



Aydın Adnan Menderes University
Electrical and Electronics Engineering Department
EE454 - Digital Image Processing
(2022-2023 Fall)



Instructor

Dr. Adem ÜKTE

Schedule

Friday 09.30 - 12.15 at MCZ01 Computer Lab.

Office Hours

Thursdays 09.30 - 11.30, (Room: C-321) (No office hours in exam weeks)

Textbooks

1. Gonzalez, Woods, and Eddins, Digital Image Processing Using MATLAB 2nd Ed., 2009.
2. Gonzalez and Woods, Digital Image Processing 4th Ed., 2018.

Grading

Term Project : 55%
Final : 55%

Grade	Letter	Grade	Letter	Important Dates (~approximately)
95 - 100	A1	70 - 74	B3	
90 - 94	A2	65 - 69	C1	Project presentations: Last two lessons Final In final weeks
85 - 89	A3	60 - 64	C2	
80 - 84	B1	55 - 59	D1	
75 - 79	B2	0 - 54	F1	

- For final exams, scores (which greater than or equal to 50) will be multiplied with a constant multiplication factor (μ) where $\mu=100/(\text{maximum score in that exam.})$ and $\mu=1.3$ (max)
- Final score must be greater than or equal to 50 (without scaling) to pass this course

Course Outline

- Digital Image Fundamentals
- Image Sampling and Quantization
- Image Enhancement in the Spatial Domain
- Histogram processing.
- Spatial domain filtering
- Image Enhancement in the Frequency Domain
- Frequency domain filtering

Term Project

There will be term projects to use and to improve the students' fundamental knowledge on DIP. Projects will be announced until the 7th week of the semester and will be an individual project consisting of a single student. Projects will require both theoretical research and practical realization parts. The assigned project should be investigated and learned by the student and should be reported. Then, it should be realized on MATLAB and the results must be presented and be reported finally.

Other Information

Attendance is NOT mandatory. But it is **STRONGLY ADVISED TO YOU ATTEND ALL LECTURES** to succeed this course.

The computers in the Computer Lab have the Matlab program installed, but it would be better if you have a computer and a Matlab program installed on this computer, both to use it during your own studies and term project.

If you have the opportunity, I recommend that you bring your own computer to class and use your own computer instead of the computers in the laboratory.

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.

For all exams, your papers will be examined and **those with a similarity ratio above a certain value will have zero exam grades.** In addition, legal disciplinary processes can be implemented against these students. These rules are valid for all students, whether they cheat from someone else or give copy to someone else.

Announcements

e-mail will be used to send important announcements. You should **check your e-mails that are registered in OBIS** system whether they are valid or not.

Lecture notes and other course material will be uploaded to my personal web page (<https://akademik.adu.edu.tr/fakulte/muhendislik/personel/aukte/dersler>)