

NEAR EAST UNIVERSITY
GRADUATE SCHOOL OF APPLIED SCIENCES
INTERIOR ARCHITECTURE DEPARTMENT

BUILDING DESIGN
GRADUATE PROGRAMME

COMPULSORY COURSES (WITH THESIS PROGRAMME)

CODE	COURSE NAME	T	P	C
GCC603	RESEARCH METHODS	3	0	3
IAR 598	SEMINAR (MASTER)	-	-	-
IAR 599	THESIS (MASTER)	-	-	-

COMPULSORY COURSES (WITHOUT THESIS PROGRAMME)

CODE	COURSE NAME	T	P	C
GCC603	RESEARCH METHODS	3	0	3
IAR 502	DESIGN STUDIO I	3	0	3
IAR 511	DESIGN STUDIO II	3	0	3
IAR 597	TERM PROJECT (DISSERTATION)	-	-	-

ELECTIVE COURSES (FOR WITH THESIS & WITHOUT THESIS PROGRAMME)

CODE	COURSE NAME	T	P	C
IAR 503	SPACE ANALYSIS	3	0	3
IAR504	PUBLIC SPACE ANALYSIS	3	0	3
IAR 505	STRUCTURAL ANALYSIS	3	0	3
IAR 506	MODULAR COORDINATION	3	0	3
IAR 508	HISTORY OF STYLES	3	0	3
IAR 509	EUROPEAN IARHITECTURE	3	0	3
IAR 510	MEDITERRANEAN ARCHITECTURE	3	0	3
IAR511	TENDENCIES & STYLES IN XX. CENTURY ARCHITECTURE	3	0	3
IAR 513	INTEGR.OF THE CONSTRUCTION SYSTEMS WITH FUNCT. SYSTEMS	3	0	3
IAR 516	ENVIRONMENTAL DESIGN	3	0	3
IAR517	SPATIAL EXPLORATION: THEORY AND PRACTICE OF EMPIRICAL SPATIAL ANALYTICS	3	0	3
IAR 519	COMPUTER AIDED DESIGN AND APPLICATION I	3	0	3
IAR521	MUSEUM DESIGN	3	0	3
IAR522	MUSEOLOGY	3	0	3
IAR525	PHOTOGRAPHY IN ARCHITECTURE	3	0	3
IAR 527	SYSTEM ANALYSIS	3	0	3
IAR 528	OTTOMAN ARCHITECTURE	3	0	3
IAR 529	COMPUTER AIDES DESIGN AND APPLICATION II	3	0	3
IAR 530	CONSTRUCTION RESEARCH PROJECT 1	3	0	3
IAR 531	IARHITECTURAL DESIGN & PRACTICE	3	0	3
IAR 536	TRADITIONAL CONSTRUCTION TECHNIQUES	3	0	3
IAR 537	HISTORICAL DEVELOPMENT OF HOUSING	3	0	3
IAR 538	CONSERVATION AND RESTORATION TECHNIQUES	3	0	3
IAR539	ARCHITECTURAL RESEARCH AND DOCUMENTATION	3	0	3

