UNIVERSITY OF PRISHTINA
"HASAN PRISHTINA"

FACULTY OF CIVIL ENGINEERING

DEPARTMENT CONSTRUCTION – MSc.

2012 – 2014

9.2 Study Program for Constuction – Master Level

Application Form for Study Program Accreditation

Description (name) of the institution	**Faculty of Civil Engineering and Architecture** **Department of Civil Engineering**
Description (name) of the academic programme	**Study Program: Constructions**
NFQ Level (BA, MA, PhD, doctorate programme, university course)	**Level7** **MA**
Academic degree or certificate, spelled out in full and in abbreviated form	**Master of Civil Engineering-Study Program: Constructions** **Msc. Civil Engineering**
Profile of the academic programme / Scientific position	**Constructions**
Target group	**The kandidates which have finished the Bachelor leve of Study**
Minimum period of study	**Minimum 2 years of study**
Type, structure and cycle (full time or part time)	**Full time present**
Number of ECTS	120 ECTS , 60 ECTS , one year
Programm (short overview)/Courses	**Obligative:** 1. Theory of Slabs and Shells 2. Steel Constructions III 3. Concrete Constructions III 4. Dynamic of Structures 5. Presstresed Concrete 6. Bridges

	Elective: 1. Wood Constructions II 2. Polymer and Bituminous Materials 3. Mathematical methods in engineering 4. The Method of Finite Elements 5. Writing skills and research methodology 6. Prefabricated elements of Concrete structures 7. Light steel constructions 8. Theory of plasticity 9. Special Foundations 10. Nonlinear analyses of structures 11. Stability of structures 12. Concrete Constructions IV 13. Examinations of Structures 14. Design of Steel Bridges 15. Design of Concrete Bridges 16. Earthquake Engineering 17. Special Structures 18. Repairing and strengthening the existing structurs 19. Masonry Structures
Number of student places	150 students
Person in charge of the academic programme	Prof.dr. Musa Stavileci,
Scientific/artistic staff (number per staff category)	10 professors and 7 assistants
Tuition fees	Acording the fee from UP 250 Euro /semester

Goal and profile of Study Program: Constructions - Master Level

- To deep the knowledge in study field offer in this study
- To offer the adequate skilled people for Kosovar work trade and also for manage and solve the technical problems in civil engineering.
- To offer the adequate solutions for solve the problems in civil engineering
- To acquired the knowledge for continuing study or research works for PhD level.

Learning Outcomes

- To be familiar with civil engineering fields in different structures.
- To apply the Theoretical knowledge in practical and experimental civil engineering works.
- To know to solve the different problems based on the knowledge of science and to offer the adequate methods for solving the problems.
- With the level of knowledge to help on the improving the civil engineering works adequate requested Standards.

Study Program relation with leading principles of Institution

Study program Constructions prezent the base of study in Department of Civil Engineering and is on the orientation with the mission for development of Faculty, adequate with the main principle of management of institution.

Study program level

This study program is a program of level 7 based on the NFQ, adequate the Master Level

Conditions for admission of students and selection procedures

The selection of applicants is based on the following criteria:

- The students with GPA ≥ 7.5 , directly without the entry exam and ranking till the request number
- The students with GPA < 7.5 will submit the entry exam, to complete the free spaces , till the request number.
- The ranking will be for the request number.

Title of academic degree

Master of Civil Engineering-Study program: Constructions

Exam Regulation

is based on the Rules of Bachelor Study (ref.234/1 , date 10.03.2011) and Rules for Master (ref 145/1, date 02.07.2010). The extract of presented rules are such the additional materials in annexes.

Diploma Supplement

– in UP is not yet implementing the diploma Supplement

Study form, structure and duration

The study in study program: Constructions, for the Master Level are the regular study with the presence of the students in lectures and exercises. The Courses are organized in semesters and years, and the minimum durations of study is 2 years.

International comparability of study program and academic degree

The study program Construction for the Master Level is abort 80 % comparable with the same study program in: University of Zagreb-Faculty of Civil Engineering.

