İZMİR INSTITUTE OF TECHNOLOGY
GRADUATE SCHOOL OF ENGINEERING AND SCIENCES

(It will be applied from 2016-2017 Fall)

DEPARTMENT OF ARCHITECTURE

PROGRAM IN MASTER OF SCIENCE

LIST OF COURSES

FALL SEMESTER

Course Code	Course Name	Core/ Elective	Prerequest	Credit	
AR 501	Research Methods 1: Introduction to Fields of Research in Architecture	Core		(2+2)3	
AR 523	*Introduction to Architectural Historiography	Core elective		(3+0) 3	
AR 540	*Socio-Cultural Studies in Architecture	Core elective		(3+0) 3	
AR 553	*Project Management	Core elective		(3+0) 3	
AR 581	*Principles of Building Physics	Core elective		(2+2) 3	
	ELECTIVE COURSE				
	ELECTIVE COURSE				

SPRING SEMESTER

Course Code	Course Name	Core/ Elective	Prerequest	Credit	
AR 526	Seminar	Core		(0+2)NC	
	ELECTIVE COURSE				
	ELECTIVE COURSE				
	ELECTIVE COURSE				

FALL SEMESTER

Course Code	Course Name	Core/ Elective	Prerequest	Credit	
AR 500	M.S. Thesis	Core		(0+1)NC	
AR 8XX	Special Studies	Core		(8+0)NC	

SPRING SEMESTER

Course Code	Course Name	Core/ Elective	Prerequest	Credit	
AR 500	M.S. Thesis	Core		(0+1)NC	
AR 8XX	Special Studies	Core		(8+0)NC	

Core-Elective Courses

At least one of the following courses must be taken.

Course Code	Course Name	Prerequest	Credit	
AR 523	Introduction to Architectural Historiography	Core elective	(3+0) 3	
AR 540	Socio-Cultural Studies in Architecture	Core elective	(3+0) 3	
AR 553	Project Management	Core elective	(3+0) 3	
AR 581	Principles of Building Physics	Core elective	(2+2) 3	

Instructions:

*Students must take one of the four courses according to their research area.

İZMİR INSTITUTE OF TECHNOLOGY
GRADUATE SCHOOL OF ENGINEERING AND SCIENCES

(It will be applied from 2016-2017 Fall)

Elective Courses

Course Code	Course Name	Prerequest	Credit	
AR 502	Thesis Research	AR 501	(2+2)3	
AR 602	Research Methods 2: Qualitative and Qualitative Approaches	AR 601	(2+2)3	
AR 511	Research into Special Topics in Architectural Design I		(2+2)3	
AR 514	Research into Special Topics in Architectural Design II		(2+2)3	
AR 517	Housing in Turkey		(3+0)3	
AR 518	Glass in 20th –Century Architecture		(3+0)3	
AR 519	Writing on Space		(3+0)3	
AR 520	Historical Change and Architectural Theory: From the Industrial Revolution to Post-Modernism		(3+0)3	
AR 521	Contemporary Trends in Architecture		(3+0)3	
AR 522	Architectural Design Approaches		(3+0)3	
AR 524	Postmodernism and Architectural Theory		(3+0)3	
AR 525	Special Topics in Architecture		(3+0)3	
AR 534	Kinetic Structural Systems in Architecture		(2+2)3	
AR 535	Steel and Wood Structures		(3+0)3	
AR 545	Cognitive Issues in Design		(3+0)3	
AR 546	Representational systems in Design		(3+0)3	
AR 547	Critical Debates in Contemporary Architectural and Urban Design Processes		(3+0)3	
AR 548	Lived-Space: Exploring the Urban		(3+0)3	
AR 549	Understanding Space		(3+0)3	
AR 552	Real-Estate Development		(3+0)3	
AR 555	Conflict Management and Negotiation Techniques		(3+0)3	
AR 556	Total Quality Management		(3+0)3	
AR 557	Project Planning and Control		(3+0)3	
AR 558	Strategic Management for Design and Construction Firms		(3+0)3	
AR 559	Operations Management for Construction Projects		(3+0)3	
AR 562	Architecture and Sciecnce		(3+0)3	
AR 564	Studies in Architectural Anthropology		(2+2)3	
AR 571	Sustainable Architecture		(3+0)3	
AR 572	Analytical Readings of Space I		(3+0)3	
AR 573	Analytical Readings of Space II: Applications		(2+2)3	
AR 582	Energy Efficient Design		(3+0)3	
AR 583	Principles of Daylighting Design and Analysis		(3+0)3	
AR 584	Introduction to Building Energy Simulation		(3+0)3	
AR 585	Fundamentals of Energy in Buildings		(3+0)3	
AR 586	Heat Transfer in Buildings		(3+0)3	
AR 587	Architectural Acoustics		(3+0)3	
AR 588	Introduction to Computational Heat Transfer and Fluid Flow in Building Applications		(3+0)3	
AR 589	Energy Efficient Lighting Design		(3+0)3	
AR 590	Integrated Design and Building Information Modeling		(3+0)3	
AR 591	Architecture, Modernity and Indentity		(3+0)3	
AR 592	Theories and Practice in Computational Architecture		(3+0)3	
AR 593	Analogical Reasoning in Design		(3+0)3	
AR 621	Architecture in Izmir		(3+0)3	
AR 626	Advanced Studies in Orientalism		(3+0)3	
AR 632	Analysis of Kinetic Structures		(2+2)3	

