

COURSE DESCRIPTIONS 2014/2015
DEPARTMENT OF ARCHITECTURE FIRST CYCLE COURSE DESCRIPTIONS

First year

Compulsory courses

ARC 101. BASIC DESIGN

Hours (Theoretical-Practical): 2+4

ECTS: 7

Students are introduced to the visual elements and principles of design through slide lectures and practical sessions. The visual elements consist of: point and line; shape and mass; texture; light; color; and space. The principles of design include: unity and variety; balance; emphasis and focal point; proportion and scale; movement, stability and rhythm. Students will be expected to apply the concepts learned from the lectures and demonstrations to create 2-dimensional visual compositions. Students will advance from achromatic compositions to more advanced chromatic compositions. Classroom lecture will expand upon visual elements and principles of design to include straight, curved and implied line; geometric and organic shapes; positive and negative space; approximate symmetry, symmetrical, asymmetrical and radial balance; illusion of depth; simulated and actual texture; and color theory. The majority of class time will be spent working on assignments but outside time may be necessary to complete the work. Critiques will follow most major assignments for critical feedback from the instructor and fellow classmates.

ARC 103. GRAPHIC COMMUNICATION

Hours (Theoretical-Practical): 2+2

ECTS: 5

The course elaborates and explores methods of graphic representation of architectural project introducing students to the fundamental drawing techniques crucial to expressing any design idea. The focus of this course is on basic graphic representational elements and their integration into complex visual presentation. The course, through various practical exercises introduces students to the methods of representation of visual attributes of objects, spatial representational systems, proportion, drawing techniques.

CEN 131. COMPUTER LITERATURE AND SKILLS

Hours (Theoretical-Practical): 2+2

ECTS: 5

This course covers basic concepts in information technology, software and hardware, operating systems, word processing, spreadsheets, databases, using the Internet in education, effects of information technology on social structures and in education, system security and ethical considerations.

ELT 117. ADVANCED READING AND WRITING I

Hours (Theoretical-Practical): 2+2

ECTS: 5

Development of Reading and Writing Skills in English: The course reinforces academic reading skills (finding the main idea, skimming, scanning, inferring information, guessing vocabulary from context, etc.) through reading selections on a

variety of topics. It also aims at developing critical thinking, which enables students to respond to ideas in a well-organized written format. Other reading related writing skills such as paraphrasing and summarizing are also dealt with.

MTH101. CALCULUS I

Hours (Theoretical-Practical): 2+2

ECTS: 6

Calculus I: Functions, Limits, continuity and derivatives. Applications. Extreme values, the Mean Value Theorem and its applications. Graphing. The definite integral. Area and volume as integrals. The indefinite integral. Transcendental functions and their derivatives. L'Hopital's rule. Techniques of integration. Improper integrals. Applications. Parametric curves. Polar coordinates.

BOS 101. BOSNIAN I

Hours (Theoretical-Practical): 2

ECTS: 2

This course is taught through the Bosnian Language. The course contains basic grammatical rules of the language. Everyday practical use of the language. This course is for Turkish students.

TDE 191. TURKISH LANGUAGE I

Hours (Theoretical-Practical): 2

ECTS: 2

This course is taught in Turkish Language. The course contains basic grammar rules of the language. Everyday practical use of the language. This course is for non-Turkish students. It covers following topics:

Basic characteristic of written language

Grammar

Subjectivity and objectivity

Free writing

Guided writing

ARC 104. INTRODUCTION TO ARCHITECTURE

Hours (Theoretical-Practical): 2+2

ECTS:4

This course is designed to inspire the student to consider the built environment in a new way through the study of ideas about architectural design and history, and architecture and planning in the context of the urban and rural environments. Ideally, this new visual vocabulary and these architectural concepts will encourage the student to become more judicious users and observers of the built environment. This course is a Fine Arts Foundation course for the general education program. As such, it emphasizes issues of design. This course also provides students with information about the profession of architecture, its history, the scope of traditional practice, contemporary issues in design and related professional careers. The critical facets of architectural education will be examined.

ARC 114. ARCHITECTURAL DESIGN I

Hours (Theoretical-Practical): 2+4

ECTS:6

Architectural Design I studio lays down the foundations for architectural design. Through lectures, small scale and experimental design projects, thinking of human inhabitation, space, and tectonics, as well as the relationship between plan, section and elevation, the course introduces principles and methods used at various stages of design analysis and synthesis processes. Site conditions are introduced to the design process; and the relation between interior and exterior are considered with

regard to inhabitation. The course has a prerequisite of ARC 101 BASIC DESIGN.

ARC 115. ARCHITECTURAL STRUCTURES I

Hours (Theoretical-Practical): 2+2

ECTS:5

Introduction to the fundamental theories and methods of building structural system and the relationships among architectural design and technologies. Course examines structural systems, construction to provide understanding of impact of these systems on architectural form. Structural classifications. Basic structural elements. Structural systems. Principles of reliance. Characteristic parts of the building: terminology, function, Vertical structural elements, Horizontal structural elements, Foundations and foundation structures, principles of design and construction

ARC 108. STATICS

Hours (Theoretical-Practical): 2+2

ECTS:4

The subject of Statics deals with forces acting on rigid bodies at rest covering coplanar and noncoplanar forces, concurrent and nonconcurrent forces, friction forces and hydrostatic forces. Much time will be spent finding resultant forces for a variety of force systems, as well as analyzing forces acting on bodies to find the reacting forces supporting those bodies. Also, students will be able to understand normal and shear stresses and combined stress, as well as the basic approach to design of beams and determination of the deflections. It is expected from students to develop critical thinking skills necessary to formulate appropriate approaches to problem solutions.