Study plan :

First year – First Semester					
Nr.	**Course**	**hours**	**ECTS**	**Obligative**	**Lecturer**
MKI01.	Theory of Slabs and Shells	3+2	6	O	Prof.dr.Musa Stavileci
MKI02	Steel Constructions III	2+2	6	O	Mr.sc.Faik Hasani,lecturer
MKI03	Concrete Structures III	2+2	6	O	Mr.sc.Kadri Morina, lecturer
	total	**13**	**18**		
	Course	**hours**	**ECTS**	**Elective**	**Lecturer**
MKI04	Glued laminated timber structure II	2+2	6	E	Prof.ass.dr.Florim Grajcevci
MKI05	Polymer and Bituminous Materials	1+1	3	E	Prof.asoc.dr.Naser Kabashi
MKI06	Mathematical methods in engineering	2+2	3	E	Prof.dr.Abdullah Zejnullahu
MKI07	The Method of Finite Elements	2+1	3	E	Prof.dr.Musa Stavileci
MKI08	Writing skills and research methodology	2+0	3	E	Prof.dr.Musa Stavileci

First year – Second Semester					
Nr.	**Course**	**hours**	**ECTS**	**Obligative**	**Lecturer**
MKII01	Dynamic of Structures	3+2	6	O	Prof.dr.Musa Stavileci
MKII02	Presstresed Concrete	2+2	6	O	Mr.sc.Kadri Morina, lecturer
MKII03	Bridges	3+0	6	O	Mr.sc.Shaban Perjuci,lecturer
	total	**12**	**18**		
	Course	**hours**	**ECTS**	**Elective**	**Lecturer**
MKII04	Prefabricated elements of Concrete structures	2+2	3	E	Mr.sc.Kadri Morina, lecturer
MKII05	Light steel	2+2	3	E	Mr.sc.Faik

	Constructions				Hasani,lecturer
MKII06	Theory of plasticity	2+2	3	E	Prof.ass.dr.Misin Misini
MKII07	Spetial Foundations	2+2	3	E	Prof.dr.Fikret Ahmedi
MKII08	Nonlinear analyses of Structures	2+2	3	E	Prof.ass.dr.Fatos Pllana
MKII09	Stability of Structures	2+2	3	E	Prof.dr.Musa Stavileci

Second Year – Third Semester					
Nr.	**Course**	**hours**	**ECTS**	**Obligative**	**Lecturer**
/	**/**	**/**	**/**	**/**	**/**
Nr.	**Course**	**hours**	**ECTS**	**Elective**	**Lecturer**
MKIII01	Concrete Structures IV	2+3	6	E	Mr.sc.Kadri Morina, lecturer
MKIII02	Examinations of Structures	2+2	6	E	Prof.asoc.dr.Naser Kabashi
MKIII03	Design of Steel Bridges	1+3	6	E	Mr.sc.Shaban Perjuci,lect/ Mr.sc.Ali Muriqi
MKIII04	Design of Concrete bridges	1+3	6	E	Mr.sc.Shaban Perjuci,lect.
MKIII05	Earthquake Engineering	2+2	6	E	Prof.ass.dr.Misin Misini
MKIII06	Special Structures	2+2	6	E	Prof.ass.dr.Florim Grajcevci
MKIII07	Repairing and strengthening the existing structurs	2+2	6	E	Prof.asoc.dr.Naser Kabashi/ prof.ass.dr.Misin Misini
MKIII08	Masonry Structures	2+2	6	E	Prof.ass.dr.Florim Grajcevci

Second Year – Forth semester					
Nr.	**Course**	**hours**	**ECTS**	**Obligative**	**Lecturer**
MKI V01	Diploma degree	/	30	O	
	total	**/**	**30**		

Name of Course: THEORY OF SLABS AND SHELLS

Content: The course is devided in two main parts: Theory of flexure of thin slabs and theory of shells. In first part are rectangular slabs and circular slabs. In second part are analyses the rotative shells and cylindrical rotative shells and also the general forms.

The aim of learning: Information with the basic knowledge in specified field of slabs and shells.

Learning Outcomes: After the finished the course student will be possible to know; to understand and to used in properly way to use the basic knowledge of engineering science and in specified fields in slabs and shells for continuing the next step of studies.

Volume and engagement of works: 3+2, 6 ECTS

Activity	Hours	Day	week	Total
Lecture	3		15	45
exercises/ Laboratory	2		15	30
Practical work				
Contact with lecturer / consultation				8
Field practice				4
Tests and seminars				4
Home work				10
Independent study (library or at home)				30
Preparing for final exam				20
The time presented during the evaluation (tests; quiz and final exam)				8
Projects , presentation and ect				
Total				159

Forms/ Learning Methods: Ordinary learning in groups, individual home works and individual seminars, site visit of buildings under constructions.

