

The courses in the above tables are classified as shown below.

Table 5.3 Classification of the Program Courses

| <i>General Education Requirements (29)</i> | |
|--|----|
| Arabic Studies 101, 201, 301 | 6 |
| English Language 101, 102, 214 | 9 |
| Islamic Studies 111, 212, 322 | 6 |
| Physical Education 101, 102 | 2 |
| General Studies Electives | 6 |
| <i>General Engineering Requirements (54)</i> | |
| Mathematics 101, 102, 201, 208 | 14 |
| Chemistry 101 | 4 |
| Physics 101, 102 | 8 |
| CE 101 Engineering Graphics | 2 |
| ICS 103 Computer Programming in C | 3 |
| EE 204 Fundamentals of Electrical Circuits | 3 |
| ISE 205 Engineering Probability and Statistics | 3 |
| ISE 307 Engineering Economic Analysis | 3 |
| ME 216/217 Materials Science and Engineering, Materials Lab | 4 |
| ME 322/323 Manufacturing Processes, Manufacturing Lab | 4 |
| CISE 301 Numerical Methods | 3 |
| CISE 305 Linear Control Systems | 3 |
| <i>Required ISE Courses (34)</i> | |
| ISE 303 Operations Research I | 3 |
| ISE 324 Work and Process Improvement | 2 |
| ISE 320 Quality Control & Industrial Statistics | 3 |
| ISE 315 Engineering Statistics | 3 |
| ISE 321 Optimization Methods | 3 |
| ISE 365 Information Systems for Industrial & Systems Engineering | 3 |
| ISE 499 Seminars | 0 |
| ISE 391 Industrial Engineering Design | 2 |
| ISE 402 Production Systems and Inventory Control | 3 |
| ISE 405 Stochastic Systems Simulation | 3 |
| ISE 426 Operations Research II | 3 |
| ISE 422 Facility Layout and Location | 3 |
| ISE 482 Senior Design Project | 6 |
| <i>Elective ISE Courses (6/9)</i> | |
| ISE 413 Productivity Engineering and Management | 3 |
| ISE 420 Advanced Quality Methods | 3 |
| ISE 429 Maintenance Planning and Control | 3 |
| ISE 430 Industrial Engineering in Healthcare Systems | 3 |
| ISE 440 Engineering Project Management | 3 |
| ISE 443 Human Factors Engineering | 3 |
| ISE 447 Decision Making | 3 |
| ISE 448 Sequencing & Scheduling | 3 |

| | |
|---|---|
| ISE 460 Industrial Process Reengineering | 3 |
| ISE 464 Industrial Information Systems | 3 |
| ISE 465 Industrial Safety | 3 |
| ISE 465 Industrial Safety | 3 |
| ISE 468 Introduction to Machine Learning and Data Analytics | 3 |
| ISE 470 Supply Chain Systems Modelling | 3 |
| ISE 472 Logistics and Transportation Systems | 3 |
| ISE 480 Reliability and Maintainability | 3 |
| ISE 491 Special Topics in Operations Research | 3 |
| ISE 492 Special Topics in Production and Quality Control | 3 |
| ISE 493 Special Topics in Reliability and Maintenance | 3 |
| ISE 494 Special Topics in IE/OR | 3 |
| ISE 496 Industrial Strategic Planning & Balanced Scorecard | 3 |

*Courses taken by students in the Summer Training option
(15)*

| | |
|--------------------------------|---|
| ISE 399 Summer Training | 0 |
| Three ISE Elective Courses | 9 |
| Two Technical Elective Courses | 6 |

Courses taken by students in the Co-op option (15)

| | |
|-------------------------------|---|
| ISE 351 Cooperative Work | 6 |
| Two ISE Elective Courses | 6 |
| One Technical Elective Course | 3 |