

School/Faculty/Institute	Faculty of Arts, Design and Architecture		
Program	B.Arch. in Architecture	Required	
Semester	Fall 2016-2017		

Course Code	ARC211			
Course Title in English	Digital Communication 1			
Course Title in Turkish	Dijital İletişim 1			
Language of Instruction	English			
Type of Course	Studio			
Level of Course	Undergraduate			
Semester	Fall			
Contact Hours per Week	Lecture:	Recitation:	Lab:	Studio: 3
Estimated Student Workload	95 hours per semester.			
Number of Credits	4 ECTS			
Grading Mode	Standard Letter Grade			
Pre-requisites	None			
Expected Prior Knowledge	None			
Co-requisites	None			
Registration Restrictions	Only Undergraduate Students			
Overall Educational Objective	<p>The aim is to bring architectural representation techniques into the computer realm. By mastering digital representation methods is becoming a crucial tool due to the increasing demand in architectural practices and academia. The application of the techniques will be explicit within a digital premise, which include image manipulation, diagrams and modeling. Thus the coursework will use a 3D modeling and graphic platforms to represent and express the potential of architectural designs.</p>			
Course Description	<p>The course focuses on basic 3D modeling and digital representation techniques in architectural representation techniques. For this purpose we will use Rhinoceros 5 as a 3D modeling tools to represent and express the potential of architectural designs - importing, export, modeling and rendering procedures as basic elements of digital representation. The course also focus on drawing commands and interface for curves and surfaces modeling; rendering engines and techniques. Finally in order to enhance and compose the rendered images we will use both Photoshop and Illustrator basic vector presentation techniques.</p>			
Course Description in Turkish	<p>Görsel iletişim çalışmaları mimari tasarım için güçlü bir süreçtir. İçerisinde eskiz yapma ve maket teknikleri, mekansal ilişkiler, etkiler, çevresel ve sosyal stratejiler de olmak üzere kurgulanan bir katmanlar seçkisi, tasarım konusunda farkındalık yaratacak bir takım çalışmalar oluşturmaktadır. Tasarım farkındalığında erişilmeye çalışılan nokta, kişinin hızlıca üretebileceği bir tür analiz biçimidir. Bu analiz, geometrilerin, malzemelerin, renklerin, hareketin; modelleri, diagramları, eskizleri vs. üzerine odaklanır ve bunları üretir. Bu temsiller, mekanın bileşenlerinin sadece ölçülebilir özellikleri üzerine değil aynı zamanda kalitesi üzerinedir.</p>			
Course Learning Outcomes and Competences	<p>Upon successful completion of the course, the learner is expected to be able to:</p> <ol style="list-style-type: none"> 1. Understanding the powerful role of digital communication techniques for architectural representation. 2. Ability to qualitative and quantitative represent the existing environment by 			

- diagrams, mappings, modeling, rendering and graphic presentation.
- 3. Ability to express the ideas by means of digital graphical methods.
- 4. Ability to produce the technical drawings.
- 5. Ability to use the renderings and graphic visualization in the digital medium by means of hybrid representations.

Relation to Program Outcomes and Competences: N=None S=Supportive H=Highly Related