IAR 540	CONSERVATION CONCEPTS	3	0	3
IAR541	OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT	3	0	3
IAR 542	CONTEMPORARY CONSTRUCTION	3	0	3
IAR543	CONSTRUCTION AND MATERIAL	3	0	3
IAR 544	CONSTRUCTION AND EQUIPMENT	3	0	3
IAR 545	CONSTRUCTION & ORGANIZATION	3	0	3
IAR 546	STRUCTURAL SYSTEMS	3	0	3
IAR547	STEEL CONSTRUCTION	3	0	3
IAR 548	INDUSTRIAL CONSTRUCTION SYSTEMS	3	0	3
IAR 549	CONSTRUCTIONAL DEFECTS	3	0	3
IAR551	CULTURAL ISSUES IN DESIGN	3	0	3
IAR 555	CONSTRUCTION SYSTEMS OF TRADITIONAL TURKISH HOUSE	3	0	3
IAR556	EVALUATION OF HISTORICAL ENVIRONMENT	3	0	3
IAR 557	VERNACULAR IARCHITECTURE	3	0	3
IAR 558	CONSERVATION PROJECT I	3	0	3
IAR559	CONSERVATION PROJECT II	3	0	3
IAR 560	SOLAR ARCHITECTURE I	3	0	3
IAR 565	PREFABRICATION AND PREFABRICATED BUILDINGS II	3	0	3
IAR 566	EFFECTS OF ORIENTATION AND THERMAL COMFORT	3	0	3
IAR 567	SOLAR IARCHITECTURE II	3	0	3
IAR 568	CONSTRUCTION SYSTEMS	3	0	3
IAR570	ARCHITECTURE IN CONTEXT			
IAR577	VERNACULAR IARCHITECTURE AND SUSTAINABILITY II	3	0	3
IAR578	UNIVERSAL DESIGN, HISTORY AND THEORY	3	0	3
IAR 580	TOTAL QUALITY MANAGEMENT	3	0	3
IAR 581	USER'S NEEDS	3	0	3
IAR582	ARCHITECTURE AND IDENTITY	3	0	3
IAR 583	SUSTAINABLE ARCHITECTURE I	3	0	3
IAR 584	SUSTAINABLE ARCHITECTURE II	3	0	3
IAR 585	PRODUCT DESIGN	3	0	3
IAR587	THERMAL COMFORT IN HOUSING	3	0	3
IAR589	CRITICAL THEORIES ON PRODUCTION OF URBAN SPACE	3	0	3
IAR594	SUSTAINABLE URBAN DEVELOPMENT	3	0	3
IAR595	NEW DESIGNS IN HISTORICAL ENVIRONMENT	3	0	3

T: Weekly Theoretical Course Hour

P: Weekly Practical Course Hour

C: Course Credit

**DEPARTMENT OF IARCHITECTURE
BUILDING DESIGN GRADUATE PROGRAMME**

COURSE NAME : Research Methods

COURSE CODE : GCC 603

COURSE CREDIT : 3

COMPULSORY/ ELECTIVE : Compulsory

CONTENTS OF THE COURSE: Introduction to reseIARh, publications and ethics, data presentations, statistical analysis, experimental design, descriptive social surveys, descriptive case studies, analytical models and correlation, predictive modeling, landscape assesment techniques, reseIARh paper publishing and ethics.

COURSE NAME : Structural Systems

COURSE CODE : IAR 546

COURSE CREDIT : 3

COMPULSORY/ ELECTIVE : Elective

CONTENTS OF THE COURSE: System, structure, construction and definition of other terms. The phases and development of structural systems. The ability of construction materials those supplies balancing, solid block, the carchass and complex systems and the inspection of these systems according to the technology of contemporary construction. The definition of superficial structural systems, the importance and the principles of working system.

COURSE NAME : Space Analysis

COURSE CODE : IAR 503

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Definition of space concepts. Examples of different spaces. The relation between space and function. Differentiations of requirements and aesthetics during the history.

COURSE NAME : Public Space Analysis

COURSE CODE : IAR 504

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Definition of space and public space concepts is made. The relationship between space and function is examined. Examples of different public spaces are explored. Needs and aesthetic differences are determined throughout history.

COURSE NAME : Structural Analysis

COURSE CODE : IAR 505

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Definition of structural. Various structure elements and the relation between them. Improvement and development of structural elements under different circumstances through history.

COURSE NAME : Moduler Coordination
COURSE CODE : IAR 506
COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: The aim of the course is to emphasize the importance of standardization in building components together with the discipline of “Dimensional Coordination” which is the most important factor in the industrialization of the building process, the course also explains the modular concept and deals with the size and location of components and elements of construction by referring to examples and by providing some modular design practices.

