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Department of Building Engineering	
Surveying (68200)	
Total Credits	**2**
major compulsory	
Prerequisites	P1 : Probability &Statistics for Engineers (68100) OR Probability and Statistics (67324) OR Statistical Methods &Probabilities for Engineers (21230) P11Synch. : Statistical Methods &Probabilities for Engineers (21230) OR Probability &Statistics for Engineers (68100) OR Probability and Statistics (67324)

Course Contents

Introduction, Tape measurements, Leveling, Theodolite and its applications, Electronic distance measurement, Coordinate geometry and Areas and Volumes

	Intended Learning Outcomes (ILO's)	Student Outcomes (SO's)	Contribution
1	1) Familiar with the meaning of surveying, and its importance and association with building engineering. Students will also learn other related issues such as scale, units of measurement, etc.	A	10 %
2	2) Able to perform all types of measurements in both the horizontal and vertical directions using basic surveying tools, levels, theodolites and total stations, and prepare a full surveying plan.	B	60 %
3	3) Able to deal with surveying in terms of coordinates in a computer environment.	B	15 %
4	4) Able to calculate and measure most types of areas whether being regular or irregular. They will also learn how to compute volumes of cut and fill needed in most civil engineering projects	A	15 %

Textbook and/ or Refrences

Textbook: Surveying for Engineers by: Dr. Najeh S. Tamim, 2nd edition, 2006. References: 1) Elementary Surveying: An Introduction to Geomatics by: Chrles D. Ghilani &Paul R. Wolf, 12th edition, 2008. 2) Surveying with Construction Applications by: Barry F. Kavanagh, 6th edition, 2007.

Assessment Criteria	Percent (%)
First Exam	20 %
Second Exam	20 %
Homeworks	10 %
Final Exam	50 %

Course Plan

Week	Topic
1	Course outline + Introduction
2	Introduction
3	Chain surveying
4	Chain surveying
5	Chain surveying + Leveling
6	Leveling
7	Leveling

null	1st Midterm (Wednesday 7/3/2012)
8	Leveling
9	Leveling
10	Angles, directions and angle measuring equipment
11	Angles, directions and angle measuring equipment
12	Electronic Distance Measurement (EDM)
null	2nd Midterm (Wednesday 11/4/2012)
13	Coordinate geometry
14	Coordinate geometry + Areas and Volumes
15	Areas and Volumes
16	Final Exam