DEPARTMENT OF ARCHITECTURE

Course Code	Course Name	Year/Semester	Theory	Practice	Credits	ECTS
ARC 1701	MATH FOR ARCHİTECTURE	2019-2020/FALL	2	0	2	2

Level of Course: Undergraduate

Course Type: Core Course

Language of the Course: English

Course time: Wednesday- 14:00-16:00

Course Classroom: A1-92

Office Hours: Monday 15:00-17:00

Mode of Delivery: Class Teaching, Assignments, Homework, Quiz, Midterm, Final

Prerequisites and Co-requisites: N/A

Course Coordinator: Assoc. Prof. Dr. Hakan ŞİMŞEK

Name of Lecturer(s): Assoc. Prof. Dr. Hakan ŞİMŞEK

Course Teaching Assistant: N/A

Course Objectives: This course aims to improve the mathematical skills of architecture students. In order to solve architectural design problems students are introduced with basic mathematical concepts and analytical geometric principles. In addition, basic mathematical knowledge that will benefit students in structural design is also gained.

Course Description: The course will contain the most important concepts of fundamental calculus with computational aspects. These are roughly Functions anf Graphs, Trigonometric, logarithmic and exponantial functions, Limit Rules, Continuity and Discontinuity, Derivative and its Rules, Derivarives of Various Functions, Applications of Derivative, Sketching the Graph of Functions, Integral and Integral Rules, Definite Integral and its Applications, Three Dimensional Coordinate Systems and Vectors, Inner Product, Dot Product, Equations of Line and Planes, Cylinders and Quadric Surfaces, Conics.

Learning Outcomes:
- To be able to understand numbers and basic concepts
- Identify problems that can be solved
- To be able to solve different problems by using different solution methods
- Ability to develop analytical skills

Recommended Text Books:

1- Calculus, A complete course by Robert A. Adams,6th (8th) edition, Pearson.

2- Calculus, International 8th Edition by James Stewart, McMaster University and University of Toronto, Cengage Learning

Planned Learning Activities and Teaching Method: This is a class course and students learn about basic mathematical thinking and concepts. The main teaching medium in math is to find the original idea for solving a problem or constructing the mathematical structure of the event

Grading: Your grades will be determined according to the average score of one midterm (%35), quiz-project studies (%15) and final exam (%50). There will be a curve for the course. (Curve is a statistical method of assigning grades designed to yield a pre-determined distribution of grades among the students in a class.). The grades will be evaluated over 100 points.

· Exams: There will be TWO exams.
   - Midterm
   - Final: The final exam will be comprehensive, with emphasis on the material not covered by the midterm.
· Missed Exams: Makeups are never allowed. An unexcused absence will result in a grade of zero. The makeup exam can be done in case an official report for examination day is brought by you.

Class Participation: Regular attendance of all enrolled classes is expected. Do not be late to the class. **Attendance will be taken through your signature within the any quarter of the class; if you come later you will be considered half-attended.** At the end of the Semester, your attendance will be reported. Attendance is compulsory and in case of absenteeism of more than **%30 for the theory, the system will automatically grade you "FX"**. If you miss a class, it is your responsibility to '**make up'** all work, including items discussed in class.

Academic integrity & plagiarism: Academic integrity is the pursuit of scholarly activity based on the values of: honesty, trust, fairness, respect and responsibility. Practicing academic integrity means never plagiarizing or cheating, never misrepresenting yourself, never falsifying information, never deceiving or compromising the work of others. Basically this means, either intentionally or unintentionally, using the words or ideas of someone else without giving credit, it's strictly forbidden.

Course Text books: There is no specific textbook for this course. Students are required to study the recommended reading textbooks and also do researches on the variety of architectural presentation techniques.

Specific Rules:

1. This class begins promptly. Please be seated by that time. Late arrivals disturb me and the rest of the class.
2. Once the lecture begins, you should remain seated throughout the entire class. If you know you have to leave early, see me before class; otherwise you are expected to remain until class is over.
3. It is not appropriate to read newspapers or have extended conversations with fellow students during class.
4. Turn off all electronic devices such as cell phones, pagers and beeping watches. They are not allowed during the class period.
5. Anyone who persists in disrupting the class will be asked to leave the classroom.
6. Cheating is totally unacceptable. Antalya Bilim University has established severe penalties for Academic Dishonesty.
7. No calculators, cell phones, iPods or other electronic devices may be used during the exams.

Communication: Students are encouraged to visit the professor during their Office Hours. If you cannot make it to announced office hours, please make individual arrangements via e-mail. However, do not expect the professor and the research assistant to respond at length via e-mail to questions of content, definition of terms, grading questions etc. If you have a question that requires a substantive response, please set up an appointment to speak with one of us.

Course Contents*:
(Weekly Lecture
Plan)

Date	Week	Chapter Topic	Take-home exercise
18.09.19	1	-Introduction to course Syllabus, • **Review of Algebra**	Critiques on homework and assignments.
25.09.19	2	• **Trigonometric, logarithmic and exponantial functions** -Learn important functions	Critiques on homework and assignments.
02.10.19	3	• **Functions and Graphs**	Critiques on homework and assignments.
09.10.19	4	• **Limit Rules, Continuity and Discontinuity**	Critiques on homework and assignments.
16.10.19	5	• **Derivative, Derivarives of Various Functions**	Critiques on homework and assignments.
23.10.19	6	• **Applications of Derivative, Sketching the Graph of Functions**	Critiques on homework and assignments. Critiques on homework and assignments.
30.10.19	7	• **Definite Integral and its Applications**	N/A
06.11.19	8	**MIDTERM SUBMISSION / Portfolio**	
13.11.19	9	• **Three Dimensional Coordinate Systems and Vectors**	Critiques on homework and assignments.
20.11.19	10	• **Dot Product**	Critiques on homework and assignments.
27.11.19	11	• **Equations of Line and Planes**	Critiques on homework and assignments.
04.12.19	12	• **Conics**	Critiques on homework and assignments.

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11.12.19	13	• Conics	Critiques on homework and assignments.	* P L E A
18.12.19	14	• **Cylinders and Quadric Surfaces**		
2019 2020		**FINAL EXAM**		

NOTE: Details of the syllabus and course schedule are subject to minor changes that will be announced in class.
Grading: Midterm and final exam responses will be evaluated for accuracy, thoughtfulness and clarity. Assignments will be evaluated for content, quality of ideas and clarity of presentation (including all necessary materials).

GRADING AND EVALUATION
The students' progress will be evaluated throughout the semester. Students' grades lower than CC will be considered as fail

Grade Scale:

90 - 100	AA	4,00
85 - 89	BA	3,50
80 - 84	BB	3,00
75 - 79	CB	2,50
65 - 74	CC	2,00
55 - 64	DC	1,50
50 - 54	DD	1,00
45 - 49	FD	0,50
0 - 44	FF	0,00

Course outline and evaluation criteria can be changed according to weekly progress by course instructor. If any ch occur, it will announce to students via e-mail.

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