COURSE NAME : History Of Styles
COURSE CODE : IAR 508
COURSE CREDIT : 3
COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Explanation of the subject. Historical frame . Period style , regional, personal style and relations between each other. Form in plastic arts. Principal elements and particularities of style formation. Methodology of style critic. From prehistory up to modern time; the chronology of cultural environment.

COURSE NAME : European IARhitecture
COURSE CODE : IAR 509
COURSE CREDIT : 3
COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Introduction to western Architecture. Reasons of its formation. Developments during history. Influences with Anatolian Turkish Architecture

COURSE NAME : Mediterranean IARhitecture
COURSE CODE : IAR 510
COURSE CREDIT : 3
COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Introduction to western Architecture. Reasons of its formation. Influences.

COURSE NAME : Tendencies & Styles In XX. Century IARhitecture
COURSE CODE : IAR 511
COURSE CREDIT : 3
COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: The definition and researches of trends in 20th century-seminaries about subjects.

COURSE NAME : Integration Of Construction Sys. With Functional System
COURSE CODE : IAR 513
COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Application of new-airconditioning, heating, electrical and fire extinguisher systems in old buildings. Analysis of coordination and administrative problems and analysis of present problems which will be the base for new administration.

COURSE NAME : Environmental Design

COURSE CODE : IAR 516

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: The basic principles and definition of concepts frequency distribution. Exemplifying methods hypothesis test, regression, correlation and trend analyses, indexes, inspection of statistics and comments. Development of linear and unlinear amphine models and analysis. Orthogonal polynoms. Direct research and simplex methods. Industrial and building production.

COURSE NAME : Spatial Exploration: Theory and Practice of Empirical Spatial Analytics

COURSE CODE : IAR517

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: The course focuses on quantitative methodological approaches in urban design, planning, and development. In the beginning, the course focuses on establishing an understanding of data collection methods, proper analysis, and statistical significance. The data collection methods regarding morphological aspects of urban form is presented. Furthermore, the course explores spatial analytical methods such as space syntax, street centrality, visual graph analysis, and agent-based modeling. Space syntax is introduced as a bottom-up configurational approach toward understanding complex systems by exploring their fundamental components. The natural theory of movement, movement economy, land use, the dual structure of urban form is the key components of these analyses. The local and global movements of people and vehicular accessibilities are shown using graph analysis. Visual graph analysis is explored as a tangible tool for quantifying human perception and the associated qualities with it. Agent-based modeling is introduced as a powerful computational tool for analyzing potential human movement based on their field of vision. The empirical aspects of all aforementioned methods are explored in case studies and the possibility of applying mix-methods and multi-disciplinary approaches are practiced by students.

COURSE NAME : Computer Aided Design & Application I

COURSE CODE : IAR 519

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Introduction to architecture up-to-date designing and drawing programs on computer.

COURSE NAME : Museum Design

COURSE CODE : IAR 521

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Today museums are the best places to visit in order to explore both for touristic and educational purposes. They serve to the economy of the countries as well as educational purposes for both locals and foreigners. Global understanding of contemporary museum design is a total complex to serve multi-purpose such as research, educational programs, permanent and temporary exhibitions, seminars and lectures. The aim of this course is to explore museology from early historical examples up to contemporary approaches by examining selected examples.

COURSE NAME : MUSEOLOGY

COURSE CODE : IAR522

COURSE CREDIT : 3

COMPULSORY/ELECTIVE: Elective

CONTENTS OF THE COURSE: Today museums are the best places to visit in order to explore both for touristic and educational purposes. They serve to the economy of the countries as well as educational purposes for both locals and foreigners. Global understanding of contemporary museum design is a total complex to serve multi-purpose such as research, educational programs, permanent and temporary exhibitions, seminars and lectures. The aim of this course is to explore museology from early historical examples up to contemporary approaches by examining selected examples.

COURSE NAME : Photography In Architecture

COURSE CODE : IAR 525

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: History and technical aspects of photography color and light, accessories and materials. Developing and printing in dark room. Indoor and outdoor shoots

COURSE NAME : System Analysis

COURSE CODE : IAR 527

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Temporary system analyzing. Definition and of problem. System cost analyzing. Classification. Settling of questioning data. Choosing of computers system. Controlling and managing of project.

