

Polytechnic University of Puerto Rico
Industrial Engineering Department
BSIE Curriculum Sequence (146 Credits)

| | Year 1 (40CRD) | | | | Year 2 (37CRD) | | | | Year 3 (37CRD) | | | | Year 4 (32CRD) | | | |
|--|----------------|---|------|--|----------------|--|------|--|----------------|------------------------------------|------|-----------------------|----------------|--------------|------|------------------|
| | QUARTER 1 | Course Title | CRD. | Prereq (Co-Req.) | QUARTER 2 | Course Title | CRD. | Prereq (Co-Req.) | QUARTER 3 | Course Title | CRD. | Prereq (Co-Req.) | QUARTER 1 | Course Title | CRD. | Prereq (Co-Req.) |
| | MATH 1350 | Calculus I | 4 | MATH 1340 or Equivalent | MATH 1360 | Calculus II | 4 | MATH 1350 | ENGL 2020 | Business English and Communication | 3 | ENGL 1010 | | | | |
| | SOHU 2010 | Socio-Humanistics Studies | 3 | None | ENGI 1110 | Engineering Graphics | 3 | None | MATH 1370 | Calculus III | 4 | MATH 1360 | | | | |
| | ENGL 1010 | The Study of the Essay as a Literary Genre | 3 | ENGL 0110 or Equivalent | SCIE 1210 | Principles of Chemistry | 4 | MATH 1340 or Equivalent (SCIE 1211) | SCIE 1430 | Physics I (Mechanics) | 4 | MATH 1350 (SCIE 1431) | | | | |
| | IE 1000 | Intro to Industrial Engineering | 3 | MATH 1330 or PAO | SCIE 1211 | Principles of Chemistry Lab. | 0 | MATH 1340 or Equivalent (SCIE 1210) | SCIE 1431 | Physics I Laboratory | 1 | MATH 1350 (SCIE 1430) | | | | |
| | | | | | SPAN 1010 | Linguistic Analysis of Literary Genres | 3 | SPAN 0110 or Equivalent | IE 1611 | Computer Tools for IE's Lab I | 1 | ENGI 1110 | | | | |
| | 13 | | | | 14 | | | | 13 | | | | | | | |
| | SOHU 2040 | Ethics, Global, and Contemporary Issues | 3 | SOHU 2010 | ENGI 2110 | Engineering Mechanics -Statics | 3 | MATH 1360, SCIE 1430 (MATH 1370) | ENGI 2260 | Engineering Economics | 3 | MATH 1350 | | | | |
| | IE 2210 | Probability for Engineers | 3 | MATH 1350, (IE 1611) | IE 2220 | Statistics for Engineers | 3 | IE 2210, IE 1611 | IE 3222 | Statistical Quality Control | 3 | IE 2220 | | | | |
| | SCIE 1440 | Physics II (Heat and Electricity) | 4 | MATH 1360, SCIE 1430, SCIE 1431, (SCIE 1441) | MATH 2350 | Differential Equations | 3 | MATH 1370, SCIE 1440 | IE 2310 | Work Design and Human Factors | 3 | IE 2210, ENGI 2110 | | | | |
| | SCIE 1441 | Physics II Laboratory | 1 | MATH 1360, SCIE 1430, SCIE 1431, (SCIE 1440) | IE 2110 | Financial and Cost Accounting | 3 | SOHU 2040, IE 1611 | IE 2311 | Work Design and Human Factors Lab. | 1 | Co-Req. (IE 2310) | | | | |
| | SOHU ELE | Socio-Humanistic Studies or Language Elective | 3 | Vary according to selected course | | | | | IE 2611 | Computer Tools for IE's Lab II | 1 | IE 1611 | | | | |
| | 14 | | | | 12 | | | | 11 | | | | | | | |
| | IE 3360 | Job Design and Work Measurement | 3 | ENGI 2260, IE 2310, (IE 3222) | IE 3410 | Materials Management and Inventory Control | 3 | IE 2110, IE 2220 | IE 3510 | Production Planning and Control | 3 | IE 3360, IE 3410 | | | | |
| | IE 3361 | Job Design and Work Measurement Lab. | 1 | IE 2311, Co-Req. (IE 3360) | ENGI 3510 | Engineering Materials | 3 | SCIE 1210, SCIE 1440 | ENGI 2120 | Mechanics of Materials I | 3 | ENGI 2110 | | | | |
| | MATH 2360 | Linear Algebra | 3 | MATH 1360 | ENGI 2310 | Computer Programming and Algorithms | 3 | MATH 1350 | IE 3422 | Operations Research Models I | 3 | MATH 2360, IE 2210 | | | | |
| | SPAN 2020 | Business Spanish | 3 | SPAN 1010 | IE 3500 | Service Engineering and Management | 3 | IE 2611, IE 3222 | IE 3530 | Industrial Organizational Behavior | 3 | IE 2310, IE 2311 | | | | |
| | ENGI 2320 | Principles of Electrical Engineering | 3 | SCIE 1440 | | | | | | | | | | | | |
| | 13 | | | | 12 | | | | 12 | | | | | | | |
| | IE 4910 | Facilities Planning and Design | 3 | IE 3422, IE 3510, IE 3361 | IE 4990 | Capstone Design Course | 3 | IE 4212, IE4910, (IE 4915) & Dept. Head Approval | IE 4995 | Capstone Design Course Extension | 3 | IE 4990 | | | | |
| | ENGI 2410 | Engineering Mechanics Dynamics | 3 | ENGI 2110 | IE 4915 | Facilities Planning and Design Project | 1 | IE 4910 | ENGI 3520 | Thermal Systems Engineering | 4 | ENGI 2410 | | | | |
| | IE 3522 | Operations Research Models II | 3 | IE 2220, IE 3422 | IE 3710 | Industrial Manufacturing Processes | 3 | ENGI 3510 | IE 4560 | Project Management Techniques | 3 | ENGI 2260, IE 2210 | | | | |
| | IE 4212 | Lean Six Sigma | 3 | IE 2611, IE 3222 | FREE EL | | 3 | | | | | | | | | |
| | 12 | | | | 10 | | | | 10 | | | | | | | |

| IE Elective Courses | | | |
|---------------------|---------------------------------|-----|---------------------|
| Code | Course Title | Cdr | Prereq(Co-Req) |
| IE 4960 | Industrial Engineering Practice | 3 | Dept. Head Approval |
| IE 5220 | Design of Experiments | 3 | IE 2220 |
| IE 5224 | Quality Management Systems | 3 | IE 3500 |
| IE 5228 | Lean Servicing | 3 | IE 3500 |
| IE 5990 | Special Topics | 3 | Dept. Head Approval |

Rev. Jun/2012

Total credits 146