İZMİR INSTITUTE OF TECHNOLOGY
GRADUATE SCHOOL OF ENGINEERING AND SCIENCES

(It will be applied from 2016-2017 Fall)

DEPARTMENT OF ARCHITECTURE

MASTER OF SCIENCE PROGRAM

CORE COURSE DESCRIPTIONS

Course Code	Course Name	Core/ Elective	Prerequest	Credit	
AR 501	Research Methods 1: Introduction to Fields of Research in Architecture	Core		(2+2)3	

It is composed of two main parts. The first part is composed of epistemological discussions and their effects on researches conducted in/on architecture. The introduction to quantitative and qualitative methods composes the second half of this course. Furthermore, during this second half of the course, the main components of a research proposal are going to be identified and studied. It also provides information on publication ethics.

AR 523	Introduction to Architectural Historiography	Core elective	(3+0) 3	

Developed for graduate students who aim to develop an expertise in the field of architectural history and theory, the course focuses on the evolution of architectural historiography by way of methodological, ideological and discursive readings of samples of architectural historiography.

AR 526	Seminar	Core		(0+2)NC	

Seminars concerning the results of a certain research subject on the architectural theory and practice of architecture.

AR 540	Socio-Cultural Studies in Architecture	Core elective	(3+0) 3	

Identity and the Other: The Politics of Difference; Modernity and Modernizations; Memory, Space, and Material Culture; The Traditional, The Vernacular, and The Ordinary; The Post-Colonial Discourse; Gender and Space; Theories of Public Space; Consumption Culture ; Environmentalism; Globalization and Its Spatial Transformations; Globalization and Glocalization in Architectural Practice

AR 553	Project Management	Core elective	(3+0) 3	

Theory and practice of project management. Roles of designer, owner, general contractor and construction manager. Total quality management in the building construction industry. Systems theory as applied to the construction process. Information technology, structuring information flows and the control of projects.

AR 581	Principles of Building Physics	Core elective	(2+2)3	

This is an introductory course presenting the fundamentals on the basic issues of building physics, i.e. thermal behavior of buildings, architectural lighting and acoustics, and conducting research methods for these topics. The education method is based on lectures with working assignments and practical exercises. Students will conduct research into each issue of building physics in simple problems and report them. The aim is to set a strong link with practice and practical problems.

AR 500	M.S.Thesis	Core		(0+1)NC	

The content of the course varies according to chosen thesis topic. The program of study is determined by student in conference with thesis advisor. The student must progress with thesis work.

AR 8XX	Special Studies	Core		(8+0)NC	

Graduate students supervised by the same faculty member study advanced topics under the guidance of their advisor.