COURSE NAME : Ottoman Architecture

COURSE CODE : IAR 528

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Foundation of Ottoman State. Developing periods and getting smaller periods. Political, economical, cultural dates, art and Architectural media. Political relationships with eastern and western countries, art and Architectural effects.

Architectural periods; early Ottoman, classic, late classic periods. 18th century Tulip period. Western movements in 19th Century and its IARhitectural reflections. National IARhitecture period. Social structure, art and Architecture in early Republic period. Important architect's buildings.

COURSE NAME : Computer Aided Design and Application II

COURSE CODE : IAR 529

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Creating new commands with Autolisp language. Introduction to Autoshade programming and its commands. Practices.

COURSE NAME : Construction Research Project I

COURSE CODE : IAR 530

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Studies made by the student and her/his advisor in the context of the topic they determined.

COURSE NAME : Construction Research Project I

COURSE CODE : IAR 530

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Studies made by the student and her/his advisor in the context of the topic they determined.

COURSE NAME : IARhitectural Design & Practice

COURSE CODE : IAR 531

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Forming the relation among environment-space-structure, in IARhitectural design . Forming the design decisions principles on case studies.

COURSE NAME : Traditional Construction Techniques

COURSE CODE : IAR 536

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Load – Bearing Wooden construction techniques. Masonry construction technique. Adobe and brick examples. Sub-masonry construction technique. Stone and wooden supports, examples. Wooden structure construction techniques. Definitions of Traditional building elements, their classifications according to structural properties. Studs and columns, materials and construction techniques, components and ornamentation methods. Foundations, materials and components. Slabs, materials and components, arches, cantilevers, roof covers, vaults, domes, etc.

COURSE NAME : Historical Development Of Housing

COURSE CODE : IAR 537

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Search of the historical impact of the environmental factors and productivity and life style on housing. The analysis of the impact of technological and socioeconomically changes and development on housing.

COURSE NAME : Conservation And Restoration Techniques

COURSE CODE : IAR 538

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Terminology, sources. Conceptual approach to restoration methods and techniques. Basic methods of conservation and restoration. Restoration of building elements. Analysis of materials and construction technology. Restoration throughout disciplines. Use of traditional materials and techniques in restoration. Urgent precautions for conservation. Conservation and restoration techniques in masonry structural system. Conservation and restoration techniques in structural wood system. Conservation methods for wood and masonry materials.

COURSE NAME : IARhitectural ReseIARh and Documentation

COURSE CODE : IAR 539

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Studies made by the student and her/his advisor in the context of the topic they determined.

COURSE NAME : Conservation Concepts

COURSE CODE : IAR 540

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Definition of conservation concept. Cases which causes conservation. Anti-conservative ideas. Historical development of the theory of architectural conservation; consciousness after the industrial revolution and the conservation cult of the late 19th century; conservation and the unity of style; destruction for the sake of restoration and the anti-restoration theory; conservation theory of the early 20th century; analytical approach towards the structures and the original materials; importance of recording and documentation; conservation concepts of the first half of the 20th century and the Venice Charter; Amsterdam Declaration and conservation of the urban historic sites and historic centers; Lausanne Charter and conservation and anastylosis in archaeological sites; authenticity, changing criteria and concept of authenticity in architectural conservation; re-use of the traditional buildings.