ARC 105 GRAPHIC COMMUNICATION II

Hours (Theoretical-Practical): 2+2

ECTS:4

Learners gain skills in using manual methods, and develop an understanding of how to use graphics for clear and effective communication. A relation between various presentation mediums will be explained to help students develop their own graphic communication skills. It covers following topics: Spatial Relationships of Objects, Spatial Coordinates and Orthogonal Projections, Orthogonal Projections, Oblique Projection, Oblique Projection, Isometric Drawing, Axonometric Drawing, Roof, Spatial Construction, Planar projection, Roads, Basics of Perspective Drawing.

ELT 102. ADVANCED READING AND WRITING II

Hours (Theoretical-Practical): 2+2

ECTS:5

Development of Reading and Writing Skills in English II: The course reinforces academic writing skills. In this course students write different types of essays based on the ideas they are exposed to in the reading selections. The emphasis is on the writing process in which students go through many stages from brainstorming and outlining to producing a complete documented piece of writing.

BOS 102. BOSNIAN LANGUAGE II

Hours (Theoretical-Practical): 2

ECTS:2

This course is taught through the Bosnian Language. The course contains basic grammatical rules of the language. Everyday practical use of the language. This course is for Turkish students.

TDE 192. TURKISH LANGUAGE II

Hours (Theoretical-Practical): 2

ECTS:2

This course is taught in Turkish Language and is continuation of Turkish Language I. The course contains intermediate grammatical rules of the language. Everyday practical use of the language. This course is for non-Turkish students.

Second year

Compulsory courses

ARC 201. SUMMER PRACTICE AT ARCHITECTURAL STUDIO

Hours (Theoretical-Practical): 30 working days

ECTS:0

This course makes students able to attend and professionally benefit from an architectural studio atmosphere. The student is expected to fully engage with the practice of a professional studio and get enough experience to be prepared for the after-graduation period.

ARC 224. ARCHITECTURAL DESIGN II

Hours (Theoretical-Practical): 2+4

ECTS:7

Studies for the identification of elements of architectural design and the development of sensitivity and awareness required for valid interpretations of natural and functional context. Semester project requires from students to provide design solution for single residential unit. Lectures and practical sessions will deal with

Analysis of a project brief.

Site Recording and Analysis

Context

Design Response and Conceptual Development / Volumetric Analysis

Functional Planning

Aesthetics

Materials

ARC 225. BUILDING CONSTRUCTION TECHNOLOGY II

Hours (Theoretical-Practical): 2+2

ECTS:4

This course offers an introduction to the history, theory, and construction of basic structural systems as well as an introduction to energy issues in buildings. It emphasizes basic systematic and elemental behavior, principles of structural behavior, and analysis of individual structural elements and strategies for load carrying. The course also introduces fundamental energy topics including thermodynamics, psychrometrics, and comfort.

ARC 437. ARCHITECTURAL STRUCTURES II

Hours (Theoretical-Practical): 2+2

ECTS:6

The course is a continuation of introductory analysis of building structural systems. Course examines parts of structural systems in greater detail, such as windows, doors, stairs and roof. This course explores the relationship between building technologies, specifications of details and architectural design in practice.

ARC 208 BUILDING MATERIALS

Hours (Theoretical-Practical): 2+2

ECTS:4

By the end of the course, students are expected to:- - recognize and analyse different construction systems, - distinguish between different materials and their structural

specifications, - be familiar with prevailing and new building materials, their application methods, - be capable of drawing a system detail in 1/20 scale with basic principles of interfaces. It covers following topics:

- Foundations, Earth materials, geotextiles, drainage, piles, diaphragms
- Wood, Wood products, plastic lumber, wood fasteners, glued laminated timber
- Wood Heavy timber frame, light frame, interior and exterior finishes
- Brick masonry Mortar, brick
- Stone and concrete masonry, Stone, Stone masonry and Concrete masonry units, Masonry wall
- Waterproof and thermal insulations (rock wool, glass wool, polystyrene, polyurethanes...)
- Concrete, Cement, Reinforcing
- Mid-term Examination
- Precast and site cast concrete Prestressed elements, joining, casting concrete, Lightweight concrete
- Steel Material, steel framing, fireproofing
- Roofing and roofing materials application
- Cladding, Flooring, Suspended Ceilings
- Exterior wall systems, Interior finishes, walls, partitions, gypsum systems

ARC 216. HISTORY OF ART AND ARCHITECTURE I

Hours (Theoretical-Practical): 2+2

ECTS:5

By the end of the course the student is expected to have a basic chronological sense of major architectural developments and be able to recognize and rationalize changes in form and material with a contextual approach. It covers following topics:

- Art in world history, introductory remarks.....Purpose of artThe beginnings of art: Prehistory - the Stone Age
- Art and Architecture in "time-cut" 3500 BCE
- Art and Architecture in "time-cut" 2500 BCE
- Art and Architecture in "time-cut" 1500 BCE
- Art and Architecture in "time-cut" 800 BCE
- Art and Architecture in "time-cut" 400 BCE
- Art and Architecture in "time-cut" 0- Beginning of the new era
- Art and Architecture in "time-cut" 200 CE
- Art and Architecture in "time-cut" 400 CE
- Art and Architecture in "time-cut" 600 CE
- Art and Architecture in "time-cut" 800 CE
- Art and Architecture in "time-cut" 1000 CE....Art and Architecture in "time-cut" 1200 CE / Intro

ARC 375. STRENGTH OF MATERIALS

Hours (Theoretical-Practical): 2+2

ECTS:4

Strength of Materials encompasses all of the issues and programs and is an essential way of approaching building projects. Understanding Strength of Materials concepts will enable students to think and practice in an integrated fashion to meet the demands of today's as well as tomorrow's high-performance bldg. project.

ARC 234. ARCHITECTURAL DESIGN III

Hours (Theoretical-Practical): 2+4

ECTS:7

Design of office buildings in relation to their particularly urban context is emphasized. Issues of settlement-dwelling relationships, buildings of functional complexity and spatial variety and architectonic interpretations of structural systems are analyzed and designed.

