

**Mining, Petroleum and Metallurgical Engineering Department**

**Cairo University
Faculty of Engineering**

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| **Course Specifications** |
| **Program(s) on which this course is given:** | B.Sc. in Metallurgical Engineering |
| **Department offering the program:** | Mining, Petroleum and Metallurgical Engineering Department |
| **Department offering the course:** | Mining, Petroleum and Metallurgical Engineering Department |
| **Academic Level:** | Undergraduate Level, 4th Year Metallurgical Engineering  |
| **Date**  | December 1st, 2014 |
| **Semester (based on final exam timing)** | 🗹 Fall 🞎 Spring |
| **A- Basic Information** |
| **1. Title:** | Economics and Organization of Metallurgical Industries | **Code:** | GEN 401 |
| **2. Units/Credit hours per week:**  | Lectures | 3 | Tutorial | 1 | Practical | 0 | Total | 4 |
| **B- Professional Information** |
| **1. Course description:** |
| **2. Intended Learning Outcomes of Course (ILOs):** | **Knowledge and Understanding** |
| 1 | Concepts and theories of mathematics and sciences, appropriate to the discipline. |
| **Intellectual Skills** |
| 2 | Combine, exchange, and assess different ideas, views, and knowledge from a range of sources in topics related to material processing, manufacturing, development and selection. |
| 3 | Judge engineering decisions considering balanced costs, benefits, safety, quality, reliability, and environmental impact.  |
| **Professional and Practical Skills** |
| 4 | Professionally merge the engineering knowledge, understanding, and feedback to improve design, products and/or services. |
| **General and Transferrable Skills** |
| 5 | Communicate effectively. |
| 6 | Search for information and engage in life-long self learning discipline. |
| **3. Contents** |
| **Topic** | **Total hours** | **Lectures hours** | **Tutorial/ Practical hours** |
| Equivalence and Single Payment Formulae | 2 | 1.5 |  |
| Other Interest Formulae | 2 | 1.5 | 1 |
| Present Worth Analysis | 4 | 3 | 1 |
| Annual Cash Flow Analysis | 2 | 1.5 | 1 |
| Rate of Return Analysis | 4 | 3 | 1 |
| Incremental Analysis | 2 | 1.5 | 1 |
| Other Analysis Techniques | 4 | 3 | 1 |
| Depreciation | 4 | 3 | 1 |
| Income Tax | 4 | 3 | 1 |
| **4. Teaching and Learning Methods** | Lectures (✓)  | Practical Training/ Laboratory ( )  | Seminar/Workshop ( )  |
| Class Activity (✓)  | Case Study (✓)  | Projects ()  |
| E-learning ()  | Assignments /Homework (✓)  | Other: Oral presentation () |
| **5. Student Assessment Methods** |
| * **Assessment Schedule**
 | **Week** |
| -Assessments; Sheets 1–5  | 2,4,6,8,10,12,14 |
| -Assignment; Quiz | 11 |
| -Assessment; Midterm Exam | 7 |
| -Assessment; Final Exam | 15 or 16 |
| * **Weighting of Assessments**
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| -Mid-Term Examination | 20% |
| -Final-term Examination  | 70% |
| -Project | 0% |
| -Class Test | 10% |
| -Presentation | 0% |
| -Total | 100% |
| **6. List of References** |
| [1] D.J. Newnan, T.G. Eschenbach, J.P. Lavelle, Engineering Economic Analysis, 9th Edition, Oxford University Press, ISBN 0-19-516807-0.  |
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| **7. Facilities Required for Teaching and Learning** |
| * Lecture hall equipped with microphone, computer, beamer and white board.
* Means of File sharing and remote communications with the students.
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| **Course Coordinator:** | **Dr. Mahmoud Mohamed Talaat** |
| **Head of Department:**  | **Prof. Dr. El-Sayed M. El-Banna** |