Program Outcomes and Competences	Level	Assessed by
	N/S/H	Exam, Project, HW, Lab, Presentation, etc.
1. Ability to read, write and speak effectively in Turkish and English, equivalent to a B2 European Language Passport Level in English.	S	
2. Ability to question and interpret ideas considering diverse points of view; gather and use data, develop concepts related to people, places and the environment, and make individual decisions.	S	
3. Ability to use appropriate graphical methods including freehand and digital drawing techniques, (ECDL advanced) in order to develop ideas in addition to communicate the process of design.	H	Assignments, HW, Presentations
4. Ability to use fundamental principles of architectural design considering the place, climate, people, society as factors, and simultaneously express present principles in relevant precedents.	S	
5. Understanding of architectural principles belonging to global and local cultures shaped by the climatic, technological, socioeconomic, cultural factors, in addition to principles of historic preservation while developing architectural and urban design projects.	N	
6. Understanding the theories and methods used to describe the relationship between human behavior and physical environment; and concurrently understanding different needs, values, behavioral norms, social and spatial patterns of different cultures.	S	
7. Ability to apply various stages of design processes considering the client and user needs, which include space and equipment requirements besides site conditions and relevant laws and standards.	S	
8. Understanding the role of applied research in determining function, form and systems and their impact on human conditions and behavior.	N	
9. Understanding of the basic principles of static and dynamic structural behavior that withstand gravity and lateral forces, in addition to the evolution and applications of structural systems.	N	
10. Ability to apply the principles of sustainability in architectural and urban design projects that aim to preserve the natural and historic resources and provide healthful environments.	N	
11. Ability to apply the fundamental principles of building and safety systems such as mechanical, electrical, fire prevention, vertical circulation additionally to principles of accessibility into the design of buildings.	N	
12. Understanding the basic principles in the selection of materials, products, components and assemblies, based on their characteristics together with their performance, including their environmental impact and reuse possibilities.	N	
13. Ability to produce a comprehensive architectural project from the schematic design phase to design development phase, while integrating structural systems, life safety and sustainability principles.	S	
14. Understanding the principles of environmental systems such as energy preservation, active and passive heating and cooling systems, air quality, solar orientation, day lighting and artificial illumination, and acoustics; in addition to the use of appropriate performance assessment tools.	N	
15. Ability to choose appropriate materials, products and components in the implementation of design building envelope systems.	N	
16. Ability to understand the principles and concepts of different fields in multidisciplinary design processes and the ability to work in collaboration with others as a member of the design team.	N	
17. Understanding the responsibility of the architect to organize and lead design and construction processes considering the environmental, social and aesthetic issues of the society.	N	
18. Understanding the legal to responsibilities of the architect of the architect effecting the design and construction of a building such as public health and safety; accessibility, preservation, building codes and regulations as well as user rights.	N	
19. Ability to understand the ethical issues involved in the design and construction of buildings and provide services for the benefit of the society. In addition to the ability to act with social responsibility in global and local scales that contribute to the well being of the society.	N	
20. Understanding the methods for competing for commissions, selecting consultants and assembling teams, recommending project delivery methods, which involve financial management	N	

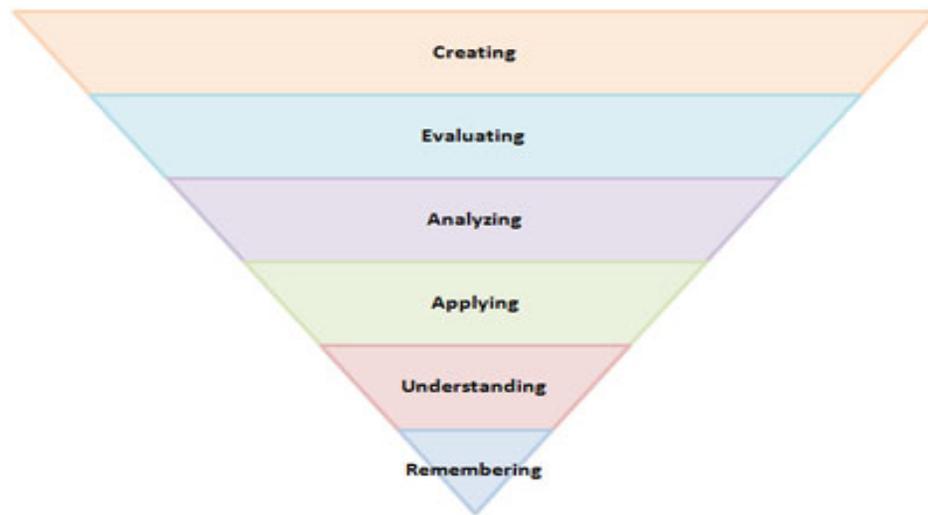
and business planning, time management, risk management, mediation and arbitration.		
Name of Instructor	Egemen Narderele, Başak Eren, Derya Uzal, Eda Yeyman	
Course Contents	Week	Topic
	1.	Introduction, Software
	2.	Basic Terminology, Technical Drafting
	3.	Technical Drafting – Lasercut Workshop
	4.	Rhino 3D – Modeling
	5.	Rhino 3D - Modeling
	6.	VRay Rendering – Cameras & Lights
	7.	VRay Rendering - Materials
	8.	Adobe Photoshop – Renders Post Production
	9.	Adobe Illustrator – Color scheme and Presentation Composition
	10.	Rhino 3D - Modeling
	11.	Rhino 3D - Modeling
	12.	Rhino 3D – Individual Studies
	13.	Rhino 3D – Individual Studies
	14.	Rhino 3D – Individual Studies
	15.	Panel Design
	16.	Panel Design
Required/Recommended Readings	<p>Recommended Reading:</p> <p>Schwartz, L (2004) Adobe Photoshop for VFX Artists, Course Technology PTR, New York.</p> <p>Alspach, T (2009) Illustrator CS4 bible, Wiley Pub., Indianapolis.</p> <p>R McNeel & Associates, (2006) Rhinoceros Level 1 Training Manual, Robert McNeel & Assoc, Seattle.</p> <p>R McNeel & Associates, (2006) Rhinoceros Level 2 Training Manual, Robert McNeel & Assoc, Seattle.</p> <p>Chiang C. and Alomar D., (2009), Rendering Plugin For Designers, ASGVIS, U.S.A.</p>	
Teaching Methods	<p>The methodology unfolds the use of Digital Communication to a conceptual manipulation design should engage from the earliest stages of the design process. Through the use of technical drafting and modeling techniques, digital communication also studies rendering and post-processing phase of image and graphic presentation. Across an array of visual representations that include but are not limited to modeling, drafting rendering and graphic design the methods describe the conveyance of ideas and information in forms that can be read or looked upon.</p>	
Homework and Projects	14 Assignments and 1 Panel	
Laboratory Work	-	
Computer Use	Yes	
Other Activities	Field trips	
Assessment Methods	<p>1. Performance in studio: 25 points</p> <p>2. Submissions: 35 points</p> <p>3. Final Portfolio Submission: 40 points (stands for final examination)</p>	
Course Administration	<p>Office: Egemen Narderele, Başak Eren, Derya Uzal, Eda Yeyman: Block A, Floor 1</p> <p>Email: narderele@mef.edu.tr, erenb@mef.edu.tr, uzald@mef.edu.tr, yeymane@mef.edu.tr</p> <p>Student participation will be essential for the visual communication studio. Attending both submissions including the Final Portfolio Submission are crucial elements in the final grade. Late submissions will not be accepted.</p> <p>70% attendance are compulsory for a successful outcome.</p>	