COURSE NAME : Contemporary Construction

COURSE CODE : IAR 541

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Occupational safety and health management is a post-graduate theoretical course on the safety, health and welfare of individuals in the workplace. It focuses on how to avoid particular pre-existing conditions causing a problem in an occupational environment, and the preventative measures that can be taken to eliminate those problems. Often, people encounter health and occupational problems in their workplace due to the detrimental effect the work physical environment may pose to them, suggesting that the workplace and working environment need to be analysed and studied in order to minimize or eliminate these occupational problems. At the end of this course, it is anticipated that students will be conversant with the goals of occupational safety and wellness programs, including fostering a safe and healthy workplace environment. They will also realize a wide array of workplace hazards (e.g., fire, ergonomic, mechanical and machine, noise and vibration, violence, bloodborne pathogens and bacterial hazards, musculoskeletal disorders and cumulative trauma disorders), including physical and psychosocial hazards, and how these risks can be prevented or eradicated to improve the health and safety of people at the workplace. This course will be delivered through weekly lectures, as well as engaging students in discussions, reseIARh of related literature and submissions.

COURSE NAME : Contemporary Construction

COURSE CODE : IAR 542

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Industrialized Systems: The technologies those are applied in a construction site. The technologies those are based on factory production. (Standardization several, systems based on cement material, production in prefabrication, the information about the problems of transportation and mounting.

COURSE NAME : Construction and Materials

COURSE CODE : IAR 543

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: The application possibility of construction materials according to the construction system and technology. The theory. The physical and chemical properties of materials. The strengthening of constructional system of building.

COURSE NAME : Construction & Equipment

COURSE CODE : IAR 544

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Introduction to equipments which effect design and construction directly. Conceptual knowledge about elements and components of systems related with heating, ventilating, lighting and communicating; how they can be part of structure, space and/or other constructional segments of building. Finding out possible problems and solutions that can be faced throughout the period of design, construction and usage of these systems. General dimensional information about equipments and methods of

determining dimensions. Specifications of fitting different equipments and their relationship with the building. Examining important applications and researches.

COURSE NAME : Construction & Organization

COURSE CODE : IAR 545

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Management and concepts of management about building and construction. Cooperative planning of building production and administration economics. Design decisions directed towards application. Evaluating the results of design and construction field. Relations between production and legality of business. Developing a method which will provide an organic relationship among the design, construction and production organization together with the constructional segments.

COURSE NAME : Steel Construction

COURSE CODE : IAR 547

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: The history of steel buildings. Information about properties of steel. The design principles of steel buildings. The determination of static system and comparison with other systems. The designing principles of plane structural systems, space frame systems, cable systems, and steel – carcass systems.

COURSE NAME : Industrial Construction Systems

COURSE CODE : IAR 548

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: The dimensional studies with theoretic and practical scales. The techniques, information about materials, information about equipments, application, consultancy. Definition of three dimensional studies, principles and methods, kinematic models, mass models, ergonomic models, presentation models, prototypes, selection of model according to the aim. Techniques of making models. The relation between model-users model-function the photographing of model, films, videos and simulation techniques.

COURSE NAME : Constructional Defects

COURSE CODE : IAR 549

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Definition of building and constructional defects. The systems of traditional and developed building types. The inspection of relations between construction and material, labour, constructor design and economy. Analyzing details and design mistakes and researching the solutions. The research and analysis on examples.

COURSE NAME : Cultural Issues in Design

COURSE CODE : IAR 551

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Definition of Cultural Issues in relation with architectural Design. Examining spatial behavior within a cultural context. Discussion of components of culture as a way of life of a typical group, a system of symbols, meanings and cognitive schemata and a set of adaptive strategies for survival related to ecology and resources. Reviewing the scope of cultural studies; comprising technology, knowledge and value systems. Research on related theories and examples from different places and groups.

COURSE NAME : Construction Systems Of Traditional Turkish House

COURSE CODE : IAR 555

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: House's formation, taking shape and development in Turkish life culture. The concept of XIX. Century Traditional Turkish House which has typical characteristics. Plan, function, elevation formations, material, construction techniques and decorate about Turkish House. Local peculiarities. Making analyze on Turkish House with contemporary life.

COURSE NAME : Evaluation Of Historical Environment

COURSE CODE : IAR 556

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Concept of historical environment / Definitions / Explanation and classification of site/Determined elements of historical environment, jointly value, urban points, established seems/settlings of edge. archaeological areas. Historical towns which have life. Rural settlings. Landscape. Reasons of depravation about historical environment. Unplanning and planning mistakes. Natural and artificial worn. Functional and economical obsolete.