ELECTIVE COURSE DESCRIPTIONS

Course Code	Course Name	Core/ Elective	Prerequest	Credit	
AR 602	**Research Methods 2: Qualitative and Qualitative Approaches**		**AR 601**	**(2+2)3**	

This course concentrates on an in-depth study of qualitative and quantitative research methods that are already introduced in the first semester. All through the semester specific examples on the use of qualitative and quantitative research methods will be discussed in detail by means of presentations by faculty and invited researchers. In the mean time, students are expected to start working on their research proposals for their dissertations and develop it all through the semester.

AR 502	**Thesis Research**	**AR 501**	**(2+2)3**	

This course concentrates on an in-depth study of qualitative and quantitative research methods that are already introduced in the first semester. All through the semester specific examples on the use of qualitative and quantitative research methods will be discussed in detail by means of presentations by faculty and invited researchers. In the mean time, students are expected to start working on their research proposals for their dissertations and develop it all through the semester.

AR 511	**Research into Special Topics in Architectural Design I**		**(2+2)3**	

The course aims at exploring specific areas of concern for architectural design oriented research studies. It also focuses on specific building types with specialized functional requirements and the related problems faced during the design process.

AR 514	**Research into Special Topics in Architectural Design II**		**(2+2)3**	

The course aims at exploring specific areas of concern for architectural design oriented research studies. It also focuses on specific building types with specialized functional requirements and the related problems faced during the design process.

AR 517	**Housing in Turkey**		**(3+0)3**	

Course is organized for providing a comprehensive and original research area. The major research areas are decided as; user and housing relations, development of plan typology, housing and housing lot relations, city and housing relations, transformation of housing morphology and mass housing. It is planned to transmit information about the topics below that is expected to provide a reliable background about the housing question:

1. Modern housing experience in Western word
2. Early cases in Turkey
3. Urban housing and the city and the Turkish case
4. Housing and economics

New housing typology in Turkey

AR 518	**Glass in 20th –Century Architecture**		**(3+0)3**	

After Enlightenment, glass was known as a revolutionary scientific tool which enlarged human horizon of knowledge. It was widely accepted that through the use of glass lenses in telescopes and microscopes the scientific reality beyond corporeal perception became accessible in both micro and macro scales. In the Medieval Age, however, glass served as a mysterious device mediating between the higher reality of God and human being. In the Gothic Cathedral, rather than offering a direct access to truth, glass was used to bring out its incommensurability. In Modern Architecture the use of this paradoxical tool perplexing mankind between sight and blindness, gave rise to numerous ground-breaking questions which have not been lucratively answered yet. This elective draws attention to the introduction of glass into architectural discipline as a 'modern' element. In view of diverse buildings designed by well-known architects of the 20th-Century such as Mies van der Rohe, Bruno Taut, Le Corbusier, the lexicon associated with the use of glass will be explored. It is possible to describe this course as a research study which focuses on the concepts of "transparency, opacity, translucency" and "light architecture." Observing these concepts, students will have an opportunity to examine and question the re-emergence of glass in the current architectural agenda.

AR 519	**Writing on Space**		**(3+0)3**	

Primary aim of this course is to develop new methods in understanding and writing on space for the graduate students who are interested in architectural history and theory. In addition to macro-historical concepts constituting historical narrations, concepts like daily life, individualism, locality, subjectivity which composes a new kind of historical writing will be introduced to the students.

AR 520	**Historical Change and Architectural Theory: From the Industrial Revolution to Post-Modernism**		**(3+0)3**	

The period that the course focuses on, reaches from the 19th century when the drastic changes in the conceptions of science and reason brought forward an unprecedented social, urban and technological transformation coupled with colonialist and imperialist domination, to the 20th century when the realms of art and architecture were questioned by radical movements bringing forth modern architecture as we know it and finally an introduction to the post-WWII transformation which anticipated the changes within the contemporary scene.

AR 521	**Contemporary Trends in Architecture**		**(3+0)3**	

Contemporary architectural design trends such as modern, late modern, post modern, deconstructivism will be discussed based on realized projects from Turkey and abroad with specific emphasis given to the space organization concepts.

AR 522	**Architectural Design Approaches**		**(3+0)3**	

A course dealing with mainly the discussion of the various architectural design approaches doctrines preached by eminent architects.

