COURSE SYLLABUS						
Course Title	**Course Code**	**Semester**	**Course Hour/Week**		**Credit**	**ECTS**
Digital Tools in Design II	ARCH 204	4	**Theory** 2	**Practice** 2	3	3
Course Type	Compulsory Courses	Department Elective	Faculty Elective	University Elective	CoHE (YÖK) Compulsory	Other
	x					
Level of Course	Associate Degree (Short Cycle)		Undergraduate (First Cycle)		Graduate / Doctoral (Second / Third Cycle)	
			x			

Language of Instruction	English

Course Instructor(s)	Assoc. Prof. Dr. Salar Salah Muhy Al-Din	E-mail : salar.aldin@arucad.edu.tr Office : TI- OFF 07
Course Objectives	ARCH 204 aims at introducing the capability of computer aids and software both in Architecture and interior architecture, besides the evolution of computers and the emergence of digital tools. Students will develop an awareness of design possibilities through implementing open-source digital tools in their design processes. The phase from advanced digital language and tools to composed designs interacting with the human senses and how digital and mixed technologies improved architectural use of materials, structure, and space will be examined.	

	Students will be able to:	**Teaching Methods**	**Evaluation Methods**
Course Learning Outcomes	**Explain** the role of digital communication, tools, and techniques in interior architecture design and representation.	Direct instruction technique, Demonstration method	Midterm Project, Class Participation
	Describe the evolution of digital tools and their impact on architectural design processes, materials, structure, and space.	Direct instruction technique, Discussion	Midterm Project

	Apply Revit software to **produce** technical drawings including plans, sections, elevations, and detailed construction drawings.	Hands-on software training	Midterm Project, Final Project
	Apply advanced Revit software to create three-dimensional models and visualizations of interior architectural spaces.	Hands-on software training	Portfolio Submission, Final Project
	Organize hybrid digital representations by integrating technical drawings, renderings, and graphic visualizations to communicate design concepts effectively.	Studio sessions, Critique rounds	Portfolio Submission, Final Project
	Design architectural representations using digital production methods and express design ideas through digital graphical techniques.	Project-based learning	Final Project
Course Content	The course focuses on the basics of how digital tools have affected the evolution of design through the contents of digital language, computational design, interface of electronics and the internet. **Digital techniques, such as Revit, will be used in the process of the course.**		

COURSE OUTLINE/SCHEDULE			
Week	**Topic**	**Implementation (theory/practice)**	**Required Reading, Preliminary preparation**
1	Introduction / an overview of the course.	T-P	
2	Reviewing and showing samples of successful and well-designed projects.	T-P	
3	History of digital drawing and design.	T	
4	Evolution of digital drawing and digital design in the architectural field.	T-P	
5	Application of the most Revit software in architectural design.	P	

6	Application of the most Revit software in architectural design.	T-P	
7	Individual proposal	T-P	
8	Mid-term review and project	T-P	
9	Development of the proposals via Revit. Part I	P	
10	Development of the proposals via Revit. Part II	P	
11	Arrangement of the 3D models in Revit and Environmental analysis-1.	T-P	
12	Finalizing of the 3D models in Revit and Environmental analysis-2	P	
13	Development of the 3D models in Revit and evaluating the cost of the project-1.	T-P	
14	Finalize the 3D models in Revit and evaluating the cost of the project-1. .	P	
15	Development of Large scale architectural Project presentation sheets via Revit	T-P	
16	Finalize of large scale architectural project via Revit	P	
17	Final Exam Week		

Required Course Material(s) / Reading(s)/ Text Book(s)	Elam K. (2011). Geometry of Design. New York: Princeton Architectural Press. **Call number: N7431.5.E44 2011.** (2009). Modular structures in design and architecture. Amsterdam: BIS Publishers. **Call number: NA2728 .A35 2009**
Recommended Course Material(s)/ Reading(s) /Other	Suggested open source references: https://www.autodesk.com/products/revit/free-trial

ASSESSMENT		
Learning Activities	**NUMBER**	**WEIGHT in %**

Mid-Term	1	40
Quiz	-	-
Assignment	-	-
Portfolio	-	-
Project	-	-
Field Study	-	-
Presentation / Seminar	-	-
Studio Practice	-	-
Other	-	-
Contribution of Final Examination/Final Project/ Dissertation to the Final Grade	1	60
TOTAL		100

CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME LEARNING OUTCOMES							
No	**PROGRAMME LEARNING OUTCOMES**	Level of Contribution (1-lowest/ 5- highest)				
		1	2	3	4	5
1	Understand architectural history, theory, and cultural heritage, including the relationship between local/vernacular traditions and global architectural discourse.		X			
2	Understand the technical knowledge and the principles of structural systems, building technology, environmental performance, and construction processes as integrated components of architectural design.			X		
3	Comprehend sustainability, ecological sensitivity, and climate-responsive design principles and their application across different scales of the built environment.			X		
4	Recognize the legal, ethical, and professional frameworks governing architectural practice, including relevant codes, standards, universal ethical values, and the principles of project management and cost estimation.			X		
5	Apply creative and critical design thinking to develop holistic architectural solutions that respond to spatial, environmental, cultural, and social challenges at local, national, and global scales.		X			

6	Produce professional drawings, models, technical documentation, and digital/parametric visualizations that effectively communicate architectural proposals at all stages of design.			X		
7	Conduct systematic, evidence-based research and apply critical evaluation methods to inform and validate design decisions throughout the design process.			X		
8	Integrate interdisciplinary knowledge — spanning art, engineering, ecology, and social sciences — to produce innovative and contextually sensitive design outcomes.	X				
9	Demonstrate professional and ethical responsibility, with sensitivity to environmental sustainability, socio-cultural diversity, and the well-being of communities served by architectural practice.			X		
10	Collaborate effectively in interdisciplinary and intercultural teams, demonstrating leadership, communication, and project management competencies in design and professional contexts.		X			
11	Communicate architectural ideas persuasively and clearly in verbal, visual, and written form to professional, academic, client, and public audiences.		X			
12	Engage in continuous self-reflection, lifelong learning, and active contribution to the evolving architectural profession at local, regional, and international levels.		X			

ECTS / STUDENT WORKLOAD				
ACTIVITIES	**NUMBER**	**UNIT**	**HOUR**	**TOTAL (WORKLOAD)**
Course Teaching Hour (X weeks * total course hours)	16	1	4	64
Preliminary Preparation and self- study	-	-	-	-
Mid-Term	1	1	4	4
Quiz	-	-	-	-
Assignment	-	-	-	-
Portfolio	-	-	-	-
Project	-	-	-	-
Field Study	-	-	-	-
Presentation / Seminar	-	-	-	-
Studio Practice	-	-	-	-

Final Examination/ Final Project/ Dissertation	1	1	8	8
Other	-	-	-	-
TOTAL WORKLOAD				**76**
TOTAL WORKLOAD / 25				3.04
ECTS				**3**

ETHICAL RULES WITH REGARD TO THE COURSE
Plagiarism Disclaimer Detected and undetected plagiarism is a serious offense at any time and can have devastating effects on your degree results and future professional life. Plagiarism is easy to avoid if you ensure that you properly identify and acknowledge your sources and do not copy directly from visual examples, designs, or notes that have themselves been taken word-for-word from your sources.

	SDG 1: No Poverty	
	SDG 2: Zero Hunger	
	SDG 3: Good Health and Well-Being	
	SDG 4: Quality Education	X
	SDG 5: Gender Equality	
	SDG 6: Clean Water and Sanitation	
	SDG 7: Affordable and Clean Energy	
	SDG 8: Decent Work and Economic Growth	
	SDG 9: Industry, Innovation and Infrastructure	X
	SDG 10: Reduced Inequalities	
	SDG 11: Sustainable Cities and Communities	X
	SDG 12: Responsible Consumption and Production	

	SDG 13: Climate Action	
	SDG 14: Life Below Water	
	SDG 15: Life on Land	
	SDG 16:Peace, Justice and Strong Institutions	
	SDG 17:Partnership for the Goals	X

ASSESSMENT DETAILS AND EVALUATION CRITERIA:	
Final grades will be determined based on the course learning activities and the assessment details for the final examination or project, as outlined below, in accordance with the University's Education and Examination Regulations. Students are required to attend at least 70% of the classes. The maximum allowable absenteeism is 30%. Mid-term submission (40%) and Final submission (60%) marks will be combined to give an overall assessment mark for this course	
PREPARED BY	Assoc. Prof. Dr. Salar Salah Muhy Al-Din
UPDATED	(23-02-2026)
APPROVED	