COURSE NAME : Vernacular IARhitecture

COURSE CODE : IAR 557

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Evaluation of traditional architecture. Features of vernacular architecture. Relationship between traditional and vernacular architecture. Differences in vernacular architecture and its reasons.

COURSE NAME : Conservation Project I

COURSE CODE : IAR 558

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Historic survey and analysis of the monument in terms of history of art and IARhitecture; the survey and documentation of the present condition of a historic monument with drawings and photographs; the restitution of the original building; the

stages of its transformations through time; structural deformation and material deterioration characteristics; conservation problems in terms of materials; the discussion and evaluation of various methods of intervention such as cleaning, strengthening, renovation, etc. for the studied monument.

COURSE NAME : Conservation Project II
COURSE CODE : IAR 559
COURSE CREDIT : 3
COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Spatial analysis on the building's environment. Preparing the street silhouettes. Establishment of conservation problems on urban scale. Analytic establishment on single building scale. Establishments on original construction details. Examining the convenience of functions that will be applied to building. Determining the conservation decisions on scale of single building and environment and project making.

COURSE NAME : Solar Architecture I
COURSE CODE : IAR 560
COURSE CREDIT : 3
COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: This course will study about energy and kind of energy, nonrenewable and renewable energy and using of energy in architecture. Solar energy is kind of renewable energy and it will address the following issues: Solar radiation, solar cells, pyranometers, geometry of the earth and sun, reckoning of time, geometry of collector and solar beam, all of the angles, effects of the earth's atmosphere, active and passive system architecture (Trombe wall, double glass, green house), conception effective energy: climate parameters, conception parameters (choice location for building, orient and shape of building, organization of inner spaces, optics and thermophysical characteristic of building shell, heat transfer and heat transfer for plane wall and composite wall. This course will also study heat exchange of buildings.

COURSE NAME : Prefabrication & Prefabricated Buildings II
COURSE CODE : IAR 565
COURSE CREDIT : 3
COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Explanation of prefabrication. The classification of the prefabricated elements which are produced in construction site and factory in terms of moulds. The purpose of application of tunnel formwork and sliding formwork. The production technology and costing economy. The determination of other production systems according to the cost economy. The determination of panel systems. The factors those effect the system. The analyze of the inputs during design, production, transportation and mounting. The completely industrialized building production systems. The machine transportation and mounting. The completely industrialized building production systems. The machine technologies. Cell systems. Analyzes of structural and constructional systems. The inspection of examples.

COURSE NAME : Effects of Orientation & Thermal Comfort

COURSE CODE : IAR 566

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: The general description of relation between climate-design. Climate types-directions and principles of building shaping. The role of hot-dry, hot-wet weather and local topography. Collection and gathering evaluation of weather result. Drawing technique of bioclimatic graphic “Hottest region diagram” movements of earth. Definition of sun and angles of sunlights. Techniques to find angles by calculation, diagram, equipment observation. Effects of sunradiation on earth. Calculation techniques of local latitude and amount of radiation. Determining the dimensions of vertical and horizontal control elements. Determining the critical periods of sun controls; dimensions of critical periods for daily sunlight angles, to decrease the results of monthly critical periods to one dimension, to get common dimensions from the results of yearly critic period. Shaping elevations (facades) for sunlight angles and other natural evaluation. Shaping and optimum directioning of building according to the common results of evaluations (sol-air principle, surface-film reflection) Special definition of weather differentiation and town (city) designing. Building thermal comfort (natural and artificial climatization) to work the collectors according to the weather properties.

COURSE NAME : Solar Architecture II

COURSE CODE : IAR 567

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: The fields those the solar system are used. The heating of using water, the heating of heating water, the heating of using and heating water all together, climating cooling and heating of buildings. Heating of swimming pools. Distillation and supplying drinking water. Drying fruits and vegetables. Production of electric-power. The conversion of solar energy to other kinds of energies. Thermal conversion systems. The heat properties and conduction properties of construction materials. The hydrogen energy. Examples on solar architecture.