AR 524	**Postmodernism and Architectural Theory**		**(3+0)3**	

The course aims to understand the state of contemporary architecture and the relationship of architectural production to historical and theoretical change with recourse todev elopments after the Second World War. Such an understanding requires looking at radical shifts in architectural debate represented by significant theoretical texts and architectural production over roughly the second half of the twentieth century . After an introductory session that frames the immediate postwar developments in architecture until the end of the 1960s, the course will continue focusing on the so-called "post-modern" era. Reaching from early reactions to modern architecture such as the incorporation of semiology , populist or neo-M arxist historicism, vernacularism and techno-determinism to the rise of phenomenology , deconstruction, sustainability or perishability and the "Bilbao effect, " into architectural discourse, the course will survey architectural production within a framework of "historical moments."

AR 525	**Special Topics in Architecture**		**(3+0)3**	

Content vary according to interests of students and instructors in charge. Specialization Topics include Architectural Design, History-Theory-Criticism, Structural Design, Computer
Aided Architectural Design and Building Performance Analysis.

AR 534	**Kinetic Structural Systems in Architecture**		**(2+2)3**	

As a result of the rapid change in activities of modern society and developments in building technology, a need of the adaptable space emerged which was the necessary precondition for the rise of the concept of motion in architecture. This conceptual transformation may be dated to the end of the twentieth century. What marks the approach to the design of this new, late twentieth-century conception of space is 'motion', which will now play an increasingly important role both conceptually and in applications of design. Our capability of utilizing kinetics in architecture today can be extended far beyond what has previously been possible. We will look at the kinematic analysis and synthesis methods used so far in mechanical engineering and explore its direct or in-direct applications into the architectural field. Additionally, Visual Nastran 4D which rapidly build complex models and test, refine and verify mechanical assemblies, will be analyzed. As an end product, students are expected to prepare a final homework.

AR 535	**Steel and Wood Structures**		**(3+0)3**	

Wood and Lumber, Types of Loading, Nailed and Stapled Connections, Problems of Wood Structures, What Is Steel, the Behavior of Steel, Behavior of Individual Steel Elements, Arrangement of Trusses, use of Steel in Architectural Design

AR 545	**Cognitive Issues in Design**		**(3+0)3**	

This course will introduce different issues in design cognition that have been discussed since 1970s. The primary concern will be definitions of design and explanations of the design process. The course will present different views in design cognition and criticisms against these views. Those which are heavily influenced by cognitive science will be emphasized.

AR 546	**Representational systems in Design**		**(3+0)3**	

Representational systems in architecture are rapidly transforming with new computer technologies. Starting from current condition in architecture, this course will investigate the claim that representational systems impact the process of design thinking as one of the tools used in the design. It will investigate the shifts in the history of architectural representation systems. Finally, architectural products from different periods will be analyzed in relation to their contemporaneous representational Systems

AR 547	**Critical Debates in Contemporary Architectural and Urban Design Processes**		**(3+0)3**	

This course engages with the critical debates on contemporary architectural and urban design processes, in the context of the new models of urban space production that emerged with the global economic and environmental crises as well as the development of the post-Industrial paradigm. Students are expected to develop theoretical skills in the discussion of such topics as the spatial organization of cultural economic activities, role of architectural and urban design practices in the generation of entrepreneurial scenarios, new divisions of labor in the production of urban and rural space.

AR 548	**Lived-Space: Exploring the Urban**		**(3+0)3**	

The conception of which the notions of space and built environment belong just to the architectural discipline has long been under critical coercion and it is argued that these notions are physically, socially, economically and ideologically produced in urban context. Additionally, spatio-temporality of any event happened through the urban settlement ranging from the production of a building to an urban demonstration needs to be explored to understand the power relationship within.

"The critique of everyday life does not make life's problems any simpler. It requires and determines a critical and self-critical consciousness which is higher than the consciousness exerted when we make the occasional uncomplicated choice", the exploration of urban environment in terms of theoretical frameworks constructed through the path of this course is vital.

