

Industrial Engineering for EE

1. **Course number and name:** 020GINES5 Industrial Engineering for EE
2. **Credits and contact hours:** 4 ECTS credits, (2 lectures per week) x 1:15.
3. **Instructor's or course coordinator's name:** Elie Maalouf
4. **Instructional materials:** Instructor's PowerPoint slides, textbook and course handout.
5. **Specific course information**
 - a. **Catalog description:**

This course provides a general idea of the world of Industrial Engineering that electrical engineers need to know about. It provides a comprehensive view on the effect of labor on productivity, the effect of information system on the flow of work, the optimum experimental design and optimizing processes.
 - b. **Prerequisites:** None
 - c. **Selected elective** for EE students
6. **Specific goals for the course**
 - a. **Specific outcomes of instruction:**
 - b. **PI addressed by the course:**

PI	1.1	1.2	2.1	2.3	2.4	4.1	4.2	6.4
Covered	X	X	X	X	X	X	X	X
Assessed	X	X		X	X	X		

7. **Brief list of topics to be covered:**
 - Productivity measures
 - Time and motion study
 - Measuring productivity
 - Facilities planning
 - Flow and system requirements.
 - Personnel requirements
 - IS and control.
 - EOQ
 - ERP
 - Design and Analysis of Experiments
 - Factors and levels
 - Non-linear regression and ANOVA
 - Operations research
 - Mathematical model
 - Optimization