COURSE NAME : Construction Systems

COURSE CODE : IAR 568

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Constructional systems concept. Basic elements of constructional system; sources, time, product. Compulsories; system’s environment, aims, criterias. Changes of constructional systems under the effect of sources, time , product, organization, simplicity to complexity, smaller scales to larger scales, singularity to plurality. Parallel changes on constructional systems together with social and technological changes. Properties of construction sector. Role of product and demand on the formation of constructional systems. Relationship between technology and organization. Evaluation of constructional systems, considering source–usage, speed and quality. Principles on the choice of constructional systems. Applied subjects; construction system analysis; comparisons of constructional systems according to source-usage; time analysis of different systems.

COURSE NAME : Architecture in Context

COURSE CODE : IAR 570

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Architecture in relation with social, political, economical, cultural, technological boundaries. Examining spatial behavior within context and discussion of architectural design approaches that can be defined as other or architecture with-out defined boundaries of context.

COURSE NAME : Vernacular Architecture and Sustainability II

COURSE CODE : IAR 577

COURSE CREDIT : 3

COMPULSORY/ELECTIVE: Elective

CONTENTS OF THE COURSE: Examining the architectural characteristics and spatial qualities of vernacular architecture in different regions of the world. Understanding the different effects like geographical location, topography and climate on vernacular buildings in contributing on sustainability.

COURSE NAME : Universal Design, History and Theory

COURSE CODE : IAR 578

COURSE CREDIT : 3

COMPULSORY/ ELECTIVE : Elective

CONTENTS OF THE COURSE: The course commences with introducing theories and concepts of universal design (UD), inclusive design, and human-centred design (HCD). At this stage, theories and definitions by scholars will be discussed while the students present their short essays weekly in regards to the main question of each session. The learning process includes three stages of awareness training based on bibliographical study, subjective experience through case study analysis, and learning from case study synthesis. The next main topic of the class is practicing universal design which includes universal design principles, design for human performance, social participation, and design with nature.

COURSE NAME : Total Quality Management

COURSE CODE : IAR 580

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: This course focuses on the essence, principles, and practices of total quality management (TQM). Some of the ideas and topics that are covered are: process improvement; process orientation; service quality; human resources; customer satisfaction programs; quality function deployment; process control and capability; role of inspection; economics of quality; productivity measurement; learning and organizational performance measures; and teachings of Deming, Juran, and Crosby.

COURSE NAME : User's Needs

COURSE CODE : IAR 581

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: "User's needs" as a course includes environmental factors which are required for individual or communal activities. Physical and psycho-social needs and user needs according to building typologies are also examined within the frame of performance criteria

COURSE NAME : Architecture And Identity

COURSE CODE : IAR 582

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Architectural identity changes according to the different geographic areas and sites in which different societies live. Aim of the course is the examination and identification of factors that are the causes of the formation and change of Architectural identity. Definition of cultural identity, personal identity, group identity, social identity, environmental identity, urban identity, institutional identity and Architectural identity and interactions between them. The main notions of human, environment and culture, relations between them and their effects on “Architect profile” and “Architectural identity”, the visual architectural identity components.

COURSE NAME : Sustainable Architecture I

COURSE CODE : IAR 583

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: The course provides opportunities for participants to engage in current debates about the potential role of Architecture in an era of climate change. Also this course will be set aside to provide an insight into the awareness and culture on which sustainability is based, presenting the different contexts in which it can be applied, retracing the history of the exploitation of renewable resources right up to an overview of current transnational energy policies. You will engage in research, academic rigorous discipline, and be expected to generate evidence-based design decisions and design guidance.