- Design - Context
- Design - Context (Public building; Commercial and Office buildings, Site)
- Design - Need (Office buildings design: Workspaces planning – relationships and sizes)
- Design -Need (Office buildings design: Other areas planning - ancillary, support, social, service; circulation / communications)
- Design: Need - Form (Office buildings design: disposition, typology)
- Design - Form
- Design - Form
- Design solutions: material
- Design solutions: structure
- Design solutions: light

ARC 209 ENVIRONMENTAL CONTROL STUDIO

Hours (Theoretical-Practical): 2+2

ECTS:4

Students will be provided with knowledge on aspects of building environment controls related to architectural planning and design. Aspects on comprehensive fire prevention and control; and influence of building materials with respect to pollution, environmental degradation will be discussed. Topics:

- Course Introduction. Architectural form as an environmental control system. CLIMATE as an context.
- DESIGN STRATEGIES Streets. Open spaces. Buildings.
- DESIGN STRATEGIES Buildings. Zoned organizations. Location. Rooms and courtyards. Size and shape. Walls .Roofs. Floors. Windows.
- The Luminous Environment Fundamentals of LIGHT Lighting and human failings. Lighting in Cultural and Art Centers. Daylighting. Electric lighting.
- ACOUSTICS Design Fundamentals of Sound. Noise isolation and control.
- RENEWABLE TECHNOLOGIES. Low energy techniques for housing. Advanced and ultra-low energy houses.
- Sustainable design. Solar architecture. PASSIVE SYSTEM. Passive house.
- EXISTING housing: a challenge and opportunity. STUDENTS PRESENTATIONS A brief overview of one example from practice. / Renewable technologies , Passive design etc. /
- HVAC System VENTILATION. Natural Ventilation HVAC : VENTILATION
- HVAC: HEATING & COOLING SYSTEMS Indoor Air Quality - IAQ
- Energy sources. Water in Architecture WATER + Waste
- Energy code. WIND and air movement
- Building design and energy strategies

ARC 226 HISTORY OF ART AND ARCHITECTURE II

Hours (Theoretical-Practical): 2+2

ECTS:5

This course is organized around individual monuments, each making or reinforcing points about how principles and ideas behind civilization and architecture in the West

(1750 – 1960) were shaped by ideas behind capitalism, nationalism, scientific materialism, socialism, and manifested in shifts of style from historicist revivals to minimalist design.

ARC 257 STEEL STRUCTURES

Hours (Theoretical-Practical): 2+2

ECTS:4

This course is organized around individual monuments, each making or reinforcing points about how principles and ideas behind civilization and architecture in the West (1750 – 1960) were shaped by ideas behind capitalism, nationalism, scientific materialism, socialism, and manifested in shifts of style from historicist revivals to minimalist design.

ARC 206 THEORY OF STRUCTURES

Hours (Theoretical-Practical): 2+2

ECTS:4

Static analysis of statically undetermined systems, propped cantilever, continuous beams, pinned frames and arches, fixed frames and arches, statically undetermined trusses using Flexibility (Force) method, Three-Moment Method (Clayperon's equations), Displacement Method of analysis (The Slope Deflection Method and Stiffness Method of Analysis) and Moment Distribution Method or Cross Method and Computer Methods.

Third Year Courses

Compulsory courses

ARC 301 SUMMER PRACTICE AT CONSTRUCTION SITE

Hours (Theoretical-Practical): 30 working days

ECTS:0

Building construction procedures and techniques and active participation in construction work. The student can engage in archaeological site work with the approval of the Department.

ARC 327 ARCHITECTURAL DESIGN IV

Hours (Theoretical-Practical):2+4

ECTS:5

The course establishes foundations for architectural design of multifamily housing engaging issues of space, organization, circulation, use, structure and material. The focus of this course is integration of basic architectural elements and conceptual spatial strategies into larger architectural structures with complex urban, social, cultural and economic characteristics. The topic of housing is treated from a wide range of perspectives: urban context, spatiality and form, functionality and aesthetics.

ARC 325 REINFORCED CONCRETE STRUCTURES

Hours (Theoretical-Practical):2+2

ECTS:5

Combined bending and compression, development and anchorage of reinforcement, deflections, design of slabs including one-way and two-way, design of footings, retaining walls, introduction to prestressed concrete, design of multi-story buildings.

ARC 325 ARCHITECTURAL DESIGN V

Hours (Theoretical-Practical):2+6

ECTS:5

This course will investigate the social, programmatic, tectonic and phenomenological characteristics of educational institutions as a building typology. The proposed theme is quite challenging since the students need to respond to the numerous building standards, laws and regulations in one hand, and in the other hand they should be able to provide a space which inspires and fosters children's creativity. The focus of the studio is on the user based design and on in-depth study of special needs of one community group resulting in detailed and complex program. The issue of children is of primary importance. What do they do, how do they learn, what is the relationship between space and creativity? The design process involves exploring the meaning of "child-orientated environment" as a basis for prosperous community. Therefore investigations of this studio will not be limited purely on architecture but they will include the study of current innovative approaches to education and learning such as Montessori and Waldorf learning method.

Students will be challenged to deepen their investigations into spatial, functional and aesthetic compositions started during previous semesters with special focus on following: standards, dimensional and zoning requirements, measurements, site assessment and analysis and phenomenological experiences (colours, light and shadow, silence and noise). An important aspect of the studio is the communication with the client since the project will be done according to the capacities and needs of Bosna Sema International School, hence students will be able to present their proposals directly to the school representatives.

ARC 362 SENIOR DESIGN PROJECT

Hours (Theoretical-Practical):0+6

ECTS:5

Office organization, financial aspects and the legal framework of the professional with emphasis on relation with project preparation and construction practice. Management aspects of the architectural practice will be dwelt on through information on professional and administrative bodies; economic and financial policies, project and construction management, as well as collaborations with other professions.