Ratio between the and practical part:

part	Practical part
100%	0%

Base literature for course :

Musa Stavileci: Teoria e sistemeve sipërfaqësore, UP, FNA, Prishtinë, 1997
Stavileci M.: Teoria e sistemeve sipërfaqesore – detyra të zgjidhura, UP, FNA Prishtinë, 1997
Girkman K.: Flachentragwerke, Wien, 1959
Timoshenko S.: Theory of plates and Shells, New York,1965

Name of Course : STEEL CONSTRUCTIONS III

Content
Introduction , history of tall metallic buildings; Choice of tall building base form ; foundations of tall buildings : flat slab ; corrugated slab and slab with gallery; overview of bearing constructive system (horizontal and vertical systems, bracing elements); Basis configuration and disposition of columns; Floor structure: overview of elements and function.

Aim of study:
- Students will receive general knowledge of constructions - metallic buildings.
- Students will receive necessary knowledge of forming constructions-buildings from different elements as an ensemble.
- Good knowledge of elements-parts of metallic constructions of tall buildings; good knowledge of connections of these elements between themselves as an ensemble.

Learning outcomes:
Students are able to complete independently:
the general disposition of a tall building with metallic construction,
the loading analysis (dead loads, wind, snow, temperature, etc),
the statical system of main girders with loading scheme for most disadvantageous cases and statical calculation and determination of geometry of main elements of bearing construction
Volume and necessary quantity of work (hours by semester 2+2, 6 ECTS)

Activity	hour	Day	week	total
Lecture	2		15	30
Theoretical/laboratory exercice	2		15	30
Practical work	4	2	2	8
Contact with professor/consult	1	8	8	8
Outdoor exercises	/	/	/	/
Colloquium, seminar	2	2	2	4
Homework	2	4	4	8
Time of personal study work (library or at home)	2	15	15	30
Final preparation for exam	4	4	4	16
Time for evaluation (tests, quiz, final exam)	4	1	1	4
Projects, presentation ,etc	2	2	2	4
Total				142

Forms/ Learning Methods
Lecture, numerical exercises, discussions during lecture and exercise in groups ; site visits during different phases of building.
-Report between and practical parts of study:

Theoretical part	Practical part
95%	5%

Base literature for course
Steel building Structures, prof.dr. Afrim Vokshi
Konstruksionet e çelikut në ndërtimtari nga autoret(Zaric,Budjevac dhe Stipanic)
Konstruksionet mikse çelik-beton nga Drago Horvatic`
Normativat Eurocode 1,2,3 dhe 4

Name of Course: CONCRETE STRUCTURES III

Content – Reinforced concrete high beams, reinforced concrete circular slab, concrete protective walls, elements suggested to longitudinal buckling, calculation of longitudinal bending, slope bending , serviceability limit state analysis , most disadvantageous but possible load combination, stress limit states, cracks limit states and deflection limit states for reinforced concrete elements. Calculation of stresses according to EC-2.
Aim of Study:
Extension of knowledge in the field of concrete constructions from previous courses. Knowledge of concrete constructions elements ; calculation and determination of their geometry .
Students will be able to calculate and dimension,to complete reinforcement details; to propose adequate dimensions for elements depending of the building destination
Outcoming learning (competences, knowledge and skills)
To calculate and determinate geometry of reinforcement details for elements of construction.
To handle buckling problem of elements with longitudinal bending,
To handle in detail problems of cracking for reinforced concrete elements,
To calculate deflections of reinforced concrete elements for time 0 and ∞ according to EC-2

Volume and necessary quantity of work (hours by semester 2+2, 6 ECTS)

Activity	Hours	Day	week	total
Lecture	2	1	15	30
Theoretical/laboratory exercise	2	1	15	30
Practical work	/	/	/	/
Contact with professor/consult	1	15	15	15
Outdoor exercises	2	2	2	4
Colloquium, seminar	2	1	2	4
Homework	2	8	8	16
Time of personal study work (library or at home)	3	8	8	24
Final preparation for exam	6	5	1	30
Time for evaluation (tests,quiz,final exam)	4	2	1	8
Projects,presentation ,etc	1	3	1	3
Total				164

