Department of Geomatics Engineering / Department of Geomatics Engineering / Department of Geomatics Engineering										
Course Code	Course Name	Teorical	Practice	Laboratory	Credits	ECTS				
GE102	FUNDAMENTALS OF SURVEYING	3.00	1.00	0.00	4.00	6.00				
Course Detail	Course Detail									
Course Language	: English									
Qualification Degree	: Bachelor									
Course Type	: Compulsory									
Preconditions	: Not	: Not								
Objectives of the Course	: Study of geodetic survey methods, surveying instruments, calculation methods and surveying applications.									
Course Contents	: Principles of surveying, angle and distance measurements, traverse surveys and computations, the importance of basic sciences for surveying, measurements and errors, surveying instruments and miscellaneous calculation methods.									
Recommended or Require Reading	: 1. C.D., Ghilani and P.R., Wolf, 2008. Elementary Surveying; An Introduction to Geomatics. Pearson, Prentice Hall.									
Planned Learning Activities and : Courses, discussions, exams.  Teaching Methods										
Recommended Optional Programme Components	: -									
Instructors	: Prof. Dr. Mevlüt Yetkin									
Instructor's Assistants	: Lecturer Omer BILGINER									
Presentation Of Course	: Face to Face, Field Study									
En Son Güncelleme Tarihi:	:									

## Course Outcomes

## Upon the completion of this course a student :

1 Learning the principle concepts of surveying instruments. Learning the principle concepts of errors in observations Learning the principle concepts of field and office works.

 $2\, Having\ ability\ to\ perform\ angle,\ direction,\ azimuth\ and\ distance\ measurements/computations.\ Having\ ability\ to\ perform\ traverse\ surveys\ and\ computations.$ 

3 Learning units of measurement. Learning the principle concepts of errors in observations

 $\ \, 4\, \text{Understanding the importance of math, geometry and trigonometry for surveying}\\$ 

 $5\, \text{Understanding the importance of coordinate geometry.}\, \text{Learning the concepts of polar and rectangular coordinates}.$ 

## Preconditions

Course Code Course Name Teorical Practice Laboratory Credits ECTS

## Weekly Contents

Trockly Contents										
	Teorical	Practice	Laboratory	Preparation Info	Teaching Methods	Course Learning Outcomes				
1.Week	*Introduction									
2.Week	*Methods of measurement in Geodesy, basic coordinate systems and units									
3.Week	*Theory of errors in observations and error propagation									
4.Week	*Basic statistics for surveying									
5.Week	*Total stations									
6.Week	*Angles and directions									
7.Week	*Distance measurements									
8.Week	*Surveying using total stations									
9.Week	*Traverse surveys and computations I									
10.Week	*Traverse surveys and computations II									
11.Week	*Deflection of the vertical, magnetic declination, and convergence angle									
12.Week	*Surveying calculations									
13.Week	*Rectangular and polar coordinates									
14.Week	*Coordinate geometry									

Assesment Methods %
1 Mdterms : 40.000
2 Assignment: 10.000
3 Final : 50.000

ECTS Workload			
Activities	Count	Time(Hour)	Sum of Workload
Vize / Midterms	1	2.00	2.00
Final / Final	1	2.00	2.00
Derse Katılım / Attending lectures	15	4.00	60.00
Ders Öncesi Biresysel Çalışma / Individual study before lecture	15	1.00	15.00
Ders Sonrası Biresysel Çalışma / Individual study after lecture	15	2.00	30.00
Ara Sınav Hazırlık / Preparation for midterm	1	15.00	15.00
Final Sınavı Hazırlık / Preparation for final	1	20.00	20.00
Ev Ödevi / Homework	3	3.00	9.00
Bütünleme / Make-up	1	2.00	2.00
Saha/Arazi Çalışması	3	4.00	12.00
		_	atal : 167.00

Total: 167.00

Sum of Workload / 30 ( Hour ): 6

ECTS: 6.00

Program And	ram 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	0	0	0	0	0	0	0	0	0	0	0
L.O. 2	0	0	0	0	0	0	0	0	0	0	0
L.O. 3	0	0	0	0	0	0	0	0	0	0	0
L.O. 4	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0