Technical Electives

ARC 308 BUILDING SYSTEMS

Hours (Theoretical-Practical):2+2

ECTS:5

Evaluation of building systems in terms of resource utilization/speed/quality. Principles in building system selection. Practices: Analysis of building systems. Definition of Building Production System (BPS). Elements of BPS: resources, process and product. Constraints of BPS: environment, aims, criteria. Development of BPS from standpoints of resources, process, product and organization in parallel with social and technological changes. Characteristics of building sector. The product characteristics and demand characteristics in the building production. Evaluation of building systems in terms of resource utilization/speed/quality. Principles in building system selection. Practices: Analysis of building system, comparative analysis of resource utilization of specific building systems, process analysis of specific systems.

ARC 305 ENVIRONMENTAL DESIGN

Hours (Theoretical-Practical):2+2

ECTS:5

The course provides a broad introduction to design, covering how we interact with the environment around us, how to make things fit and feel better (ergonomics), materials and methods of assembling them, and determining the ecological costs of these decisions. The course includes case studies, design projects and experiments. It provides methods for determining needs, developing research teams, and finding solutions to difficult design problems. It also looks closely at the systems implications of design.

ARC 333 INTRODUCTION TO DETERIORATION AND CONSERVATION

Hours (Theoretical-Practical):2+2

ECTS:5

An introduction to conservation of the built environment; essence of conservation and preservation; simple methodology to identify critical assessment; and cultural significance of a material, building object or group of buildings. It covers following topics:

- Concept of heritage preservation: basics
- Concepts in conservation
- Concepts in conservation
- Concepts in conservation
- Conservation practice: Methodology of conducting conservation - restoration projects Survey and analyses
- Doctrine of architectural conservation
- Preservation methods; degree of intervention
- Mid-term (Project :midterm presentation)
- Introduction to restoration techniques
- Conservation practice: Case studies, Rehabilitation
- Conservation practice: Case studies, Conservation and restoration
- Conservation practice: Methodology of conducting conservation - restoration projects Project Solutions
- Case studies : Preservation methods Student's presentations. Concluding Remarks (+Notes: Protection services and legislation in the field of heritage

ARC 311 ADVANCED MEASURING METHODS

Hours (Theoretical-Practical):2+2

ECTS:5

Measuring method are necessary to develop every design project. The methods of making a thorough measured and descriptive survey of a building by means of various techniques and instruments are given in a series of lectures. Practical exercises are carried out on the site. The methods of making a thorough measured and descriptive survey of a building by means of various techniques and instruments are given in a series of lectures. Practical exercises are carried out on the site.

ARC 303 CITY PLANNING AND URBAN DESIGN

Hours (Theoretical-Practical):2+2

ECTS:5

The concepts of: settlement, urbanization, planning; subjects of the contemporary city planning, the legal dimension of planning. Course intends to:

- Demonstrate a systematic and critical understanding of the theories, principles and practices of City Planning and Urban Design
- Critical review of the city development and urban planning

- Understanding of the development of Cities/Towns through History: Background, Concept, Genesis, Postulates, Principles, Criteria
- Critically review of social, economic, environment, religion and cultural roles of the city/town development
- Creative application of the knowledge in the research and analysis work
- Understanding of the Contemporary approaches in the City development and urban planning
- Demonstrate a systematic and critical understanding of street and squares, public and stationary traffic, infrastructure, waste management, zoning of the cities
- Basic understanding of basic sustainable urban planning and green cities gradation, dominance, balance, unity.
- Basic understanding of collaboration between Urban, Peri Urban and Rural
- Demonstrate skills to actively participate in the presentation and peer review and constructive communication with colleagues.

ARC 306 GEOMETRY AND THE ELEMENTS IN DESIGN

Hours (Theoretical-Practical):2+2

ECTS:5

Geometry and the Elements In Design will teach students to create an object that is both visually appealing and useful. This can be reached using different geometric shapes to make the product. It covers following topics

Definition of geometry

Usage of geometrical principles in design

Construction elements

Interior design

Geometry and aesthetic

Case studies

ARC 326 DESIGN WITH CLIMATE

Hours (Theoretical-Practical):2+2

ECTS:5

The course addresses the issue of climatic considerations and their significance in the design process of the built environment emphasizing the necessity of different architecture for different climates. Definition of climatic problems, effect of topography and surrounding elements on microclimate; different climatic regions, examples of vernacular architecture are the main topics. A design project considering site selection/topography/landscape/ orientation and microclimate/micro space in urban and rural context is the output.

ARC 307 DESIGN OF STEEL STRUCTURES

Hours (Theoretical-Practical):2+2

ECTS:5

Principles, analysis and methodologies for conceptual and detailed design of steel structures. Emphasis on the role of mechanics in modern structural engineering design specifications with a focus on load and resistance factor design. Topics include behavior and design of hot-rolled and cold-formed steel: connections, members, frames and advanced analysis techniques. Principles of basic design concepts. Definition of loads (dead, live, wind, snow and earthquake loads). Material characteristics of steel. Behavior of individual elements, tension members, compression members, beams and columns. Types and behavior of connections, connection design and details. Use of steel in architectural design. Behavior and

analysis of large span steel structures.

ARC 365 HISTORICAL ENVIRONMENT AND CONSERVATION

Hours (Theoretical-Practical):2+2

ECTS:5

Conservation concepts in site scale, single building, building groups and conservation methods in urban scale from a historical view. Conservation and restoration applications in Europe. Areal work and restoration projects in practice in Bosnia sites. History and theory of conservation.; evaluation of historic buildings and sites. Historic building survey, inspection and recording. Diagnosis of building failures. Restoration techniques (consolidation of materials and structures, reintegration, renovation, reconstruction). Introduction to urban conservation methodology. Listing buildings and spaces of architectural and historic importance, urban conservation plans, and integrated conservation. National legislation concerning conservation.