Learning Forms/ methods
Lecture, exercises, discussions, individual seminar work and site visits.
-Ratio between Theoretical and practical parts of study:

Theoretical part	Practical part
50%	50%

Base literature for course
K. Morina, H. Sylejmani dhe N. Hoxha, Ligjerata te autorizuara prej Konstruksionet e betonit I
K.Negovani dhe N. Verdho Konstruksionet prej betoni I, II EC-1 , Ec-2
J.Radić: Betonske konstrukcije, Zagreb

Course name: GLUED LAMINATED TIMBER STRUCTURE II

Contents: Main technical rouls for glued laminated timber elements. Calculation - design of glulam different structural elements. Design of Glulam Structure, conections of structural elements, different mounting details and Stability of glued laminated timber Structure frame system.

Learning goals: A modul that enables the students to recognize glued laminated timber materials and their technical performances of capability the different Structure, design and calculations of different type of timber Structure.

Results of Learning:
Design the external action in the glulam timber Structure, Read the partial safety coefficients from EC-1 and EC-5 norme, Lists and explain technological activity to create the glued laminated timber Structure, their structural featuries.
Design the different simply static structural elements like beams, frame systems.
Design the Structural glulam timber elements of different static systems as are the arc.
Design the diferent supports of diferent glulam structure.
Design and calculation of the necessary bracing for timber structure.
The volume and amount of work needed are 2+2 and 5 ECTS.

Activities	Hour	Day	Week	Total
Lectures	2	1	15	30
exercises / laboratory	2	1	15	30
Tutorial work	0	0	0	0
Contacts with the teacher/consultation	2	1	2	4
Field exercises	0	0	0	0
Colloquies, Seminars	2	3	3	6
Homeworkk	2	1	15	30
Own study time Student (at the library or at home)	2	1	15	30
Preparation for final exam	4	1	5	20
Time spend on assessment (tests, screak, final exam)	2	3	3	6
Projects, Presantations, etc..	1	1	7	7
Total	26	/	/	163

Forms/Methods of Teaching
Regular teaching, lecture in groups and in the small groups on exercises and in groups the workshops or homeworks.
The Relationship between and practical study

Part	Practical Part
60 %	40 %

The Used basic Literature for courses:
1. F. Grajcevci, Glulam Structure,(Authorised Lecture) FCEA, Prishtinë
2. Werner, Zimmer., “Holzbau 2”, Dach- und Hallentragwerke nach DIN und Eurocode, Berlin Aufl.-1999
Eurocode 1
Eurocode 5

Course name; POLYMERS AND BITOMINOUS MATERIALS
Content:
General informations for Polymer Materials.Main properties of Polymers.Types of Polymers and using such a construction materials.Concrete polymers, properties comparing with usually concrete. Bitominous Materials, properties and examinations of main properties.Asphalt and the main properties such a building material.
Aim of learning:
-To inform the students with Polymers Materials, definitions and the properties.
- the possibility to apply the polymer materials in improvement of properties of other constraction materials: concrete; asphalt, etc.
- to create the conditions for informations and examinations of main properties
Outcomin learning of course;
- to know the properties of polymer materials, origin and basic definitions
-to know the properties of bitominous materials and behavior under the different conditions
- to know to apply the polymer and bitominous matrials to improve the properties of other building materials
- to have the possibilities for new knowlwdge in techonological development of those materials based on the request Standards.
Volume and engangment of of works: 1+1, 3 ECTS

Activity	Hours	Day	week	Total
Lecture	1	1	15	15
Theoretical exercises/ Laboratory	1	1	15	15
Pratctical work	4	1	1	4
Contact with lecturer / consultation	1	1	8	8
Field practice	8	1	1	8
Tests and seminares	1	4	4	4
Home work	1	8	8	8
Independent study (library or at home)	1	15	15	15
Preparing for final exam	8	2	2	16
The time presented during the evaluation (tests; quiz and final exam)	2	1	1	2
Projects , presentation and ect	1	1	1	1
Total	29	/	/	96

Forms/ Learning Methods: Ordinary learning in small groups,laboratory exercises and individual home works and individual seminars,
Ratio between the and practical part:

Theoretical part	Practical part
60 %	40 %

Literature for using :
1. N.Kabashi, Materialet polimere dhe bituminoze FNA, Prishtine
2/Z.Simunic: Polimeri u graditeljstvo, Zagreb
3. Sergiy Minko: Responsive polymer materials

-*Name of course:* MATHEMATICAL METHODS IN ENGINEERING

-*Content* : The subject contains the following main parts: differential equations of first order, differential equations of higher orders, operating systems of linear differential equations, Laplas transformations, numerical series, functional series, Fourie series and double integrals.