Referring to the motto "social space is a social product", the power struggle in the urban context will be observed directly on the "lived-space" in the limits of the course. During the course, the images (both visual (still and moving) and audial) will refer to this spatio-temporality for re-presenting the everyday life. Both video and photography as an apparatus of exploring the everyday life in urban context shapes the perception of the inhabitants including the participator of the course. During the course, the participators are aiming to understand the urban settlement via relevant writers on which its topics is developed.

AR 549	**Understanding Space**		**(3+0)3**	

This is an introductory course presenting the fundamental theories and concepts of (architectural) space. Its objective is to present the overlaps and differences among different theoretical approaches to architectural space within the field of philosophy, history and theory of architecture and facilitate discussion and understanding of the relationship between different layers that construct space.

The content of the course consists of: main theories and historical understandings of space; the relationship between time and space; phenomenology of space; the relationship between life of space and the spatial practices; space and motion, kinesthetics; space and visual perception

AR 552	**Real-Estate Development**		**(3+0)3**	

The course starts with general knowledge on housing issues. Besides this the business of "real-estate development" is introduced. Site selection, legal context, design development, financing and marketing are focused consecutively. Selected samples are considered depending on the theoretical knowledge.

AR 555	**Conflict Management and Negotiation Techniques**		**(3+0)3**	

Conflict and Negotiation Management course presents negotiation theory, strategies and styles in the context of an organizational environment. Negotiation topics follow two models beginning with the Distributive Model and defining BATNA (Best Alternative to Negotiated Agreement) and building to a more cooperative approach of Integrative Bargaining Model. An objective of this course is to distinguish among these basic models and assess their utility in different work contexts.

The course is a blend of theoretical presentations and learning milieus. Mastering the fundamentals of distributive and integrative negotiations is best done experientially through role plays. The course is designed to provide students with practical conflict management experience through role-play negotiations. Students will be able to track their progress as a negotiator and will be able to rate this in their own final grades. Course will feature simulation games, case studies and group discussions as well. Simulation games and case studies, and the students' reaction to them, will provide the basis for class discussions abut the nature of various decision mechanism and the role of perceptions in managing conflicts.

Basic conflict and negotiation related concepts and processes are general and context-free, while others are specific to the construction management field. Construction disputes will particularly be covered as the construction industry requires cooperation from design through completion. Interdependent relationships exist between owners, contractors, subcontractors, architects, engineers, suppliers, construction inspection firms and housing department of municipalities. The potential risk of financial loss due to conflict is astounding. In today's competitive marketplace, construction professionals must be aware of negotiation and bargaining techniques in order to be profitable. The unresolved and often unrecognized cost of conflict diminishes profitability.

The games and role-plays will illustrate context-free decision patterns while some will exemplify conflict and choice patterns specific to construction sector decision-making and negotiations. The course will help enhance skills at creating value in negotiations.

This course also aims to give students a vision on issues of emotional quantity and ethical rules for qualified and sustainable relationships in business life through a set of suggested readings. In this framework, the course refers to motivation, communication, working with difficult people and effective listening. The course content is intended to get enriched with the supporting issues of psychology by seminars of the guest lecturers who are experts in the field.

AR 556	**Total Quality Management**		**(3+0)3**	

Theory and practice of total quality management. Customer satisfaction, continual improvement, management commitment, training, teamwork, statistical methods, cost of quality, supplier involvement, customer service, implementation.

AR 557	**Project Planning and Control**		**(3+0)3**	

Project planning, planning phases, WBS, different planning methods (Gantt charts, CPM, PERT), scheduling and budgeting, cost estimating techniques, resource allocation and leveling, progress monitoring, variance reporting, MS Project and Primavera applications.

AR 558	**Strategic Management for Design and Construction Firms**		**(3+0)3**	

The concept of strategy, tools of strategic management, goals, values and performance, analyzing the industry environment, analyzing resources and capabilities, the concept of competitive advantage, market-based view of competitive advantage, resource based view of competitive advantage, competitive strategies, generic strategies, mode and scope of competition, cooperative strategies, tacit collusion, strategic alliances, corporate strategies, vertical integration strategies, global strategies.