ECTS
Student
Workload
Estimation

Activity	No/Weeks	Hours			Calculation	Explanation
	No/Weeks per Semester (A)	Preparing for the Activity (B)	Spent in the Activity Itself (C)	Completing the Activity Requirements (D)		
Lecture					0	$A*(B+C+D)$
Lab etc.					0	
Midterm(s)					0	$A*(B+C+D)$
Assingment, Project, Presentation	13	1	4	2	91	$A*(B+C+D)$
Final Examination	1	8	3		11	$A*(B+C+D)$
Total Workload					102	
Total Workload/25					4,08	
ECTS					4	

Key verbs for cognitive domain in writing learning outcomes and competences:

Bloom's Taxonomy



Revised edition by Lorin Anderson (a student of Bloom)

Key Verbs:

Remembering: defines, describes, identifies, knows, labels, lists, matches, names, outlines, recalls, recognizes, reproduces, selects, states.

Understanding: comprehends, converts, defends, distinguishes, estimates, explains, extends, generalizes, gives an example, infers, interprets, paraphrases, predicts, rewrites, summarizes, translates.

Applying: applies, changes, computes, constructs, demonstrates, discovers, manipulates, modifies, operates, predicts, prepares, produces, relates, shows, solves, uses.

Analyzing: analyzes, breaks down, compares, contrasts, diagrams, deconstructs, differentiates, discriminates, distinguishes, identifies, illustrates, infers, outlines, relates, selects, separates.

Evaluating: appraises, compares, concludes, contrasts, criticizes, critiques, defends, describes, discriminates, evaluates, explains, interprets, justifies, relates, summarizes, supports.

Creating: categorizes, combines, compiles, composes, creates, devises, designs, explains, generates, modifies, organizes, plans, rearranges, reconstructs, relates, reorganizes, revises, rewrites, summarizes, tells, writes.

Key verbs for affective domain in writing learning outcomes and competences:

Receiving Phenomena: asks, chooses, describes, follows, gives, holds, identifies, locates, names, points to, selects, sits, erects, replies, uses.

Responding to Phenomena: answers, assists, aids, complies, conforms, discusses, greets, helps, labels, performs, practices, presents, reads, recites, reports, selects, tells, writes.

Valuing: completes, demonstrates, differentiates, explains, follows, forms, initiates, invites, joins, justifies, proposes, reads, reports, selects, shares, studies, works.

Organizing: adheres, alters, arranges, combines, compares, completes, defends, explains, formulates, generalizes, identifies, integrates, modifies, orders, organizes, prepares, relates, synthesizes.

Internalizing values: acts, discriminates, displays, influences, listens, modifies, performs, practices, proposes, qualifies, questions, revises, serves, solves, verifies.