ARC 313 BUILDING CONSTRUCTION MANAGEMENT AND ECONOMICS

Hours (Theoretical-Practical):2+2

ECTS:5

Organisational/Personnel Management work study and production processes. Industrial Psychology. Application of computers in Construction Management Techniques of time and motion studies. Actors taking part in the process of building production in Construction sector, their authorities and responsibilities. The evolution of the building sector in the world. Basic concepts related to construction management. The techniques of construction management and project management, cost in building-production; applications of cost estimation and quantity calculation, cost-benefit analyses.

ARC 324 ARCHITECTURE AND CITY

Hours (Theoretical-Practical):2+2

ECTS:5

This course will explore how we learn about the architecture and the city. At the interface of art, architecture, urban design and landscape, between urban and curatorial practice, the students will get acquainted with the ways how we read, explore and interpret the architecture and the city. The major focus will be on the physical form, through architectural and urban history, theory, typologies and representation in art and mass media, questioning the possibilities that the display of architecture and city opens in the creation of knowledge and urban culture.

This general education course will introduce some key ideas drawn from interdisciplinary studies. Its core aim is to raise students' interests in encountering and imagining urban space through different ways. The lectures are divided into four parts:

The shape of the city. The first part introduces how cities are conceptualized and how their historical development is understood; this is an introductory section familiarizing the class with the issues to be covered in the course.

Urban theories. In the second part, key topics concerning urban theories, restructuring and transformation will be discussed; we will look at some dominant factors influencing urban form and urban culture.

City representation: literature, painting, film. Mass Media. The third section will explore the relationship between cultural productions (the visual arts, novels, poems, essays, film, architecture and urban planning) and the context within which they were

produced. We will discuss how paintings, novels and movies express the individual experience of urban condition, and how they in turn shape the individual's expectations of those experiences. The presence of architecture and city in publicity and mass media will be analyzed as a part of urban branding and destination creation.

City on display: City museums and urban curating. The fourth section concerns the multiple ways through which we encounter and interact with the city. It takes 'practices' – urbanistic, artistic, curatorial, everyday - as ways of 'reading' and explores the possibilities of their enhancing through the activities of city museums and urban curating.

The course will be concluded by class presentations and discussions.

ARC 331 THEORY OF CONSERVATION

Hours (Theoretical-Practical):2+2

ECTS:5

Basic concepts of theory of conservation. Historical background, contemporary international regulations, charters, declarations. Terminology in conservation.

The course begins with an overview of the process of preservation, as described by a model for heritage stewardship, in which a structure's significance and needs are assessed within the context of the capacity (and needs) of its steward. Next, each component of an architectural conservation assessment is considered in the context of architectural styles, building technology, materials, geographical, consideration and other factors. Related assignments address styles, general conservation issues (through field work) and building-specific issues (through site work). Then, the physical properties, craft and production techniques, performance and conservation of specific material/systems are addressed. Work is placed in the context of conservation standards and treatments. Site visits supplement lectures and readings.

ARC 357 COMPUTER ANALYSIS OF BUILDING STRUCTURES

Hours (Theoretical-Practical):2+2

ECTS:5

This class investigates the use of computers in architectural design and construction. It begins with a pre-prepared design computer model, which is used for testing and process investigation in construction. It then explores the process of construction from all sides of the practice: detail design, structural design, and both legal and computational issues.

ARC 317 ENVIRONMENTAL AESTHETICS

Hours (Theoretical-Practical):2+2

ECTS:5

In this class, students will explore ecologically motivated art such as earthworks, land projects, performance and ephemeral works and ecofeminist works among others. Since environmental or eco artists typically collaborate with landscape architects, urban planners, local officials and experts in other disciplines, such as ecologists, geographers, and anthropologists, students will be expected to consider a wide range of disciplines. Sustainability through grass roots efforts, industry and governmental institutions will also be helpful in framing class discussion.

A theoretical course conducted in discussions on assigned readings and research. Aims to introduce students to environmental concerns and issues of aesthetic related to the environment and to social and urban experiences. Apart from the discussions, students are asked to submit papers related to the environment, short stories,

drawing and visual documentation.

ARC 326 FUNDAMENTALS OF SITE PLANNING

Hours (Theoretical-Practical):2+2

ECTS:5

An integrated theory and applications course which provides an exposition of theoretical principles associated with the site planning process, and then involves students in hands-on exercises. The inter-relationship between site planning decisions and their potential consequences will be demonstrated through practical exercises.

Studies the techniques of site planning in four parts. Starts with an analysis of the main physical site elements, continues with the analysis, relation and location of activities on a site. Alternative choices for vehicular and pedestrian circulation systems are studied in the third section. The architectural design elements of site design, criteria for the evaluation of good site design, and practical know-how on site design constitute the fourth section

ARC 318 PROBLEMS OF TRADITIONAL BUILDING MATERIALS

Hours (Theoretical-Practical):2+2

ECTS:5

The main principle of a performance based building regulatory system is that there should be proof of performance of the proposed material, component or system. Thus, the approach may require verification tests and documented data to be provided to regulatory authorities. Most traditional building materials and methods do not have standard test methods that can be used to verify their performance and this tends to discourage wide use. However, it has widely been accepted that "history-in-use" is an important facet of a lot of these building materials and methods and it should be adequate proof of compliance to regulatory requirements.

ARC 332 STUDIO OF CONSERVATION AND RESTORATION

Hours (Theoretical-Practical):2+2

ECTS:5

The discipline of architectural conservation and restoration covers restoration, alteration, management and renewal of both historic and latter-day settlement and buildings. Architects' working methods for inspecting and analyzing buildings are studied, as well as the planning of new architecture in the encounter with existing settlement. The subject field includes close studies of traditional building trades and their application to refurbishment. Current research focuses on the design process, methods of planning and investigation in preservation and renewal using traditional materials and methods, and design programs and studies for the management and development of existing built environments.

