**Course Description Form**

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| 1. Course Name: | | | | | | | | |
| Engineering Economy | | | | | | | | |
| 1. Course Code: | | | | | | | | |
|  | | | | | | | | |
| 1. Semester / Year: | | | | | | | | |
| Second / Third | | | | | | | | |
| 1. Description Preparation Date: | | | | | | | | |
| 15 September 2023 | | | | | | | | |
| 1. Available Attendance Forms: | | | | | | | | |
| Class | | | | | | | | |
| 1. Number of Credit Hours (Total) / Number of Units (Total) | | | | | | | | |
| 3/2 | | | | | | | | |
| 1. Course administrator's name (mention all, if more than one name) | | | | | | | | |
| Name: Prof. Dr. Ahmed Mancy Mosa  Email: [ahmed.mancy@muc.edu.iq](mailto:ahmed.mancy@muc.edu.iq) | | | | | | | | |
| 1. Course Objectives | | | | | | | | |
| **Course Objectives** | | | | 1. Understand importance of engineering economics, and gain a working knowledge of money management and how to make economic comparisons of alternative engineering designs or projects. 2. Understand the impact of depreciation, inflation, taxation, economic basis for replacement, project scheduling, and applied to economic investment and project-management problems. 3. Appreciation of ethical and other economic issues related to professional and personal financial and economic decisions. | | | | |
| 1. Teaching and Learning Strategies | | | | | | | | |
| **Strategy** | | The main adopted strategy in delivering this module, encourage students’ participation in the exercises, refining and expanding their critical thinking skills comprised:  Lectures.  Tutorials.  Homework and Assignments.  Tests and Exams.  In-Class Questions and Discussions.  Connection between Theory and Application.  Extracurricular Activities.  In- and Out-Class oral conservations. | | | | | | |
| 1. Course Structure | | | | | | | | |
| **Week** | **Hours** | | **Required Learning Outcomes** | | **Unit or subject name** | | **Learning method** | **Evaluation method** |
|  | 2 | | Introduction - Description and Role in Decision Making | | Principles | | Theoretical | Several Ways (Exams + Assignments) |
|  | 2 | | Interest Rate and Rate of Return, Cash Flows: Estimation and Diagramming, Simple and Compound | | Principles | | Theoretical | Several Ways (Exams + Assignments) |
|  | 2 | | Costs- Interest | | Principles | | Theoretical | Several Ways (Exams + Assignments) |
|  | 2 | | Demand-Supply | | Principles | | Theoretical | Several Ways (Exams + Assignments) |
|  | 2 | | The time value of money - Economic Equivalence | | Principles | | Theoretical | Several Ways (Exams + Assignments) |
|  | 2 | | Deprecation: Introduction and Calculation methods | | Deprecation | | Theoretical | Several Ways (Exams + Assignments) |
|  | 2 | | Deprecation: Examples | | Deprecation | | Theoretical | Several Ways (Exams + Assignments) |
|  | 2 | | The basic methods for economic studies | | Best Alternative Selection | | Theoretical | Several Ways (Exams + Assignments) |
|  | 2 | | Compression between alternatives: Introduction | | Best Alternative Selection | | Theoretical | Several Ways (Exams + Assignments) |
|  | 2 | | Present Worth Comparison of Equal-Lived Alternatives | | Best Alternative Selection | | Theoretical | Several Ways (Exams + Assignments) |
|  | 2 | | Present Worth Comparison of Different-Lived Alternatives | | Best Alternative Selection | | Theoretical | Several Ways (Exams + Assignments) |
|  | 2 | | Present Worth Comparison of Infinite Analysis Periods | | Best Alternative Selection | | Theoretical | Several Ways (Exams + Assignments) |
|  | 2 | | Equivalent Uniform Annual Worth Analysis | | Best Alternative Selection | | Theoretical | Several Ways (Exams + Assignments) |
|  | 2 | | The Rate of Return Method | | Best Alternative Selection | | Theoretical | Several Ways (Exams + Assignments) |
|  | 2 | | Benefit/Cost Ratio Method | | Best Alternative Selection | | Theoretical | Several Ways (Exams + Assignments) |
| 1. Course Evaluation | | | | | | | | |
| Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc  1. Course cumulative:  a. Assignments: 5  b. Quizzes: 5  c. Midterm Exams: 15  d. Reports and Computer Laboratory activities: 15  e. Practical Exam: 10  2. Final Exam: 50 | | | | | | | | |
| 1. Learning and Teaching Resources | | | | | | | | |
| Required textbooks (curricular books, if any) | | | | | | ENGINEERING ECONOMY, Leland Blank , P. E., Anthony  Tarquin , P. E.,7TH EDITION  staff.emu.edu.tr/elnazgholipour/Documents/courses/ieng42  0/lecture-notes/spring-2020-2021/Engineering-Economy.pdf  Engineering Economy, E. Paul DeGarmo, Eight Edition | | |
| Main references (sources) | | | | | | Engineering Economics , R. Panneerselvam Professor School  of Management Pondicherry University .  ENGINEERING ECONOMICS (uoanbar.edu.iq)  Blank, Leland T., and Anthony J. Tarquin. "Engineering economy." *(No Title)* (2005).‏ | | |
| Recommended books and references (scientific journals, reports...) | | | | | | ASCE periodicals | | |
| Electronic References, Websites | | | | | | <https://ascelibrary.org/> | | |