject learning outcomes:

- Student should know to do dimensioning of these units according to maximal static loads (MTN)
- Should know to calculate unit continuity and connections between them, to check the stability of each unit and of whole structure

Working necessary volume and amount: 3+2, 6 ECTS

Activity	Hour	Days	Weeks	Totally
Lectures	3	15	15	45
Theoretical/laboratorial exercise	2	15	15	30
Practical work				
Contact/consulting with lecturer	1	8	8	8
Field exercise				
Colloquium, workshops	2	2	2	4
Home works	2	8	8	16
Student own study time (library, home)	2	15	15	30
Final prepare of exam	4	3	3	12
Time spend in evaluation (test quiz, final exam)	4	1	1	4
Project, presentation, etc.	2	1	1	2
Total	22			150

Forms/ Methods of teaching : Lecturing, numerical exercises, discussion during group lectures and exercise

Proportion between theoretical and practical part of study:

Theoretical part	Practical part
100 %	0 %

Basic literature used on subject:

- Basics of metal structures, Molosavljevic, Radojkovic & Kuzmanovic
- Metal structures I & II, Boris Androic, Darko Dujmovic, Ivica Dzeba)
- Handbook of Structural Engineering (editor in chef aW.F.CHEN)
- Euro cod 1 & 3 norms

Course name: Water treatment

Contain: Water needs, water intake, prepare, distribution, evacuation and its treatment
Aim of learning: Basic knowledge for supply, evacuation and treatment of water.
Subject learning outcomes: To know water needs, to know the problem of water evacuation and treatment, to set problems in reasonable form, to solve problems in models form, to predict developments for economic needs, security, environment and use.
Working necessary volume and amount: 3+2, 6 ECTS

Activity	Hour	Days	Weeks	Totally
Lectures	2	1	14	28
Theoretical/laboratorial exercise	2	1	14	28
Practical work	3	5	1	15
Contact/consulting with lecturer	0.1	5	14	14
Field exercise				
Colloquium, workshops	1	1	3	3
Homework	1	1	14	14
Student own study time (library, home)	2	1	14	28
Final prepare of exam	2	7	1	14
Time spend in evaluation (test quiz, final exam)	1	1	3	3
Project, presentation, etc.	1	1	1	1
Total				150

Forms/ Methods of teaching : Regular group lecturing
Proportion between theoretical and practical part of study:

Theoretical part	Practical part
60 %	40 %

Basic literature used on subject:
Dr. Naim Hasani Lectures and exercise on Water treatment
Prof. Dr. Sylejman Daka, Water supply, Prishtina

Course name: Water structures

Contain: First part of course will focus generally on water structures and their classification. Reservoirs and their volumes, also will be given main factors on dam type selection, main properties, locations and identification of dam construction material. Filtration pressure through dam foundation and dam body, and its impact on dam stability. Main types of dams, and exactly local material dam and its subtypes, concrete heavy dams, concrete light dams, and dams with contrafors. Also part of lectures will focus on dams security and methods for calculation of dam stability

Aim of learning: Course aim is to offer to students basic knowledge of dams and its characteristics. Also they will be introduced with structure, design and function of dams. Students will obtain knowledge on dams security and theirs maintenance as well as application of hydrological methods on design and security of dams.

Subject learning outcomes: By the end of this course, students will be able to analyze and evaluate dams, according to scientific and engineering perspective. They could than evaluate dam types and their application on different locations, as well as to evaluate dam security in front of external factors.

Working necessary volume and amount: , 4 ECTS

Activity	Hour	Days	Weeks	Totally
Lectures	2		15	30
Theoretical/laboratorial exercise	2		15	30
Practical work	1		5	5
Contact/consulting with lecturer	2		2	4
Field exercise	2		3	6
Colloquium, workshops	2		4	8
Homework	2		15	30
Student own study time (library, home)	2		3	6
Final prepare of exam	1		1	1
Time spend in evaluation (test quiz, final exam)	1	1	3	3
Project, presentation, etc.	1		1	1
Total				121

Forms/ Methods of teaching : Regular lecturing, with theoretical, laboratorial and practical part on water structures on spot. Also, course contains development of exercise and homework which will be included at final exam. Students will be engaged on workshops topics and work groups.

Proportion between theoretical and practical part of study:

Theoretical part	Practical part
70 %	30 %

Basic literature used on subject:

1. Prof. Dr. Zekirija Idrizi "Objektet hidroteknike"
2. Johnston, A., and Millmore, J., "An Engineering Guide to the Safety of Embankment Dams"., Building Research Establishment, 1999.
3. U.S. Army Corps of Engineers., Earth and Rock Fill Dams: General Design and Construction Considerations", 2004.

Course: Building organization and technology

Content: In this course are taught the principles of work organization in construction including: the basics of work organization and leadership, regulation of plant, construction technology, bidding and contracting processes, and interpersonal aspects of the construction project cycle.
Learning objectives: To present schedule contemporary knowledge about the organization of construction. Generalized access where are included all aspects of building organization at the level of work site and construction project.

Learning outcome of the course: To get familiar with the nature of construction works, project cycle of the construction and construction enterprise organization.
-To get familiar with construction processes on site by visits in person.
-To develop dynamic time and resource plans.
-To manage projects and construction contracts.
-To develop group work.

The required volume and amount of work (hours per semester 2+2, 3 ECTS)

Activity	Hour	Day	Week	A total
Lectures	2	1	15	30
Theoretical exercises / laboratory				
Tutorial (practical work)	8	2	1	
Contacts with the teacher / consultations	1	1	15	15
Field Exercises	8	1	1	8
Midterms, seminars	2	2	2	4
Homework	1	8	8	8
Self preparation time (at the library or at home)	1	15	15	15
Preparation for final exam	8	3	3	24
Time spent on assessment (tests, quizzes, final exam)	4	2	2	4
Projects, presentations, etc.	2	1	1	2
Total	**31**	/	/	**102**

Forms / Methods of teaching
Regular teaching, in groups in lectures and in small groups in laboratory exercises and group work in workshops or the home office.

The relationship between theoretical and practical study:

The theoretical part	Part practical
60%	40%

Base literature for course:
1. Rodiqi I.: 'Menaxhimi i ndërtimit', FNA, PR, 2004
2. Rodiqi I.: OTN- Përmbledhje detyrash (script), 1993.