

EC 538 Selected Topics in Electronics

COURSE INFORMATION

Prerequisites	Academic Year & Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Laboratory	
EC434	5	9	2	2	0	3

COURSE AIM

The course introduces the students to digital image processing techniques and their applications. Throughout the course, the student should be familiar with image edge detection, image restoration, image segmentation, and image enhancements. Also, an overview of the color image fundamentals is introduced to the students. Furthermore, the course identifies and introduces the important methods, and applications of image compression.

COURSE WEEKLY CONTENTS

- 1 Introduction to Image Processing.
- 2 Digital Image fundamentals .
- 3 Digital Image fundamentals.
- 4 Image Transforms .
- 5 Image Enhancement.
- 6 Image Filtration.
- 7 Image Filtration.+ 7th week assessment + midterm Exam
- 8 Edge detection.
- 9 Image restoration.
- 10 Image segmentation.
- 11 Color fundamentals.
- 12 Color fundamentals and 12th week exam.
- 13 Color Image Processing.
- 14 Morphological image processing.
- 15 Image compression.

STUDENT GRADING & ASSESSMENT

Weeks	Exams	Assign.	Quizzes	Reports	Present.	Lab.	Total
1 to 7	20 Midterm	←	10	MARKS		→	30
		To be freely distributed among possible assessments					
8 to 12	←		20	MARKS		→	20
13 to 15	←		10	MARKS		→	10
16 or 17	40 Final						40
Total	Exams	Assign.	Quizzes	Reports	Present.	Lab.	100

REFERENCES

- Textbook** • Relevant text books- and [R. E. Woods](#), "Digital Image Processing", 2nd edition, Prentice-Hall.

Other

- Digital Image Processing," "[Kenneth R. Castleman](#)", Prentice Hall.