Department of Geomatics Engineering / Department of Geomatics Engineering / Department of Geomatics Engineering

Course Code	Course Name	Teorical	Practice	Laboratory	Credits	ECTS
GE418	DIGITAL PHOTOGRAMMETRY	3.00	0.00	0.00	3.00	6.00

Course Detail

Course Language	: English
Qualification Degree	: Bachelor
Course Type	: Optional
Preconditions	: Not
Objectives of the Course	: The aim of this course is to teach basic optic and mathematical knowledge of digital photogrammetry and its stereo model application techniques within analyzing.
Course Contents	: Optical and Mathematical Basics for Photogrammetry, Hardware of Digital Image Accusation Systems, Sowtware and Data Structure of Digital Image Accusation Systems, Coordinate Systems in Digital Photogrammetry, Interior Orientation in Digital Photogrammetry, Exterior Orientation in Digital Photogrammetry, 2D and 3D Data Structure in Digital Photogrammetry
Recommended or Required Reading	: Mikhail, E., M., Bethel, S., J., McGlone, J., C., 2001, Modern Photogrammetry, John Wiley-Sons, USA, 473 P, 1997. Kraus, K., Photogrametry Volume 1, Fundamentals and Standard Processes, 389 P., Germany, 1993 Kraus, K., Photogrametry Volume 2, Advanced Methods and Applications, Germany, 459 P. Wolf, P., R., Dewitt, B., A.,Elements of Photogrammetry with applications in GIS, 3rd Edition, The McGraw-Hill companies, USA, 2000. Close Range Photogrammetry and Machine Vision, K.B. Atkinson, ISBN:187032446X, Whittles Publishing, 1996.
Planned Learning Activities and Teaching Methods	: Lecture, discussion, exam.
Recommended Optional Programme Components	: Attandance is important
Instructors	: Dr. Öğr. Üyesi Müge Ağca
Instructor's Assistants	: none
Presentation Of Course	: powerpoint presentation
En Son Güncelleme Tarihi:	:

Course Outcomes

Upon the completion of this course a student :

1 Students learn the methods of analyzing 2D and 3D data with data obtained from terrestrial and aeronautical systems.

2 Students understand the importance of digital photogrammetry. Learns the software used in the field of digital photogrammetry by practice.

3 Students learn to integrate photogrammetric data with different spatial data.

4 Students distinguish between analytical and digital photogrammetry. They produce orthophoto, DTM, DEM, and base maps.

5 Students learn the concepts, methods, and techniques currently used by the photogrammetric systems and by laser scanning systems (aerial and terrestrial)

Preconditions

Course Code	Course Name	Teorical	Practice	Laboratory	Credits	ECTS

Weekly Contents

	Teorical	Practice	Laboratory	Preparation Info	Teaching Methods	Course Learning Outcomes
1.Week	*Optical and Mathematical Basics for Photogrammetry					
2.Week	*Optical and Mathematical Basics for Photogrammetry					
3.Week	*Hardware of Digital Image Accusation Systems					
4.Week	*Software and Data Structure of Digital Image Accusation Systems					
5.Week	*Coordinate systems in Digital Photogrammetry					
6.Week	*Coordinate systems in Digital Photogrammetry					
7.Week	*Interior Orientation in Digital Photogrammetry					
8.Week	*Exterior Orientation in Digital Photogrammetry					
9.Week	*Midterm Exam					
10.Week	*2D and 3D Data Structure in Digital Photogrammetry					
11.Week	*2D Data Analysis in Digital Photogrammetry					
12.Week	*3D Data Analysis in Digital Photogrammetry					
13.Week	*Application I					
14.Week	*final exam					

ECTS Workload

Activities	Count	Time(Hour)	Sum of Workload
Vize / Midterms	1	1.00	1.00
Final / Final	1	2.00	2.00
Derse Katılım / Attending lectures	14	3.00	42.00
Ders Öncesi Biresysel Çalışma / Individual study before lecture	14	4.00	56.00
Ders Sonrası Biresysel Çalışma / Individual study after lecture	14	3.00	42.00
Ara Sınav Hazırlık / Preparation for midterm	1	10.00	10.00
Final Sınavı Hazırlık / Preparation for final	1	14.00	14.00
		Total :	167.00
		Sum of Workload / 30 (Hour) :	6
		ECTS :	6.00

Program And OutcomeRelation

	P.O. 1	P.O. 2	P.O. 3	P.O. 4	P.O. 5	P.O. 6	P.O. 7	P.O. 8	P.O. 9	P.O. 10	P.O. 11
L.O. 1	4	0	0	5	0	5	0	0	0	0	0
L.O. 2	4	0	0	5	0	5	0	0	0	0	0
L.O. 3	4	0	0	5	0	5	0	0	0	0	0
L.O. 4	4	0	0	5	0	5	0	0	0	0	0
L.O. 5	4	0	0	5	0	5	0	0	0	0	0