INTERDISCIPLINARY ENGINEERING - 6-YEAR BACHELOR OF SCIENCE AND JURIS DOCTOR

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 pursing 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>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>CHEM 107</td>
<td>General Chemistry for Engineering Students</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CHEM 117</td>
<td>General Chemistry for Engineering Students</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>ENGL 103 or ENGL 104</td>
<td>Introduction to Rhetoric and Composition</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ENGR 102</td>
<td>Engineering Lab I - Computation</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>MATH 151</td>
<td>Engineering Mathematics I</td>
<td>4</td>
</tr>
<tr>
<td></td>
<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>
<td>3</td>
<td></td>
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</table>

Semester Credit Hours: 16

Spring

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ENGR 216/PHYS 216</td>
<td>Experimental Physics and Engineering Lab II - Mechanics</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>MATH 152</td>
<td>Engineering Mathematics II</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>PHYS 206</td>
<td>Newtonian Mechanics for Engineering and Science</td>
<td>3</td>
</tr>
<tr>
<td></td>
<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>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 120</td>
<td>Fundamentals of Chemistry II</td>
<td>1, 4</td>
</tr>
</tbody>
</table>

Second Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>ENGR 217/PHYS 217</td>
<td>Experimental Physics and Engineering Lab III - Electricity and Magnetism</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>ITDE 201</td>
<td>Foundations of Interdisciplinary Engineering</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>MATH 251 or MATH 253</td>
<td>Engineering Mathematics III or Engineering Mathematics III</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PHYS 207</td>
<td>Electricity and Magnetism for Engineering and Science</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Select one of the following:</td>
<td>3</td>
<td></td>
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<tr>
<td></td>
<td>COMM 203</td>
<td>Public Speaking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COMM 205</td>
<td>Communication for Technical Professions</td>
<td></td>
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<tr>
<td></td>
<td>COMM 243</td>
<td>Argumentation and Debate</td>
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<td></td>
<td>ENGL 203</td>
<td>Writing about Literature</td>
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<td></td>
<td>ENGL 210</td>
<td>Technical and Professional Writing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Math/Science elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technical electives</td>
<td>1, 6</td>
<td></td>
</tr>
</tbody>
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Semester Credit Hours: 18

1. A grade of C or better is required.
2. Entering students will be given a math placement exam. Test results will be used in selecting the appropriate starting course which may be at a higher or lower level.
3. Of the 21 hours shown as University Core Curriculum electives, 3 must be from creative arts (see AREN curriculum for more information), 3 from social and behavioral sciences (see IDIS curriculum for more information), 3 from language, philosophy and culture (see CVEN, EVEN and PETE curriculum for more information), 6 from American history and 6 from government/political science. The required 3 hours of international and cultural diversity and 3 hours of cultural discourse may be met by courses satisfying the creative arts, social and behavioral sciences, language, philosophy and culture, and American history requirements if they are also on the approved list of international and cultural diversity (http://catalog.tamu.edu/undergraduate/general-information/degree-information/international-cultural-diversity-requirements/) courses and cultural discourse (http://catalog.tamu.edu/undergraduate/general-information/degree-information/cultural-discourse-requirements/) courses.
4. BMEN, CHEN and MSEN require 8 hours of fundamentals of chemistry which are satisfied with CHEM 119 or CHEM 107/CHEM 117 and CHEM 120; Students with an interest in BMEN, CHEN and MSEN can take CHEM 120 second semester freshman year. CHEM 120 will substitute for CHEM 107/CHEM 117.
5. For BS-PETE, allocate 3 hours to core communications course (ENGL 210, COMM 203, COMM 205, or COMM 243) and/or 3 hours to UCC elective. For BS-MEEN, allocate 3 hours to core communications course (ENGL 203, ENGL 210, or COMM 205) and/or 3 hours to UCC elective.
Interdisciplinary Engineering - 6-Year Bachelor of Science and Juris Doctor

**Spring**
- MATH 308 Differential Equations $^\text{1}$ 3
- University Core Curriculum (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/) 3 6
- Technical electives $^\text{1, 6}$ 9