COURSE NAME : Sustainable Architecture II

COURSE CODE : IAR 584

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Constructional systems concept. Basic elements of constructional system; sources, time, product. Compulsories; system’s environment, aims, criterias. Changes of constructional systems under the effect of sources, time , product, organization, simplicity to complexity, smaller scales to larger scales, singularity to plurality. Parallel changes on constructional systems together with social and technological changes. Properties of construction sector. Role of product and demand on the formation of constructional systems. Relationship between technology and organization. Evaluation of constructional systems, considering source–usage, speed and quality. Principles on the choice of constructional systems. Applied subjects; construction system analysis; comparisons of constructional systems according to source-usage; time analysis of different systems.

COURSE NAME : Product design

COURSE CODE : IAR 585

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE : The BSc Product Design programme is one half of the study area of Product Design. This course area focuses on and helps you develop the key skills that are needed to allow you to work within the product design industry with specialist focus on the technical aspects related to product operation and production. You will develop your skills in a well-equipped and stimulating environment that constantly encourages you to push yourself and your skill development.

COURSE NAME : Thermal Comfort in Housing

COURSE CODE : IAR 587

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Effects of sunradiation on earth. The general description of relation between climate-design in housing. Collection and gathering evaluation of weather result. Definition of sun and angles of sunlights. Determining the critical periods of sun controls; dimensions of critical periods for daily sunlight angles, to decrease the results of monthly critical periods to one dimension, to get common dimensions from the results of yearly critic period.

COURSE NAME : CRITICAL THEORIES ON PRODUCTION OF

URBAN SPACE

COURSE CODE : IAR 589

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : ELECTIVE

CONTENTS OF THE COURSE: Theories of urban space, production and reproduction of urban space, social justice in spatial dimension, urban geographies, critical discussion upon capital-based urban space transformations, uneven urban development, capital-intensive urbanization, righ to the urban space.

COURSE NAME : Sustainable Urban Development

COURSE CODE : IAR 594

COURSE CREDIT : 3

COMPULSORY/ELECTIVE: Elective

CONTENTS OF THE COURSE: This course is about understanding sustainable urban development policies and implementations in urban-neighbourhood scale. It also gives relative reseIARh methods for monitoring sustainable development targets in urban zones. Additionally, relative sustainable city, spatially sustainable urban growth implementations from different countries are explained by various references.

COURSE NAME : New Designs in Historical Environment

COURSE CODE : IAR 595

COURSE CREDIT : 3

COMPULSORY / ELECTIVE : Elective

CONTENTS OF THE COURSE: Design Principles (approaches) of new buildings designed in historical environment. Explanation of historical environment, importance of historical environment as a design criteria. Explanation of different design approaches of new designs in historical environment. Discussions of the different design principles over examples built in

different historical environments. Role and importance of New Designs in Historical Environments.

COURSE NAME : TERM PROJECT (MASTER)
COURSE CODE : IAR 597
COURSE CREDIT : non- credit
COMPULSORY / ELECTIVE : Compulsory (for without thesis programme)
CONTENTS OF THE COURSE: A comprehensive research and a report on the selected IARhitectural subject.

COURSE NAME : SEMINAR (Ms)
COURSE CODE : IAR 598
COURSE CREDIT : non- credit
COMPULSORY / ELECTIVE : Compulsory
CONTENTS OF THE COURSE: Information on presentation and discussion, method and techniques. Decision of common rules. Deciding subjects related to themes, self criticism and evaluation on subjects. Learning presentation and discussion methods and techniques for scientific researches. Application of experiences on a subject.

COURSE NAME : THESIS (MASTER)
COURSE CODE : IAR 599
COURSE CREDIT : non- credit
COMPULSORY / ELECTIVE : Compulsory
CONTENTS OF THE COURSE: A comprehensive research on the selected field of IARhitecture. A completed Master's thesis must present the author's ideas clearly, precisely and correctly. The thesis should guide a reader to understand: i) what the master's thesis proposes, ii) why it is relevant to the field, iii) how the systematic approach explores the master's reseIARh question, and iv) what conclusions are reached.