School/Faculty/Institute	Faculty of Arts, Design and Architecture	
Program	B.Sc. in Interior Design	Elective

Course Code	INT 456			
Course Title in English	Creative Coding			
Course Title in Turkish	Yaratıcı Kodlama			
Language of Instruction	English			
Type of Course	Lecture			
Level of Course	Undergraduate			
Semester	Fall & Spring			
Contact Hours per Week	Lecture: 3	Recitation:	Lab:	Studio:
Estimated Student Workload	130 hours per semester			
Number of Credits	5 ECTS			
Grading Mode	Standard Letter Grade			
Pre-requisites	None			
Expected Prior Knowledge	None			
Co-requisites	None			
Registration Restrictions	Only Undergraduate Students			
Overall Educational Objective	To understand the concept of interactive spaces and to programming as a creative medium—as a way of making and exploring. To be able to explore the computer environment as a tool capable of powerful creative possibility, not via pre-built software, but instead by writing code.			
Course Description	This course is an introduction to computer programming within the context of interactive environments, visual arts and image. Students will look at the basic structures and affordances of code as inspiration for designing interaction between user and space, making artworks, and as a tool capable of creating things that would be hard by hand. It promotes conditional and systematic thinking.			
Course Description in Turkish	Bu ders, kullanıcıyla etkileşimli mekanlar, görsel sanatlar ve imaj ekseninde bilgisayar programlamaya giriş niteliğindedir. Ders kapsamında öğrenciler, kodlamanın temel strüktürünü ve potansiyellerini irdeleyecek ve kullanıcı-mekân arasında iletişimi tasarlamak, görsel sanat eserleri yapmak ve elde yapılması zor olabilecek tasarım ürünleri yapmak gibi konularda kodlamadan ilham alacaklardır. Ders koşullu ve sistematik düşünmeyi teşvik etmektedir.			

Course Learning Outcomes and Competences	Upon successful completion of the course, the learner is expected to be able to:
	1. understand the concept of mathematical thinking in design;
	2. conditional and systematic thinking skills;
	3. demonstrate knowledge of fundamental programming concepts;
	4. design several visual & interactive projects;
	5. objectively present their design process and workflow;
	6. integrate a variety of media elements into their projects;
	7. demonstrate the ability to research and learn unfamiliar technical topics;
	8. design projects that use code in a creative way;
	9. research historic and current design precedents to contextualize their work.

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

Program Outcomes and Competences	Level	Assessed by
	N/S/H	Exam, HW, Seminar.
1- Ability to read, write and speak effectively in Turkish and English, equivalent to a B2 European Language Passport Level in English.	S	Readings, assignments.
2- Ability to use the knowledge over human-space relationship in terms of perception, experience, and behavior in interior design	S	Readings, seminars, assignments
3- Ability to approach to the interior design profession from the perspective of new and evolving theories and practices.	H	Readings, seminars, assignments
4-Developing an independent and critical perspective to spatial design	H	Readings, seminars
5- Effective use of interdisciplinary research and design principles in the challenges he/she faces in the field.	H	Readings, seminars, assignments
6- Acquiring the capability to creatively synthesize and bring together insight and knowledge from different sources to solve problems in designing interior space.	S	Readings, seminars, assignments
7- Acquiring the ethic and methodological formation to design in line with social responsibility of the interior designer and sustainability of the practice of the profession.	S	
8- Approaching to and recognizing design and formation of space as a social and ethical practice.	S	Readings
9- Having personal traits of creativity, leadership, and inquisitiveness that is required for innovation in design.	H	Readings, seminars, assignments
10- Ability to pursuing interior design process in the framework of interdisciplinary and multi dimensional relationships in local, national and global contexts.	H	Readings, seminars, assignments
11- Ability to present design ideas by utilizing analog and digital presentation tools and in oral and printed form in national and international settings.	H	Assignments, seminars,
12- Creating designs that are sustainable and respectful to diverse user needs, local and regional values, and natural and cultural heritage.	N	
13- Having vision of shaping future while being conscious of the social role and importance of interior design.	H	Readings, assignments, seminars
14- Determining personal goals of the life long learning towards being an intellectual professional and being able to communicate with individuals and groups in national and international spheres for this purpose.	S	Readings
15- Execution of interior design projects according to the national and international standards, professional etiquette, legal and institutional codes.	N	

		H	Readings, seminars
16- Following most recent researches, discoveries, and practices to reach emerging thoughts, practices, and theoretical perspectives			
17- Defining design problems and forming critical approaches and sharing them with relevant stakeholders in the field after recognizing and criticizing contemporary spatial, environmental, urban and social problems.		S	

