



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Computer Vision							
Course Code		EEE573		Course Level		Second Cycle (Master's Degree)			
ECTS Credit	8	Workload	201 (<i>Hours</i>)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course		Teaching computer vision techniques and their application fields. Teaching classification basics.							
Course Content		Geometric modelling of the image Image movement and optical flow prediction Image merge and geometric transformation Morphological image processing Pattern classification and definition, Hough transformation							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Demonstration, Discussion, Case Study, Project Based Study, Individual Study, Problem Solving					
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Assignment	3	30
Term Assignment	1	70

Recommended or Required Reading

1	Computer Vision, Dana H. Ballard, Christopher M. Brown
2	Computer Vision : Algorithm and Applications, Richard Szeliski

Week	Weekly Detailed Course Contents	
1	Theoretical & Practice	Computer Vision definition, content and general expressions
2	Theoretical & Practice	What is Image?
3	Theoretical & Practice	Device of derivation image, and their properties
4	Theoretical & Practice	Basic Digital Image Processing Process
5	Theoretical & Practice	Basic Digital Image Processing Process
6	Theoretical & Practice	Segmentation
7	Theoretical & Practice	Geometrical Constructions – 2 Dimensional
8	Intermediate Exam	Midterm Exam.
9	Intermediate Exam	Midterm Exam.
10	Theoretical & Practice	Geometrical Constructions – 3 Dimensional
11	Theoretical & Practice	Moving Fields
12	Theoretical & Practice	Optic Flow
13	Theoretical & Practice	Computer Vision Problems
14	Theoretical & Practice	Computer Vision Problems
15	Theoretical & Practice	Project presentation
16	Final Exam	Final Exam.

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	16	6	4	160
Assignment	3	2	5	21
Term Project	1	10	10	20
Total Workload (Hours)				201
[Total Workload (Hours) / 25*] = ECTS				8

*25 hour workload is accepted as 1 ECTS



Learning Outcomes

1	To learn geometric modelling of the image
2	To be able to develop projects in real life such as Prediction, Classification and Recognition.
3	Gaining image fusion and geometric transformation.
4	Being able to follow the research topics developing in the field of Computer Vision; To be able to make presentations by preparing short seminars on this subject.
5	To gain experience in reading and writing articles.

Programme Outcomes (*Electrical and Electronics Engineering Master*)

1	Developing and intensifying knowledge that requires expertise in the area of Electrical-Electronics Engineering, and gaining the skills necessary to analyze and solve problems using this knowledge
2	Grasping the inter-disciplinary interaction related to Electrical-Electronics Engineering, interpreting and forming new types of knowledge by combining the knowledge from Electrical-Electronics Engineering and the knowledge from various other disciplines
3	Developing new approaches to solve the complex problems arising in Electrical-Electronics Engineering, coming up with solutions while taking responsibility and carrying out a specific study independently
4	Assessing the knowledge and skill gained in the area of Electrical-Electronics Engineering with a critical view
5	Transferring the current developments and one's own work in Electrical-Electronics Engineering, to other groups in written, oral and visual forms
6	The ability to control the collecting, interpreting, practicing and announcing processes of the Electrical-Electronics Engineering related to data taking into consideration scientific, cultural and ethical values and the ability to teach these values to others
7	Developing application plans concerning the subjects related to Electrical-Electronics Engineering and the ability to evaluate the end results of these plans within the frame of quality processes

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5
P1	3	4	3	3	4
P2	3	4	3	3	4
P3	3	4	5	3	4
P4	3	3	5	3	4
P5	4	5	5	4	4
P6	3	4	4	3	4
P7	4	3	3	4	4