-*Learning goals:* Acquisition of techniques for solving differential equations of different orders, researching the convergence of infinite series and the calculation of double integrals.

-*Results of case learning (competencies, knowledge and skills):* After completion of this course/ subject/ student will be able to solve the differential equations of various orders to treat the nature of the series and to calculate double integrals, and make different mathematical models from the profession pertaining to, and then do their solution.

-*Volume and quantity of work required (hours for semester 2+2, 6 ECTS)*

Activity	Hours	Days	Weeks	Total
Lecture	2	15	15	30
/ Laboratory exercises	2	15	15	30
Tutorial				
Contact with the professor/ Consultations				8
Exercises in the field				
Exams, seminars				10
Homework				15
Own study time (at the library or at home)				25
Final preparation for the exam				24
Time spent on assessment (tests, quizzes, final exam)				8
Projects, presentations ,etc				
Total				150

-*Forms/ Methods of teaching* : lecture

-*Report between the part and the practical*

Part	Practical part
50%	50%

-*Literature used in course:* : A.Zejnullahu , F.Berisha , Matematika III , 1997 ,Prishtinë

Name of course: METHOD OF FINITE ELEMENTS
Content: During the analyse are presented the general informations in physics-geometrical concepts of metod of finite elements. The behavior of material is limited under the statical and dynamic analyses. In many examples are illustrated with numerical examples . The first part is Theoretical base knowledge and apply in analyses of structures , and second part is dynamic analyses of the structures.
Aim of learning: Basic knowledge of MFE and apply in analyzing the statical and dynamical behavior of engineerin structures.
Outcomin learning: After finished this course students will be able to know, to use and to understand the basic pricipes of civil engineering science in general, and in statical and dynamic fields individualy, and to create the enough results for continuing the study.
Volume and engangment of of works: 2+2, 5 ECTS

Activity	Hours	Day	week	Total
Lecture	2		15	30
Theoretical exercises/ Laboratory	2		15	30
Practical work				
Contact with lecturer / consultation				7
Field practice				
Tests and seminars				10
Home work				10
Independent study (library or at home)				20
Preparing for final exam				10
The time presented during the evaluation (tests; quiz and final exam)				8
Projects , presentation and ect				
Total				125

Forms/ Learning Methods: Ordnary learning in groups, individual home works and individual seminars,
Ratio between the and practical part:

Theoretical part	Practical part
100%	0%

Literature using for the course:
Musa Stavileci, Niko Pojani: Metoda e elementëve të fundëm në Mekanikën e Strukturave, UP, FNA, Prishtinë, 2006
Wilson E.L.: Three-Dimensional Static and Dynamic Analysis of Structures, Computers and Structures, inc Third Edition, 2002
Zienkiewiecz O.: The Finite Element Method, McGraw-Hill, New York, 1994

Name of course: DYNAMIC OF STRUCTURES
Content: In and applicative way will be analyses the problems for calculating of engineering structures (beams, frames; trusses), under the dynamical loads .The analyzing problems will be presented such a systems with: single degree of freadomt; multi degree of freedom and method of dissipate parameters.
Aim of learning: Depth the knowledge for analyses and design the engineering structures under the dynamic loads.
Outcoming learning: After the finishing the course the student will be able to know, to use and to understand the principles of dynamic of structures and also to apply directly during tha analyses of structures. During this course student will take the more information for continuing study in this field.
Volume and engagement of works: 3+2, 6 ECTS

Activity	Hours	Day	week	Total
Lecture	3		15	45
Theoretical exercises/ Laboratory	2		15	30
Practical work				
Contact with lecturer / consultation				8
Field practice				
Tests and seminars				14
Home work				20
Independent study (library or at home)				20
Preparing for final exam				20
The time presented during the evaluation (tests; quiz and final exam)				8
Projects , presentation and ect				
Total				165