AR 559	**Operations Management for Construction Projects**		**(3+0)3**	

Construction site planning, construction contracts, stages of planning, planning and producing a program, resource management, trade-off analysis, activity sampling, health and safety regulations, moral and legal obligations, the concept of waste, waste re-cycling and re-use, just-in-time deliveries (JIT), outsourcing, reasons for outsourcing, selecting material vendors and sub-contractors.

AR 562	**Architecture and Sciecnce**		**(3+0)3**	

Modernity and architectural knowledge. Interconnections, implantations, migrations between scientific knowledge and architectural knowledge from both historical and contemporary perspectives. Concepts, approaches, methods, theories etc.

AR 564	**Studies in Architectural Anthropology**		**(2+2)3**	

The field of architectural anthropology is identified as a science of case studies, based on extensive in-depth architectural and anthropological forms of fieldwork. In other words, architectural anthropology articulates 'the potential dimension of architecture', drawing attention to the study of the spatial aspect of ritual/ tradition/daily life as a collective response to urban/rural form and space. Here the study of architecture can function as a unique lens to successfully evaluate social changes, cultural transformations by tracing signs, alterations and permanencies of any issue emerging with modernization attempt. Fieldwork for surveying sediments of modernity in transit can be any case in rural, semi-rural or urban context, in Turkey or abroad, related to contemporary traditional or modern dwelling practice of people in transformation process.

AR 571	**Sustainable Architecture**		**(3+0)3**	

Architecture for sustainability cannot be separated from environmental movements, political distinctions, and development/progression activities particularly in the last three decades of the twentieth century. Thus, the course starts out from a critical historical overview of approaches and practices toward sustainability. Oppositions North-South, Developed-Developing, First World-Third World, West-East are starting points toward moving the scope along to a more circumstantial platform centering not on global but local definitions of sustainability. To this end, the indicators of sustainable design approaches in the world and the projects in Turkey will be scrutinized. Among these practices, the concept of locality in social, cultural, ecological, political, economic, technological, legalistic, and architectural terms will be explored

AR 572	**Analytical Readings of Space I**		**(3+0)3**	

Architectural and urban morphology; Typology of common buildings; Typo morphological analysis that link the building scale with the urban pattern; Relationship between human orientation, way finding and spatial form; Theories and applications of space syntax analysis.

AR 573	**Analytical Readings of Space II: Applications**		**(2+2)3**	

Analysing the fundemental theoretical texts on space and time relations. Applying technical skills with observations, recordings, and representations in order to analyse the relations in an urban quarter/space and represent the results with various approaches.

AR 582	**Energy Efficient Design**		**(3+0)3**	

The course covers the principle criteria for energy efficient design, the active and passive utilization of solar energy in buildings and different configurations of building envelope. It is supplemented with environmentally-friendly buildings consuming less energy, low energy, zero energy and plus energy building examples.

AR 583	**Principles of Daylighting Design and Analysis**		**(3+0)3**	

This is a course to present fundamentals of Daylighting design, analysis, and Daylighting performance of buildings under the basic issues of building physics; and to conduct research methods for these topics. The education method is based on lectures with working assignments and practical exercises. Students will conduct research into each issue of Daylighting in simple problems and report them. The aim is to set a strong link with practice and practical problems.

AR 584	**Introduction to Building Energy Simulation**		**(3+0)3**	

This course develops an understanding on basics of energy efficient architecture and builds on this to develop skills in energy simulation for buildings. The CAD tools are used for the prediction and analysis of a building's energy performance in regard to building physics.

AR 585	**Fundamentals of Energy in Buildings**		**(3+0)3**	

For improving a perspective focused about energy and thermodynamics; main definitions and fundamentals important to energy are introduced. Properties of pure substances, first and second laws of thermodynamics, fundamentals and applications of air-conditioning are investigated in this course.

AR 586	**Heat Transfer in Buildings**		**(3+0)3**	

Fundamentals of heat transfer are introduced with applications to energy gains/losses to/from building envelope. Heat transfer mechanisms; heat conduction, convection and radiation are investigated in this course.

AR 587	**Architectural Acoustics**		**(3+0)3**	

In order for architects to have a better grasp of the acoustic aspects of our built environment, the physics of sound as well as the principles of auditory perception should be well understood. This course introduces the basic principles in architectural acoustics. Topics include: Sound and hearing, indoor/outdoor sound propagation, sound insulation, design guidelines for room acoustics and noise control.