Prepared by and Date	Assistant Prof. Dr. Sibel Yasemin Özgan, 19.02.2020
Semester	Spring 2019-2020
Name of Instructor	Assistant Prof. Dr. Sibel Yasemin Özgan

COURSE CONTENT	Week	Topic
INTRODUCTION	1.	Introduction and General Overview to the Class + Syllabus Review What is creative coding? Introduction to Interactive Spaces
CODE and COMPUTERS	2.	How do computers work? Describing behavior. Pseudocode
FORM and COMPUTERS DRAWING BY PIXELS & COORDINATE SYSTEMS	3.	Drawing with Computers Introduction to the Processing Environment Basic Shapes, Shape Properties, Color, Custom Shapes, Comments
VARIABLES CONDITIONALS	4.	Making and Processing Variables, A little Math
ITERATION & LOOPS FUNCTIONS	5.	For loops, nested loops, driving parameters with loops, push/pop Matrix(), creating functions, historical quilt research
RECURSION & FRACTALS TIME	6.	Creating recursive functions, Pythagoras Tree, Koch Snowflake, the pixel array
INTERACTIVITY	7.	Follow, Map, Click, Location
RANDOMNESS	8.	Random and other generators
OBJECT ORIENTED PROGRAMMING	9.	Classes and Objects, Array Lists, Simulating motion
ARRAYS	10.	Make an Array Repetition and Arrays Arrays of Objects
IMAGES and PIXELS TEXT & DATA	11.	Images, Fonts, Shapes
VIDEO	12.	Video Processing, Creating Videos, Frame Rates and Screen Sizes
INTERACTION	13.	Concepts, Kinect, Arduino
FINAL PROJECTS	14.	Final Documentation and Critiques, Presentations
	15.	Final Examination Period
	16.	Final Examination Period
Required/Recommended Readings	Required Reading:	Burry, M. (2011). *Scripting cultures: Architectural design and programming*. John Wiley & Sons. Pearson, M. (2011). *Generative Art*. Manning Publications Co.. Reas, C., & Fry, B. (2006). Processing: programming for the media arts. *AI & SOCIETY*, *20*(4), 526-538. Reas, C., & Fry, B. (2007). *Processing: a programming handbook for visual designers and artists*. Mit Press.

	Reas, C., & McWilliams, C. (2011). *Form+ Code: in design, art, and architecture*. Princeton Architecturel Press.
	Reas, C., & Fry, B. (2015). *Getting Started with Processing: A Hands-On Introduction to Making Interactive Graphics*. Maker Media, Inc..
	Shiffman, D. (2009). *Learning Processing: a beginner's guide to programming images, animation, and interaction*. Morgan Kaufmann.
	Shiffman, D., Fry, S., & Marsh, Z. (2012). *The nature of code* (pp. 323-330). D. Shiffman.
Teaching Methods	The course will have presentations by the instructor as well as extensive discussion by the class. The course follows the 'Flipped classroom' model, with all readings available to the students prior to class.
Homework and Projects	1 Individual Project, weekly reflection papers & assignments
Laboratory Work	-
Computer Use	Yes
Other Activities	-
Assessment Methods	The course runs with lectures, excursions, weekly readings, and hands-on assignments (both in class and take-away). Active attendance and in-class participation in production and discussions (%10); reflection papers & assignments (%20); individual mid-term projects (%30); and one final group project by group (%40) comprise consecutively 10, 20, 30 and 40 % of the course.
Course Administration	Email: ozgans@mef.edu.tr Students are required to attend % 70 of the classes in theoretical courses. Consequently, absenteeism exceeding 4 weeks (classes) will result in failure. %70 Attendance is essential for this course. Most of the class time will be allocated to discussion of weekly topics. Students have to be prepared and upload their weekly assignments before coming to class late submissions take points off. All students are responsible for behaving personally and academically in a way that is expected from a university student. That behavior includes but is not limited to respecting views and ideas of peers; not being involved in a discriminating behavior concerning race, religious beliefs, sexual orientation; always using one's own ideas in their projects. Academic Dishonesty and Plagiarism: YOK Disciplinary Regulation

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	14	2	2	2	84	A*(B+C+D)
Lab etc.	0				0	
Midterm(s)	1	1	1		2	A*(B+C+D)
Assingment, Project, Presentation	14	1	1	1	42	A*(B+C+D)
Final Examination	1	1	1	1	3	A*(B+C+D)
Total Workload					131	
Total Workload/25					5,24	
ECTS					5	