ARC 371 COMPUTER LITERACY IN ARCHITECTURE

Hours (Theoretical-Practical):2+2

ECTS:5

This course is designed for students who want to learn computer tools and office productivity tools such as Word, PowerPoint and Excel. Topics covered will enable students to understand computer-based work, create and edit word documents, create powerful presentations using PowerPoint, and customize spreadsheets using Excel.

An introduction to computer basics. Both theory and practice of operating systems, word-processors, spread-sheets and data-base programs are covered to provide an understanding of state-of-art of the computer technology.

ARC 316 DESIGN METHODS

Hours (Theoretical-Practical):2+2

ECTS:5

Design processes using architectural projects as case studies; assigned projects; design experience includes schematic design: program development, concept formulation, design methodologies, graphic and verbal communication skills; core design studio for professional degree candidates.

The course focuses on definitions of design and different methods to define and solve design problems. An overview of quantitative methods, such as decision theory and optimization; qualitative methods, such as decision trees and pattern languages are discussed. Methods that help in finding creative solutions, such as brainstorming and synectics are covered..

ARC 344 ARCHITECT'S MARKET STRUCTURE

Hours (Theoretical-Practical):2+2

ECTS:5

This course gives details of architect's employment and earnings, including regional variations. It includes regulations information on bonus payments, fringe benefits and holidays.

This course aims to prepare the senior students to the market conditions that they will experience after graduation: Defines the role of the architect through economic, social and cultural parameters of the market structure; investigates the rules and regulations affecting the architect's services in both the private and the government sectors.

ARC 322 ACOUSTICS IN ARCHITECTURE

Hours (Theoretical-Practical):2+2

ECTS:5

This practical course applies the latest research on sound behavior, high-performance materials, and audiovisual systems to a wide variety of building types and uses. Case studies draw on the experience as acoustical engineers, and explain what can't be seen, only heard.

Nature of sound, acoustic design criteria, measurements, sound absorption, reverberation, airborne and solid-borne sound transmission, speech privacy, mechanical equipment noise, good hearing requirements, auditorium design, building project evaluations. Fundamental Concepts. Sound measurement. Sound in large spaces. Geometrical room acoustics. Statistical room acoustics. Reverberation time. Impulse response acoustical design criteria. Clarity index. Room impression. Initial time delay gap. Design of rooms for speech and for music. Room acoustics equation. Steady state levels in rooms. Demonstrations. Case studies and architectural details.

ARC 345 LANDSCAPE RESEARCH

Hours (Theoretical-Practical):2+2

ECTS:5

The purpose of this course is to develop among upper level graduate students in architecture the techniques and intellectual skills necessary to complete an original, academically acceptable research. While preparing the student to undertake the research process, the course aims as much as anything at developing the student's abilities to critically think about, and frame, landscape architecture.

The main aim of this course is to present a general layout of landscape architecture. Besides, the methodology of planning of urban areas, national parks, recreation centers, sport areas, highways, are the usual subjects of this course. Erosion control,

both living and non-living materials and their characteristics and standards are also presented.

ARC 319 ISSUES AND PROBLEMS IN MODERNISM

Hours (Theoretical-Practical):2+2

ECTS:5

In this course the complex relations between the Western architectural production of early twentieth century and its material and intellectual contexts is explored. We start by delving into the concepts of `aesthetic modernism` and `social modernity`. After setting the scene through an analysis of social, economic and intellectual background of what come to be known as `Architectural Modernism`, each week the course focuses on specific (architectural) productions and problems with the aim of acquainting the students with different `modernisms` as well as cases that deviate from the `Modernist` norms.

ARC 320 NEW BUILDING TECHNOLOGIES

Hours (Theoretical-Practical):2+2

ECTS:5

Construction systems reduced to the smallest possible number of identical elements have long been used by architects to build structures as well as dismantle and change them as quickly, efficiently, and economically as possible. Think of the architecture of the nomads, the Crystal Palace designed by the architect John Paxton for the London World's Fair of 1851, or the modern construction systems of the nineteenth and twentieth centuries in steel, concrete, and wood. Presentation of special construction techniques and equipment in building activities. This lecture course aims to present an over and view of large scale construction activities from feasibility studies to construction, erection, monitoring of special structures.

ARC 330 UNDERSTANDING TECTONICS

Hours (Theoretical-Practical):2+2

ECTS:5

This course is about explaining the principles and applications of tectonic theory. An advanced tutorial study on outstanding examples of architecture. Analysis of selected works. Aims at an understanding of construction techniques, materials and detailing, as well as the cultural and spiritual intentions of the architect.

ARC 372 COMPUTER AIDED DRAFTING AND DESIGN

Hours (Theoretical-Practical):2+2

ECTS:5

This course presents all common methods of computer/automated graphical construction most helpful to the architecture student, describing, in easy-to-understand terms, a wide range of hardware platforms that will run a single set of software options.

The purpose of the course is to introduce computer aided graphics applications. Two dimensional and three dimensional representation techniques are presented. Drawing, rendering, animation programs are covered. Students are expected to fully represent a project in computer environment.

ARC 346 LANDSCAPE DESIGN

Hours (Theoretical-Practical):2+2

ECTS:5

Landscape Design Fundamentals will provide students with the basic skills for graphical representation of the landscape, including the development of site plan,

section, elevation, and perspective views. The course will encourage the exploration of sustainable landscape solutions at the site scale based on the concept that a landscape designed for multiple functions (ecological, economic, and social) will meet the needs of society, while minimizing the negative impacts on the future environment.

The nature and use of natural and man-made landscape materials to develop an understanding of the making of exterior spaces and of their sequential development. A Cultural and Architectural History with stone circles and ziggurats, and traces design's evolution through to today's suburbs and theme parks. An encyclopedic account of man-made landscapes around the world. Examples of Japanese gardens, Golf Courses, and so on.

