Aydın Adnan Menderes University
Electrical and Electronics Engineering Department

EE214 – Computer Aided Engineering Applications (2026-2027 Fall)

Instructor

Prof. Dr. Yılmaz KALKAN

Schedule

Tuesday 13:30 - 17:15 (**C – Z01, Eng. Fac. Computer Lab.**)

Office Hours

Wednesday 09:30-12:30, Office: C-326 **(!!!!! No office hours in exam weeks.)**
If you cannot come to my office, you can reach me with e-mail whenever you need via yilmaz.kalkan@adu.edu.tr

Textbook

1. Moore, H., MATLAB for Engineers, 4th Edition, ISBN: 9780133485974, Pearson, 2015

Reference Books

1. Signals and Systems - Continuous and Discrete, R.F. Ziemer, W.H. Tranter, and D.R. Fannin, 4th Edition. Prentice Hall, 1998.

Grading

Midterm (Project) : 30%
Final (Project) : 50%
Homeworks : 20%
Social Bonus : + 10%

Grade	Letter	Grade	Letter	Important Dates (~approximately)
95 - 100	A1	65 - 69	C1	Midterm: No Midterm
90 - 94	A2	60 - 64	C2	
85 - 89	A3	55 - 59	C3	Final: No Final
80 - 84	B1	50 - 54	D1	
75 - 79	B2	0 - 49	F1	Project Report Deadline
70 - 74	B3	Irregular	F2	

- Final score must be greater than or equal to 50 (after scaling) for being succeeded.

Homeworks

Usually there will be homework for each 2-3 weeks (totally 4-5 homeworks). Homeworks will be practical and will include the important outcomes of those weeks. Moreover, they give idea about the exam and project. The process of actively struggling with an assignment is one of the most important educational experiences that you will have in this course. Your main incentive for consistently doing the assignments should be to enhance your comprehension of the material. It is beneficiary for the student to put some individual work on these. Late homeworks will not be accepted.

Term Project

To achieve good programming skills in MATLAB can be obtained by finishing a detailed project. Hence, a term project will be announced in this course and students will finish and deliver this term project in a team-work organization. Project groups may include 2-4 students, and more than one project topic can be announced. Each team should prepare its own project using MATLAB and it must be reported well. The detailed information on project will be announced later.

Course Outline

I. Introduction to Engineering (~2+2 Hrs.)
Electrical & Electronics Engineering,
Department regulations

II. Introduction to MATLAB (~2+2 Hrs.)
What is MATLAB,
Workspace, Working directory and command lines

III. Programming in MATLAB (~18+18 Hrs.)
Help & Lookfor commands
What Variables, numbers and constants
Operators and functions
Operations with matrix and vector variables
M-files in MATLAB
Plotting graphs in MATLAB
Conditional expressions, logical operators
Loops and their controls
Writing algorithms and codes in MATLAB

IV. Advanced programming in MATLAB (~6+6 Hrs.)
Special functions of MATLAB & Creating functions in MATLAB
MATLAB GUI
MATLAB Simulink

Expectations

We expect you to make an honest effort to do homeworks and submit on time. Also we expect that the work you submit to us under your name is yours. Interactions of students on the problems are useful and are encouraged, but each person should work on his/her solution. Copying from others is immature, dishonest and waste of everyone's time. **Attendance is mandatory.** A Student has to attend 80% (10 weeks) of the lectures in a semester. If a student does not attend more than 20% of the lectures, it fails and it is not permitted to enter the final examination.

Social Bonus (extra +10%)

To award **social development of the students** (which is important for today's engineers), social activities (Reading book, playing a musical instrument, doing sport regularly, and going to cinema or theatre etc.) will be graded as bonus. This bonus grade (being extra +10%) will be added directly the overall score of the student at the end of the term. **Bonus point is at most 100 points** and includes the following activities.

- **Reading book:**
  - Reading any classical book (eg. Tolstoy, Steinbeck, J. Verne, Yaşar Kemal…)---- 10 points
  - Reading any kind of book except classical ones ----- 5 points
  - Reading "Nutuk" ------25 points
- **Playing a musical instrument** ------50 points for each instrument
- **Doing sports regularly** ------30 points for each sport
- **Going to cinema or theatre** ------10 (20) points for each cinema (theatre)
- **ADU IEEE Membership** ------- 20 points
- Other social activities (camping, dancing etc.) may be evaluated with student's declaration.

For evaluation of social activities, the student's declaration is enough. You need to write your activities in a word file with detailed information and send to me at the end of semester. Presentations in the classroom may be supported ☺

"Bir öğretim üyesinin güvenini kaybekmetense, not kaybetmeyi tercih edin ve kopya çekmeyin." Prefer to lose grade but do not loose reliance of any instructor, DO NOT CHEAT.