Forms/ Learning Methods: Ordnary learning in groups, individual home works and individual seminars,
Ratio between the and practical part:

Theoretical part	Practical part
100%	0%

Literature using for the course:
Niko Pojani: Teoria e strukturave DINAMIKA, shblu, Tiranë, 2002
Stavileci M.: Dinamika e konstruksioneve, leksione të shkruara, UP, FNA, Prishtinë 2000
Clough R., Penzien J.: Dynamics of Structures, McGraw-Hill, 2ndEd 1993
Chopra A.: Dynamacis of Structures-Theory and Aplications to Earthquake Engineering, Prentice-Hall, New York, 1996

Name of Course: PRESTRESSED CONCRETE

Content : Methods of prestressing , prestressing types of reinforced concrete element, losses of prestressing force in the case of prestressing with adhesion and funicular . Losses from anchorage slip and friction and wobbling effects,losses from elastic strains, from steel relaxation, from deform time and deflection of concrete.
Choice of cross section of prestressed concrete element , calculation and determination of prestressed element geometry according to EC2,
Object of study (module): understanding of prestressed concrete priorities, by reducing tension stresses in reinforced concrete structures; knowledge of types and methods of prestressing and of their application in building practice, ability of students to design in details a prestressed element with different cross sections: T, TT, I, U, or different hollowed cross section .
Results of learning (competences, knowledge dhe skills) :Students will have more informations and will deal with design of reinforced concrete problems ; they will be able to propose, in the right time, in first phasis of design , adequate concept of shoice of the structure,;they will be able to design completely to details, a roof shelter, a roof main girder, or a prestressed girder.
Volume and necessary quantity of work (hours by semester 2+2, 6 ECTS)

Activity	hours	day	week	total
Lecture	2	1	15	30
Theoretical/laboratory exercice	2	1	15	30
Practical work				
Contact with professor/consult	1	1	15	15
Outdoor exercises	2	1	2	4
Colloquium, seminar	1	1	2	4
Homework				
Time of personal study work (library or at home)	4	3	3	12
Final preparation for exam	6	5	1	30
Time for evaluation (tests,quiz,final exam)	4	2	1	8
Projects,presentation ,etc	1	3	1	3
Total				136

Forms/ Learning Methods
Lecture, exercises, seminar individual work and site visits

- **Ratio between Theoretical and practical parts of study**

Theoretical part	Practical part-elaboratet
50 %	50 %

Literature using for the course:
H. Sylejmani, K. Morina, N. Hoxha, Ligjerata te atorizuara ngaBetini i ParanderurK. Morina & Agron Gjinolli, Permbledhje detyrash te zgjidhura nga Betoni i ParanderurI. Tomocic, Predapregnuti Beton

Name of Course: SPECIAL FOUNDATIONS
Content: pile foundation, bearing capacity of single pile, bearing capacity of single pare fronm static pentrration, Negative skin friction, Behavior of group piles, Excavation with screen, Cutt-off wall (diaphragm wall), Foundation on difficult soils.
Reason of learning: Reason of approved of deep foundation, Information of methods of dep foundation, determination of dimensions of foundation and base technic for design of deep foundations and reinforcement of excavated walls.
Archieveing results: To know characteristics of deep foundation, To know to determinate the dimensions of elements of deep foundation, To know to choose type of deep foundation,expecially loads from structure, geotechnical profile of terein, engineering characteristics of soils, ground water table, allowable load of soils and settlement, To know to do stability control of foundation.
.
Volume and engangment of of works (2+2, 6 ECTS)

Activity	Hours	Day	week	Total
Lecture	2		15	30
Theoretical exercises/ Laboratory	2		15	30
Practical work	1		15	15
Contact with lecturer / consultation	1		15	15
Field practice				
Tests and seminars				
Home work	1		10	30
Independent study (library or at home)	2		10	20
Preparing for final exam				20
The time presented during the evaluation (tests; quiz and final exam)	1		10	10
Projects , presentation and etc.				
Total				150

- Forms/ Learning Methods: Ordnary learning in groups, individual home works and individual seminars,
Ratio between the and practical part:

Theoretical part	Practical part
60%	40%

Literature using for the course:
Ahmedi, F., Fondamente 2 , Universiteti i Prishtinës, Prishtinë, 2005, Nonweiller, E., Mehanika tla i temeljenje Gradjevina, Zagreb, 1985, Braja, M.D., Shallow foundations, bearing capacity and settlement, Sacramento, 1999.

