

Industrial Engineering Program

1. COURSE NUMBER AND NAME	IE 339 - Work Measurement and Standards
2. CREDITS AND CONTACT HOURS	3 Credits. 4 Contact Hours
3. COURSE INSTRUCTOR	George Abdou
4. TEXT BOOK	Niebel & Freivalds, Methods, standards & Work Design, 10 th Ed., WCB McGraw-Hill, 1999.
4A. OTHER MATERIAL	
5A. CATALOG DESCRIPTION	Emphasizes the measurement and evaluation of existing work methods and how improvement can be achieved. Topics include visual and micro-motion study techniques, motion economy, time study, and work sampling. The development and use of standard data and computerized techniques. Also, hands-on experience through a series of laboratory experiments.
5B. PREREQUISITES	IE 203, IE 224
5C. REQUIRED, ELECTIVE OR SELECTED ELECTIVE	Required
6A. SPECIFIC OUTCOMES OF INSTRUCTION	<p>The students will:</p> <ol style="list-style-type: none"> 1 Learn the fundamentals of time study and the analytical techniques needed for utilizing data collected from time studies (a, h). 2 Learn the importance of ergonomics and motion economy as they relate to work measurement and standards (a, h, j). 3 Be able to break down tasks into basic elements and record times of elements (b, d). 4 Be able to redesign an existing, inefficient work flow to increase its efficiency and present the results of the effort (b, c, d, e, g, k).
6B. CRITERION 3 OUTCOMES ADDRESSED	<p>The mapping of the four (4) outcomes of instruction of item 6A to the Criterion 3 outcomes (a-k) is as follows:</p> <ol style="list-style-type: none"> 1. Satisfies Criterion 3 outcomes a and h. 2. Satisfies Criterion 3 outcomes a, h and j. 3. Satisfies Criterion 3 outcome b and d. 4. Satisfies Criterion 3 outcomes b, c, d, e, g and k

7. TOPICS COVERED

1. Introduction of work methods
2. Problem solving tools
3. Manual work design
4. Workplace, equipment and tool design
5. Work environment design
6. Time study
7. Performance rating
8. Allowance and standard data
9. Work sampling