INDUSTRIAL ENGINEERING
- 5-YEAR BACHELOR OF SCIENCE/MASTER OF SCIENCE IN FINANCE

Program Requirements

The freshman year is identical for degrees in aerospace engineering, architectural engineering, civil engineering, computer engineering, computer science, electrical engineering, electronic systems engineering technology, environmental engineering, industrial distribution, industrial engineering, interdisciplinary engineering, manufacturing and mechanical engineering technology, mechanical engineering, multidisciplinary engineering technology, nuclear engineering, ocean engineering, and petroleum engineering (Note: not all programs listed are offered in Qatar). The freshman year is slightly different for chemical engineering, biomedical engineering and materials science and engineering degrees in that students take CHEM 119 or CHEM 107/CHEM 117 and CHEM 120. Students pursuing degrees in biological and agricultural engineering should refer to the specific curriculum for this major. It is recognized that many students will change the sequence and number of courses taken in any semester. Deviations from the prescribed course sequence, however, should be made with care to ensure that prerequisites for all courses are met.

First Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Semester Credit Hours</th>
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<tbody>
<tr>
<td>CHEM 107 General Chemistry for Engineering Students</td>
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<tr>
<td>CHEM 117 General Chemistry for Engineering Students Laboratory</td>
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<tr>
<td>ENGL 103 Introduction to Rhetoric and Composition</td>
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<tr>
<td>ENGR 102 Engineering Lab I - Computation</td>
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<td>MATH 151 Engineering Mathematics I</td>
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<td>University Core Curriculum (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/</a>)</td>
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Spring

| ENGR 216/PHYS 217 Experimental Physics and Engineering Lab II - Mechanics | 2 |
| MATH 152 Engineering Mathematics II | 4 |
| PHYS 206 Newtonian Mechanics for Engineering and Science | 3 |
| University Core Curriculum (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/) | 3 |
| Select one of the following: | 3-4 |
| CHEM 120 Fundamentals of Chemistry II | 4 |

Second Year

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<tr>
<td>ENGR 217/PHYS 217 Electrical and Magnetism</td>
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<td>MATH 251 Engineering Mathematics III</td>
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<td>MMET 181 Manufacturing and Assembly Processes I</td>
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<tr>
<td>PHYS 207 Electricity and Magnetism for Engineering Science</td>
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<td>STAT 211 Principles of Statistics I</td>
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<td>Select one of the following:</td>
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<td>CSCE 110 Programming I</td>
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<td>CSCE 111 Introduction to Computer Science Concepts and Programming</td>
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<td>CSCE 121 Introduction to Program Design and Concepts</td>
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<td>CSCE 206 Structured Programming in C</td>
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Spring

<p>| ACCT 640 Accounting Concepts and Procedures | 3 |</p>
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<td>ECON 202</td>
<td>Principles of Economics</td>
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<td>ISEN 210</td>
<td>Fundamentals of Industrial Engineering Design</td>
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<td>ISEN 230</td>
<td>Informatics for Industrial Engineers</td>
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<td>MATH 304</td>
<td>Linear Algebra</td>
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<td>MEEN 221</td>
<td>Statics and Particle Dynamics</td>
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<td><strong>Summer</strong></td>
<td>FINC 601</td>
<td>Financial Analysis Practicum</td>
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<td>FINC 602</td>
<td>Corporate Finance</td>
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<td><strong>Third Year</strong></td>
<td>Fall</td>
<td>ACCT 327</td>
<td>Financial Reporting I °</td>
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<td>FINC 601</td>
<td>Financial Analysis Practicum</td>
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<td>ISEN 310</td>
<td>Uncertainty Modeling for Industrial Engineering °</td>
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<td>ISEN 320</td>
<td>Operations Research I</td>
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<td>ISEN 330</td>
<td>Human Systems Interaction</td>
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<td>MATH 308</td>
<td>Differential Equations</td>
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<td>ISEN 340</td>
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<td>ISEN 350</td>
<td>Quality Engineering</td>
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<td>ISEN 355</td>
<td>System Simulation</td>
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<td>ISEN 370</td>
<td>Production Systems Engineering</td>
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<td>ENGL 210</td>
<td>Technical and Business Writing</td>
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<td>ENGL 203</td>
<td>Writing about Literature</td>
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<td>COMM 203</td>
<td>Public Speaking</td>
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<td>COMM 205</td>
<td>Communication for Technical Professions</td>
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<td>ACCT 328</td>
<td>Financial Reporting II</td>
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<td>ISEN 460</td>
<td>Capstone Senior Design</td>
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<td>MEEN 222/ MSEN 222</td>
<td>Materials Science</td>
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<td>High Impact Experience °</td>
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<td>ISEN 399</td>
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<td>FINC 603</td>
<td>Investments</td>
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<td>ECEN 215</td>
<td>Principles of Electrical Engineering</td>
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<td>MEEN 315</td>
<td>Principles of Thermodynamics</td>
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<td>BAEN 320</td>
<td>Engineering Thermodynamics</td>
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<td>MGMT 680</td>
<td>Business and Corporate Strategy</td>
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<td><strong>Spring</strong></td>
<td>ACCT 647/ FINC 647</td>
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<td>FINC 605</td>
<td>Valuation and Financial Modeling</td>
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<td><strong>Total Semester Credit Hours</strong></td>
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</table>

- MSF prerequisite course that counts towards ISEN degree. 
- Course that will double count. 
- A total of 9 hours of technical electives is required. The choice of courses to be taken must be made in consultation with the student’s advisor and/or the Industrial Engineering Advising Office. 
- All students are required to complete a high-impact experience in order to graduate. The list of possible high-impact experiences is available in the INEN advising office. 
- The MS Finance degree requires students to take 6 hours of electives in support of their career goals. 

The Bachelor of Science degree in Industrial Engineering requires a grade of C or better for required industrial engineering (ISEN) courses. The program includes a total of 164 hours which up to 9 hours may be applied toward both the Bachelor of Science in Industrial Engineering and the Master of Science in Finance. 

**Total Program Hours 164**