Name of course: STABILITY OF STRUCTURES
Content: The course is devided in two part : Linearising theory of second level and Stability of structures with some of elements,. The analyse will be study with the analytical and numerical methods. Also will be analyses the stability of slabs, imperfection of slabs, and different modes of stability.
Aim of learning: Informations of basic think in stability of structures.
Outcomin learning: At the end of this cours the student will be able to: know, to understand and to use the main concepts for analyses the elements and structures under the critical force and to analyse the stability of elements of structures. Also to have the enough informations for continuing study.
Volume and engangment of of works: 2+2, 3 ECTS

Activity	Hours	Day	week	Total
Lecture	2		15	30
Theoretical exercises/ Laboratory	2		15	30
Pratctical work				
Contact with lecturer / consultation				7
Field practice				
Tests and seminares				4
Home work				4
Independent study (library or at home)				10
Preparing for final exam				10
The time presented during the evaluation (tests; quiz and final exam)				8
Projects , presentation and ect				
Total				103

Forms/ Learning Methods: Ordnary learning in groups, individual home works and individual seminars,
Ratio between the and practical part:

Theoretical part	Practical part
100%	0%

Literature using for the course:

Musa Stavileci: Teoria e strukturave STABILITETI, UP FNA Prishtinë 2003
Chen W.F.,Lui E.M.: Structural Stability Theory and implementation, Elsevier, Neww-York-Amsterdam-London
Softa F.: Teoria e strukturave Qëndrueshmëria, Pllakat, Membranat, Tiranë, 1990

Name of Course: CONCRETE STRUCTURES IV

- **Content** frame structures; dilatation joints, expansion joints, deflection joints , types of joints;calculation of cross sections according to theory of plasticity, method of Forfeter, Method of Caquot, Prefabricated reinforced concrete constructions, positive and negative attributes of montage system, montage elements, slabs, beams, columns, walls and foundations, connections of prefabricated constructions;caisson shelter, slab and ribs construction, design of caisson slab with approximate method, calculation and reinforcement of caisson slab, shelter without girders (mushroom) ,positive and negative attributes of this slab, minimal dimensions according to EC2

Aim of Learning):

-understanding of structure design starting with proposal of structure concept, choice and appropriation of optimal constructive system variant

-knowledge of concrete constructions, as frames , structures with reinforced concrete wall or diaphragm, mixed/dual structures etc

(4)ability to design in details a concrete structure, prefabricated or all in one, including analysis, preliminary final calculations, with diagram of details made with software or manual method,

(5)ability to propose adequate solutions depending on the building destination and according to the conditions of project duty.

Outcoming Learning: (1)Students will have more informations and will deal with problems of reinforced concrete structures;

(2)will be able to propose, in the right time, in first phasis of design, ideore solution of structures

(3) will be able to design completely to details a complete reinforced concrete structure, including diagram for appropriate solution, reinforcement details and specification of material.

- **Volume and necessary quantity of work** (hours by semester, ECTS)

Activity	hour	day	week	total
Lesson	2	1	15	30
Theoretical/laboratory exercice	3	1	15	45
Practical work				
Contact with professor/consult	2	1	15	30
Outdoor exercises	2	1	2	4
Colloquium, seminar	1	1	2	4
Homework				
Time of student work (library or home)	5	3	15	225
Final preparation for exam	8	5	1	40
Time for evaluation (tests,quiz,final exam)	4	2	1	8
Projects,presentation ,etc	1	3	1	3
Total				

Forms/ Methods of teaching

Lecture, exercises, seminar individual work and site visits

Raport between and practical parts of study

Theoretical part	Practical part
50%	50%

Literature using for course:

K. Morina, H. Sylejmani dhe N. Hoxha, Ligjerata te atorizuara nga Projektimi i Strukturave BA;

K.Negovani dhe N. Verdho Konstruksionet prej betoni I, II;

EC-1 , Ec-2 ;

Ivan Tomičić: Betonske konstrukcije Zagreb; V. Hasanović: Betonske konstrukcije Sarajeve;