ARC 437 ARCHITECTURAL COMPOSITION

Hours (Theoretical-Practical):2+2

ECTS:5

The course addresses issues of architectural composition and form. Leaving aside demands of program and site in order to concentrate on formal relationships at multiple scales.

This course tends to develop “the language of architecture” through form at the same time to encourage confidence in personal and formal.

Origin and characteristics of the architectural composition Resources of composition.

Space, basic element of constitution of architecture. Basic elements of composition:

Shape, line, area, volume, size, interval, intensity, Basic principles of composition:

Proportion, symmetry and asymmetry, balance, penetration.. Formal properties of

composition—number, geometry, proportion, hierarchy, and orientation Directions in

perception of form. Notes on the plan. Type. The square. Layering. Linear forms.

Core and shell. Frame and object. Clusters. Subtractive spaces and the deep wall.

Articulated skin. Typological similarities of architectural forms that cut across cultural, social, historical, and geographic boundaries

ARC 323 LIGHTING IN ARCHITECTURE

Hours (Theoretical-Practical):2+2

ECTS:5

The primary focus of this course will be the study of lighting in an architectural context. The course will stress the integration of electric and natural light sources during the design process and place an emphasis upon the role light can play in shaping architecture.

Basic principles related to light and color in architecture; importance of light and color as design factors; light and vision; light sources and lighting methods; lighting fundamentals; visual comfort; design of artificial lighting systems; types of lighting, luminaries and applications.

ARC 209 BUILDING ELEMENT DESIGN

Hours (Theoretical-Practical): 2+2

ECTS:4

Building Element Design encompasses all of the issues and programs and is an essential way of approaching building projects. Understanding Building Element Design concepts will enable students to think and practice in an integrated fashion to meet the demands of today's as well as tomorrow's high-performance building projects. Topics:

Introduction to Building Element Design

Structural analysis and structural loads, building codes, load combinations
Loads on Roof structures (designing the roofs)
Loads on Roof structures (designing the roofs)
Loads on structural walls, partition walls and their load (designing the walls)
Loads on the slabs (designing the slabs)
Designing the frame elements (columns)
Designing the frame elements (beams)
Designing the foundations (shallow)
Designing the foundations (deep)
Structural analysis for the entire building (load transfer through the elements)
Structural analysis for the entire building (load transfer through the elements)
Technical reports and their importance

Non-Technical Electives

FES 365. ENTREPRENEURSHIP

Hours (Theoretical-Practical): 3

ECTS:3

This course will provide students with an understanding of issues facing entrepreneurs and an exposure to the skills involved in addressing them. We will explore how executives should approach making critical decisions during the different phases of an entrepreneurial company's life. Starting from the vantage point of the individual, we will put ourselves in the shoes of decision makers ranging from technology entrepreneurs to venture capitalists, from real estate developers to inventors.

BUS 361. LEADERSHIP

Hours (Theoretical-Practical): 3

ECTS:3

This course develops a working knowledge of leadership theory and practice. The student will also develop self-knowledge of his or her leadership philosophy and preferred leadership styles along with a skill for successful analysis of cases involving leadership.

BOS 101. Bosnian Language I

Hours (Theoretical-Practical): 2 (2-0)

ECTS: 0

This course provides Basic communication skills such as understanding and speaking in Bosnian language by understanding the structure of Bosnian language on starter level.

BOS 102. Bosnian Language II

Hours (Theoretical-Practical): 2 (2-0)

ECTS: 0

This course provides Basic communication skills such as understanding and speaking in Bosnian language by understanding the structure of Bosnian language on beginner level.

TDE 191. Turkish Language I

Hours (Theoretical-Practical): 2 (2-0)

ECTS: 0

This course provides Basic communication skills such as understanding and speaking in Turkish language by understanding the structure of Turkish language on starter level.

TDE 192. Turkish Language II**Hours (Theoretical-Practical): 2 (2-0)****ECTS: 0**

This course provides Basic communication skills such as understanding and speaking in Turkish language by understanding the structure of Turkish language on beginner level.

BUS 105. Introduction to Law**Hours (Theoretical-Practical): 3 (2-1)****ECTS: 3**

This course gives a general overview of law and legal systems. It covers the nature and sources of law, court systems, and the substantive areas of constitutional law, contracts, torts, criminal law, contracts, agency, and property. This course is geared towards providing students with the basic knowledge of all aspects of the law, critical legal thinking, and a comparative approach to the civil and common law systems. This course is a prerequisite for all other Legal Studies courses.

BUS 112. Fundamentals of Management**Hours (Theoretical-Practical): 3 (2-1)****ECTS: 3**

This course provides a thorough understanding of what is required to set up organization, motivate and manage your team successfully and provides clear structures and tools to enable you to do this. It will show you how to master the five key areas of modern management: Goal Setting; Effective Time Management; Performance Management; Motivating Your Team.

BUS 221. Marketing I**Hours (Theoretical-Practical): 3 (2-1)****ECTS: 3**

The purpose of this course is to cover subjects that relate to foundations of marketing management in modern business establishments. Topics to be taught in this course include definition and scope of marketing, marketing environment, managing marketing information, consumer and business buyer behavior, creating value for target customers, product, services and branding strategy, new product development and product life-cycle strategies, pricing products: Understanding and capturing customer value.

BUS 222. Marketing II**Hours (Theoretical-Practical): 3 (2-1)****ECTS: 3**

Marketing is a key function for all commercial and non-commercial organizations today. This course covers basic marketing subjects and gives students an opportunity to prepare a real life project through which they will have a chance to see how marketing is applied in real world. Basic topics to be covered in this course include pricing, supply chain management, retailing, wholesaling, advertising, personal selling and direct marketing.

