



The International University of Beirut  
الجامعة الدولية في بيروت

**Major Title:** Bachelor of Engineering in Industrial Engineering  
**Major Code:** BEIENG  
**Level:** underGraduate  
**Number Of Credits:** 150  
**Date:** 10-08-2022

## Bachelor of Engineering in Industrial Engineering (BEIENG)

### First Year

#### Fall Semester

| Code    | Title                            | Credits | Prerequisites           | Corequisites |
|---------|----------------------------------|---------|-------------------------|--------------|
| MATH225 | Linear Algebra with Applications | 3       | ENGL051-MATH161         |              |
| CHEM200 | General Chemistry                | 3       | ENGL101-CHEM160         |              |
| ENGG200 | Introduction to Engineering      | 3       | MATH160-CHEM160         |              |
| PHYS220 | Physics for Engineers            | 3       | PHYS161-ENGL101-PHYS160 | MATH210      |
| MATH210 | Calculus II                      | 3       | MATH161-MATH160         |              |
| Total   |                                  | 15      |                         |              |

#### Spring Semester

| Code     | Title                           | Credits | Prerequisites                           | Corequisites     |
|----------|---------------------------------|---------|-----------------------------------------|------------------|
| MATH220  | Calculus III                    | 3       | MATH210                                 |                  |
| CSCI250  | Introduction to Programming     | 3       |                                         | ENGL101-CSCI250L |
| CSCI250L | Introduction to Programming Lab | 1       |                                         | ENGL101-CSCI250  |
| MENG250  | Statics                         | 3       | MATH161-MATH160-PHYS161-PHYS160-ENGL051 | MATH210          |
| MATH270  | Ordinary Differential Equations | 3       | MATH210                                 | MATH225          |
| EENG250  | Electric Circuits I             | 3       | PHYS161-PHYS160-MATH161-MATH160-ENGL051 | ENGG200-MATH210  |
| Total    |                                 | 16      |                                         |                  |

#### Summer Semester

| Code    | Title                           | Credits | Prerequisites | Corequisites |
|---------|---------------------------------|---------|---------------|--------------|
| MENG225 | Engineering Drawing & CAD       | 3       |               |              |
| ENGL201 | Composition and Research Skills | 3       | ENGL151       |              |
| Total   |                                 | 6       |               |              |

### Second Year

#### Fall Semester

| Code     | Title                                     | Credits | Prerequisites           | Corequisites |
|----------|-------------------------------------------|---------|-------------------------|--------------|
|          | General Education Electives               | 3       |                         |              |
| ENGG300  | Engineering Economics                     | 3       | ENGL201-MATH225-MATH220 |              |
| IENG320  | Introduction to Environmental Engineering | 3       | ENGL201                 |              |
| IENG310L | Industrial Engineering Field Visit        | 1       | ENGL201                 |              |

|         |                                                     |    |                 |         |
|---------|-----------------------------------------------------|----|-----------------|---------|
| MATH310 | Probability & Statistics for Scientists & Engineers | 3  | MATH210-ENGL201 |         |
| MENG310 | Engineering Material Science                        | 3  | MENG250         | CHEM200 |
| Total   |                                                     | 16 |                 |         |

### Spring Semester

| Code     | Title                              | Credits | Prerequisites   | Corequisites |
|----------|------------------------------------|---------|-----------------|--------------|
| ENGL251  | Communication Skills               | 3       | ENGL201         |              |
| EENG370L | Industrial Electronics Lab         | 1       |                 | EENG370      |
| IENG370  | Industrial Systems Simulation      | 3       | MATH310-CSCI250 |              |
| IENG350  | Introduction to System Engineering | 3       | ENGG200-CSCI250 |              |
| IENG360  | Operations Analysis Methods        | 3       | MATH310         |              |
| EENG370  | Industrial Electronics             | 3       | EENG250         | EENG370L     |
| Total    |                                    | 16      |                 |              |

### Summer Semester

| Code    | Title                          | Credits | Prerequisites | Corequisites |
|---------|--------------------------------|---------|---------------|--------------|
| ARAB200 | Arabic Language and Literature | 3       |               |              |
|         | General Education Electives    | 3       |               |              |
| Total   |                                | 6       |               |              |

## Third Year

### Fall Semester

| Code    | Title                                          | Credits | Prerequisites   | Corequisites |
|---------|------------------------------------------------|---------|-----------------|--------------|
| IENG410 | Human Factors Engineering                      | 3       | IENG350-ENGL201 |              |
| IENG420 | Industrial Engineering Information Systems     | 3       | IENG350         |              |
| IENG440 | Quality Control and Reliability                | 3       | IENG360         |              |
| IENG430 | Inventory Control                              | 3       | IENG350-CSCI250 |              |
| IENG400 | Design and Analysis of Engineering Experiments | 3       | MATH310-CSCI250 |              |
| Total   |                                                | 15      |                 |              |