Geothard Franz: Konstruktionslehre des stahlbetons New York;

Andrej Spasov : Betonske konstrukcije Shkup;

Ž. Radosavljević : Betonske konstrukcije I, II dhe III Beograd

Name of the course**:** EXAMINATIONS OF STRUCTURES

Content: Basic knowledge for the behavior the materials and elast-plastic properties. Direct correlations of property of materials in result of examinations of structures. Main strain and stresses and main directions. The theory of instruments: deformeters,clinometers;strain gauges and main principles for using the instruments. The deformabile properties: moduls of Elasticity;Poisson ratio, etc. Model analyses, model such a element for analyzing the structures. The methods for evaluation of properties of materials in structures: nondestructive methods and destructive methods.Apply of different methods for "in situ" analyses of bridges under the loads. Optical analyses of stresses, methods and properties.

Aim of learning:

- To inform the students for indicate the properties of materials in thery of elasticity during the examinations of structures.

-to have the informations about the theory of Instruments, and directly apply in examinations of structures.

-To have the chance , directly in laborator and in field to apply the methods for examinations

Outcoming learning of course:

-to know to apply the theory of elasticity in measurement methods

-to know the theory of instruments and to apply in directly measurement of deflections;deformations and the results to apply for calculations of stress and strain in elements or structures.

-to understand the basic parameters of optical analyses of stresses.

-to know to analyse the behavior of the structures under statical and dynamic loads

Volume and engangment of of works: 2+2, 6 ECTS

Activity	Hours	Day	week	Total
Lecture	2	1	15	30
Theoretical exercises/ Laboratory	2	1	15	30
Pratctical work	8	2	1	8
Contact with lecturer / consultation	1	1	15	15
Field practice	8	1	1	8
Tests and seminares	2	2	2	4
Home work	1	8	8	8
Independent study (library or at home)	2	15	15	30
Preparing for final exam	8	3	3	24
The time presented during the evaluation (tests; quiz and final exam)	2	2	2	4
Projects , presentation and ect	2	1	1	2
Total	38	/	/	163

Forms/ Learning Methods: Learning in small groups, laboratory works;individual home works and individual seminars,

Ratio between the and practical part:

Theoretical part	Practical part
60 %	40 %

Literature using for the course:

1. N.Kabashi, Shqyrtimet e Konstruksioneve,(ligjerata te autorizuara) FNA, Prishtine
2/Vukotic: Ispitivanje Konstrukcija, Beograd
3. J.P.Holman: Experimental Methods for Engineers

Name of the course: EARTHQUAKE ENGINEERING - FUNDAMENTAL

Contents: In the Engineering Perspective in the course are treated the Seismic Respose of Structure, problems to modeled as singel system degrees of freedom SDOF and multy system degrees of freedom MSDOF. Also are analyzed the new concepts of Earthquake Engineering filed. The fundamental materials of Courses are referred regardings to the norms and standards, mainly Eurocodes, respectivly EC 8.

Learning goals: To Prepare as well the students with the basic engineering structural analysis and to design the Resistant Structures under seismic actions.

Results of Learning:
After completing this course /subject/ student will be able to recognize, understand and use the fundamental notions of engineering earthquakes, in order to afford as are pasible expect difficulties during and after these studies.
The volume and amount of work needed are 2+2 and 5 ECTS.

Activities	Orë	Ditë	Javë	Gjithsej
Lectures	2		15	30
exercises / laboratory	2		15	30
Tutorial work				
Contacts with the teacher/consultation				5
Field exercises				
Colloquies, Seminars				6
Homeworkk				8
Own study time Student (at the library or at home)				20
Preparation for final exam				20
Time spend on assessment (tests, screak, final exam)				6
Projects, Presantations, etc..				
Total				125

Forms/Methods of Teaching
Regular teaching, lecture in groups and in the small groups on exercises and in groups the workshops or homeworks.
The Relationship between and practical study

Part	Practical Part
100 %	0.0 %

The Used basic Literature for courses:

Niko Pojani: Seismic Engineer, Tiranë 2003,
Misin Misini: Earthquake Engineering - Fundamental, (Authorised Lecture) FCEA, Prishtinë
Clough R., Penzien J.: Dynamics of Structures, McGraw-Hill, 2ndEd 1993