ECO 101. Introduction to Economics I**Hours (Theoretical-Practical): 3 (2-1)****ECTS: 3**

Students will learn about essential principles of economics. They will learn how people, companies and governments should manage scarce resources in an effective way.

ECO 206. Macroeconomics**Hours (Theoretical-Practical): 3 (2-1)****ECTS: 3**

This course provides an overview of macroeconomic issues: the determination of output, employment, unemployment, interest rates, and inflation. Monetary and fiscal policies are discussed. Important policy debates such as, the sub-prime crisis, social security, the public debt, and international economic issues are critically explored. The course introduces basic models of macroeconomics and illustrates principles with the experience of the U.S. and foreign economies.

BUS 108. Business English

Hours (Theoretical-Practical): 3 (3-0)

ECTS: 3

The course aims at developing fluency and accuracy in using Business English with the help of essential business content: basic structures and vocabulary, authentic reading and listening texts (e.g. newspaper articles, interviews, etc.), business reports and case studies. It covers the most important areas of management, production, marketing, finance and macroeconomics.

BUS 103. Introduction to Business

Hours (Theoretical-Practical): 3 (2-1)

ECTS: 3

This course presents a balanced view of business; the strengths, weaknesses, successes, failures, problems, and challenges. It provides students a base for more advanced courses. The objective of this course is to provide students a clear and complete description of the concepts underlying business and illustrate the dynamism and liveliness of business organizations and people who operate them with real life examples.

BUS 321. Production Management

Hours (Theoretical-Practical): 3 (2-1)

ECTS: 3

The course includes topics such as systems, models and modelling approaches, decision analysis, certainty, risk and uncertainty conditions, linear programming, sensitivity analysis and transportation and assignment problems.

BUS 114. Communication Skills

Hours (Theoretical-Practical): 3 (2-1)

ECTS: 3

Communication skills are an essential element every employee and manager must have as part of their standard tool set. In this course, through interactive lectures, self-assessments, role-playing activities and video simulations, students gain practical experience passed on a flexible, genuine and self-confident approach. They also gain the skills to collaborate on written reports and oral presentations honing their communications skills

BUS 324. Operations Research

Hours (Theoretical-Practical): 3 (2-1)

ECTS: 3

Defining a problem, developing a model appropriate to a problem, obtaining the solution of the model, analyzing the results, testing and implementing the model.

BUS 337. International Marketing

Hours (Theoretical-Practical): 3 (2-1)

ECTS: 3

The purpose of this course is to introduce students with the concepts of international marketing. The course covers topics that pertain to marketing of goods and services in an international environment. Case studies and class discussions about the challenges of marketing in global environments will enhance student learning in this

course. Some basic concepts covered in this course include regional market characteristics and preferential trade agreements, social and cultural environments, the political, legal and regulatory environments, importing, exporting and sourcing, global market entry strategies, brand, product and pricing decisions, global channel and communication decisions.

EDU 135. Introduction to Education

Hours (Theoretical-Practical): 3 (3-0)

ECTS: 3

The course looks at basic concepts in education and the bases of education as an academic discipline (philosophical, social, legal, psychological, economic and political principles). The course considers the historical development of education, methods in educational sciences, Turkish educational system and principles, the role of the teacher in the educational system, teaching as a profession and practices and developments in the field of teacher training.

EDU 136. Educational Psychology

Hours (Theoretical-Practical): 4 (2-2)

ECTS: 3

Educational Psychology focuses on how psychological theory and concepts can be understood and inform effective classroom practices. Topics include cognitive and social development, theories of motivation and learning, classroom management, individual and group differences and student assessment. Attention will be directed toward the nature and conditions of learning, critical aspects of learning and the problems encountered in fostering and directing learning.

EDU 235. Teaching Principles and Methods

Hours (Theoretical-Practical): 4 (2-2)

ECTS: 3

Basic concepts related to instruction, principles of learning and instruction, the importance and utilities of planned steps in instruction, planning instruction (yearly, weekly lesson plans), learning and instruction strategies, instructional methods and techniques, making a linkage between these methods, techniques and the practice, instructional materials, the roles and responsibilities of the teachers in enhancing the quality of instruction, competencies of teacher.

EDU 236. Instructional Technology and Material Design

Hours (Theoretical-Practical): 4 (2-2)

ECTS: 3

With a great deal of investment being put into outfitting schools with technology, the question of whether or not it is worth the investment is a valid one. Ongoing developments in technology necessitate to build a bridge between education and technology use actively in classroom. This course aims to provide an understanding that necessity and solutions. Latest developments for that integration goal will be introduced and students will be guided to prepare practical use of technological skills through in-class activities and assignments.

EDU 335. Classroom Management

Hours (Theoretical-Practical): 2 (2-0)

ECTS: 3

One of the major challenges teachers face in their practice is classroom management. When a teacher does not have essential management skills, effective instruction may not occur in the classroom. In this course you will learn to create a productive learning environment.

EDU 336. Measurement and Evaluation

Hours (Theoretical-Practical): 4 (2-2)

ECTS: 3

Concepts of measurement and evaluation, classroom test construction, creation and use of derived scores, selection and use of published measurement instruments, alternative assessment, and current issues will be covered in the course.

EDU 435. Guidance and Counseling

Hours (Theoretical-Practical): 4 (2-2)

ECTS: 3

The aim of this course is to give you the knowledge and skills necessary to become a qualified guidance and counselling. Guidance promotes personal, social, educational and vocational development in individuals.

EDU 436. Educational System and School Management in Europe

Hours (Theoretical-Practical): 3 (3-0)

ECTS: 3

EDU 436 course examines the cultural values and historical developments which have shaped schooling in EU. The syllabus focuses mainly on the educational system in the leading European countries but also compares educational systems in Europe, Asia and the USA. As well as exploring education from kindergarten to university in Europe, students are placed in elementary schools in Europe to teach one hour of English per week. The course combines the theoretical aspects of teaching at the same time as providing students with the chance to teach.