### Spring Semester

| Code    | Title                                        | Credits | Prerequisites   | Corequisites |
|---------|----------------------------------------------|---------|-----------------|--------------|
| IENG480 | Manufacturing Processes                      | 3       | IENG400-IENG430 |              |
| IENG470 | Facilities Planning                          | 3       | IENG440-IENG430 |              |
| IENG460 | Production Planning and Control              | 3       | IENG430-IENG360 |              |
| IENG450 | Industrial Engineering CAD/CAM Tools         | 3       | IENG350         |              |
| ENGG450 | Engineering Ethics and Professional Practice | 3       | ENGL251         | ENGG300      |
| Total   |                                              | 15      |                 |              |

### Summer Semester

| Code    | Title                                       | Credits | Prerequisites | Corequisites |
|---------|---------------------------------------------|---------|---------------|--------------|
| CULT200 | Introduction to Arab - Islamic Civilization | 3       |               |              |
| ENGG499 | Practical Experience                        | 4       |               |              |

|                        |                                                         |         |                                 |              |
|------------------------|---------------------------------------------------------|---------|---------------------------------|--------------|
| Total                  |                                                         | 7       |                                 |              |
| Fourth Year            |                                                         |         |                                 |              |
| Fall Semester          |                                                         |         |                                 |              |
| Code                   | Title                                                   | Credits | Prerequisites                   | Corequisites |
| IENG515                | Organizational Environments                             | 3       | IENG410                         |              |
| EENG500L               | Industrial Systems Automation and Control Lab           | 1       |                                 | EENG500      |
| EENG500                | Industrial Systems Automation and Control               | 3       | CSCI250                         | EENG500L     |
|                        | Major Elective                                          | 3       |                                 |              |
| IENG510                | Manufacturing Systems                                   | 3       | IENG460-IENG360                 |              |
| IENG615                | Operations Research                                     | 3       | IENG460-IENG430                 |              |
| Total                  |                                                         | 16      |                                 |              |
| Spring Semester        |                                                         |         |                                 |              |
| Code                   | Title                                                   | Credits | Prerequisites                   | Corequisites |
| IENG551L               | Industrial and Manufacturing Workshop                   | 1       | IENG510                         |              |
|                        | Major Elective                                          | 3       |                                 |              |
|                        | Major Elective                                          | 3       |                                 |              |
| IENG570                | Occupational Safety Engineering                         | 3       | IENG470                         |              |
| IENG565                | Industrial Waste Management                             | 3       | IENG515-IENG320                 |              |
| IENG555                | Advanced Concepts in Quality Improvement                | 3       | IENG440                         |              |
| Total                  |                                                         | 16      |                                 |              |
| Summer Semester        |                                                         |         |                                 |              |
| Code                   | Title                                                   | Credits | Prerequisites                   | Corequisites |
| IENG595                | Capstone Project                                        | 6       | IENG615-IENG555-ENGG450         |              |
| Total                  |                                                         | 6       |                                 |              |
| Major Elective Courses |                                                         |         |                                 |              |
| Code                   | Title                                                   | Credits | Prerequisites                   | Corequisites |
| EENG601                | Advanced Systems Automation                             | 3       | EENG500                         |              |
| ENGG510                | Methods of Optimization                                 | 3       | ENGG450-MATH310-MATH270-MATH220 | IENG615      |
| ENGG550                | Engineering Project Management and Control              | 3       | IENG420                         |              |
| ENGG600                | Engineering Entrepreneurship                            | 3       | ENGG450-IENG515                 |              |
| IENG560                | Infrastructure and Facilities Management                | 3       | IENG510                         |              |
| IENG610                | Selected Topics in Industrial Engineering               | 3       | ENGG450                         |              |
| IENG625                | Data Analysis and Decision Models                       | 3       | IENG410-MATH310                 |              |
| IENG635                | Food Engineering                                        | 3       | IENG510-IENG440                 |              |
| IENG640                | Fundamentals of Petroleum and Petrochemical Engineering | 3       | IENG570-IENG480-IENG320         |              |
| IENG665                | Oil and Gas Production Logistics                        | 3       | IENG640                         |              |
| IENG680                | Food Manufacturing Processes                            | 3       | IENG635                         |              |

