

COURSE NUMBER	SET 304
COURSE NAME	Adjustment Computations I
COURSE STRUCTURE	(3-0-4) (lecture hr/wk - lab hr/wk – course credits)
COURSE DESCRIPTION	This course is designed to give the student the necessary knowledge to perform reduction of survey observations to measurements, to understand the errors involved in measurements and their propagation, and the analysis thereof to determine the relationship of the adjusted measurements to the observations and to verify that the mathematical constraints have been met.
PREREQUISITE(S) REQUIRED MATERIAL	Calculus I or equivalent. Ghilani and Wolf Adjustment Computations Spatial Data Analysis, 4th edition, John Wiley, 2006.
	Additional Text: —Mikhail, Gracie, Analysis and Adjustment of Survey Measurements Van Nostran Reinhold, Current Edition —Frank Ayres Jr. Matrices Schaum's outline series, McGraw-Hill Pub. Company — Supplementary text distributed by the instructor — WEB
COURSE LEARNING OUTCOMES (CLO)	The Course Learning Outcomes support the achievement of the following SET Student Outcomes and TAC of ABET Criterion 9 requirements Student Outcome a - an ability to select and apply the knowledge, techniques, skills, and modern tools of their disciplines to broadly-defined engineering technology activities CLO – 1, 2 Student Outcome b - an ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies CLO – 3, 4 Student Outcome k - A commitment to quality, timeliness, and continuous improvement CLO – 3, 5 Student Outcome l - an ability to utilize modern measurement technologies to acquire spatial data CLO – 1, 4 Student Outcome m - an ability to utilize industry-standard software to solve technical problems CLO – 4, 5 Student Outcome o – an ability to design and implement procedures, and analyze data for conformance with precision and accuracy requirements CLO – 2, 3, 5
MODIFICATION TO COURSE	The Course Outline may be modified at the discretion of the instructor or in the event of extenuating circumstances. Students will be notified in class of any changes to the Course Outline.
COURSE COORDINATED BY	Dr. L. Potts