AR 588	**Introduction to Computational Heat Transfer and Fluid Flow in Building**		**(3+0)3**	

Governing equations are obtained for cartesian and cylindrical coordinates. Numerical solution process of the steady-state and transient heat conduction problems are considered; and laminar and turbulent flows and heat transfer problems in computational fluid dynamics are investigated based on building applications.

AR 589	**Energy Efficient Lighting Design**		**(3+0)3**	

This is a course to present fundamentals architectural lighting design, with its energy efficiency, and its analysis under the basic issues of building physics; and to conduct research methods for these topics. The education method is based on lectures with working assignments and practical exercises. Students will conduct research into each issue of lighting in simple problems and report them. The aim is to set a strong link with practice and practical problems.

AR 590	**Integrated Design and Building Information Modeling**		**(3+0)3**	

The course focuses on how models created in Building Information Modeling based CAD systems are communicated to analysis tools in other disciplines. Students will be introduced to tools for creating parametric models, and exporting these models into a number of formats in order to carry out analysis for structure, energy, lighting, acoustics as well as cost estimation and construction scheduling. This project based course will, through hands-on exercises, expose the behind the scenes structure of the database and assumptions underlying BIM technology and give students the chance to discover the limits of interoperability that is available with state of the art systems.

AR 591	**Architecture, Modernity and Indentity**		**(3+0)3**	

This course aims to introduce students to selected themes related to the politics of identity (modern, imperial, national religious among others) in architectural and urban spaces of the
19th, 20th and 21st centuries. Concepts of authorship, audience, conceptual constructions of the 'West' and the 'Orient', colonialism, imperialism, nation building and heritage will be
addressed through selected readings and case studies.

AR 592	**Theories and Practice in Computational Architecture**		**(3+0)3**	

This course is a seminar course on computational theories and practice in architecture. It focuses on the changes and shifts in architectural theory and practice since the introduction of
computational technologies, tools, and ideas into architecture. The course stems from the premise that design thinking involves and is made possible with tools that we use as
designers. Shifts and changes in the tools and technologies offer new potentials in design thinking while blocking some others. Through these changes, some so called traditional
tools, crafts, and representational systems are considered obsolete. They became extinct. Some lament these changes and some are overly optimistic about them. The fast and
almost uncontrolled shifts in the current digital technologies require a critical and analytical look into their application. The shift has been around for long enough that there exhibits
entitled the archeology of the digital. Books and publications in the area are abundant.

AR 593	**Analogical Reasoning in Design**		**(3+0)3**	

Analogical reasoning stems from our mind's fundamental capacity of seeing and establishing similarity relationships between any domains. At times when these relations are too trivial
either the similarity is too straightforward the domains are too close. Whereas at times when the opposite is true we are in the territory of innovative creative analogy which invoke
deep appreciation. Analogical reasoning makes those domains which are unfamiliar to us familiar and as such is a principal strategy of learning. It offers a unique way of reasoning in
addition to deductive and inductive reasoning and is especially important for creativity.

AR 621	**Architecture in Izmir**		**(3+0)3**	

The course is oriented to the compilation of data; analysis and interpretation of past and present architectural developments in Izmir.

AR 626	**Advanced Studies in Orientalism**		**(3+0)3**	

The course examines Orientalism from both Eastern and Western perspectives. The emphasis will be given on travel notes and visual arts from 18th century to the present. The discussions will center on not only how the West depicted the Orient, but also how the people of the East understood themselves and their relation to the West. The course will focus on European relations with the Middle East; however, examples from the Far East and India are also going to be discussed. In the first half of the semester the theoretical background necessary to understand orientalist view and its critique will be given to the students. The second half of the course is reserved for discussions on Orientalism in various areas ranging from architecture and art to popular culture and politics.

AR 632	**Analysis of Kinetic Structures**		**(2+2)3**	

Planar and spatial mechanisms. Position analysis with trigonometric method. An excel spreadsheet method. Matrix. Position analysis with Denavit- Hartenberg method.