**Semester Credit Hours** 18

**Summer**
- ITDE 399 High Impact Experience for Interdisciplinary Engineers 0

**Semester Credit Hours** 0

**Third Year**
**Fall**
- ITDE 301 Interdisciplinary Engineering Experimentation $^\text{1}$ 1
- Select one of the following: 3
  - MATH 304 Linear Algebra $^\text{1}$
  - MATH 311 Topics in Applied Mathematics I $^\text{1}$
  - MATH 323 Linear Algebra $^\text{1}$
  - MATH 401 Advanced Engineering Mathematics $^\text{1}$
- University Core Curriculum (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/) 3
- Technical electives $^\text{1, 6}$ 9

**Semester Credit Hours** 16

**Spring**
- University Core Curriculum (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/) 3
- Technical electives $^\text{1, 6}$ 13

**Semester Credit Hours** 16

**Fourth Year**
**Fall**
- LAW 7001 Analysis, Research, and Writing I 3
- LAW 7005 Civil Procedure 4
- LAW 7042 Torts 4
- LAW 7110 Professional Identity 0.5
- LAW 7418 Legislation and Regulation 3

**Semester Credit Hours** 14.5

**Spring**
- LAW 7002 Analysis, Research, and Writing II 3
- LAW 7007 Alternative Dispute Resolution Survey 1
- LAW 7017 Contracts 4
- LAW 7021 Criminal Law 3
- LAW 7032 Property 4
- LAW 7110 Professional Identity 0.5

**Semester Credit Hours** 15.5

**Fifth Year**
**Fall**
- LAW 7010 Constitutional Law 4
- LAW 7091 Professional Responsibility 3
- Upper level LAW electives $^\text{8, 9}$ 8

**Semester Credit Hours** 15

**Spring**
- Upper level LAW electives $^\text{8, 9}$ 15

**Semester Credit Hours** 15

**Sixth Year**
**Fall**
- ITDE 401 Interdisciplinary Engineering Capstone Design I $^\text{1, 10}$ 3
- Technical Electives $^\text{1, 6, 10}$ 3
- Upper level LAW electives $^\text{8, 9, 10}$ 9

**Semester Credit Hours** 14

**Spring**
- ITDE 402 Interdisciplinary Engineering Capstone Design II $^\text{1, 10}$ 2
- ITDE 499 Degree Plan Approval for ITDE 0
- Technical Electives $^\text{1, 6, 10}$ 3
- Upper level LAW electives $^\text{8, 9, 10}$ 9

**Semester Credit Hours** 14

**Total Semester Credit Hours** 157

A total of 40 semester credit hours of technical electives are required. To be selected in consultation with ITDE advisor.

Select from the following courses: ASTR 314; ATMO 363; BIOL 111, BIOL 113; CHEM 222, CHEM 227, CHEM 310, CHEM 311, CHEM 315, CHEM 316, CHEM 318, CHEM 322; ECCB 205; GEOG 205; GEOL 101, GEOL 104, MARS 408, MARS 410; MATH 304, MATH 311, MATH 323, MATH 401; PHYS 222; RWFM 375; STAT 211, STAT 414.

Students must successfully complete a minimum of six credit hours in one or more upper-level experiential courses. As part of the six credit hours, the student must successfully complete an approved externship or a clinic that involves advising or representing one or more actual clients or serving as a third-party neutral. An experiential course must be a simulation course, a law clinic, or a field placement. One LARW III course is required.

Courses taken for credit for both the undergraduate and professional degree for a combined total of 30 semester credit hours: ITDE 301, ITDE 401, ITDE 402, 6 semester credit hours of technical electives, and 18 semester credit hours of upper level LAW electives. All double-counted elective courses are to be selected in consultation with both ITDE and LAW advisors.

The combined program includes a total of 188 semester credit hours, which includes 30 semester credit hours applied both to the Bachelor of Science in Interdisciplinary Engineering and Juris Doctor degrees.

The JD degree is conferred on students who satisfactorily complete the program with a cumulative grade point average of 2.33 or better in LAW classes. In addition, each student must complete an upper-level rigorous writing requirement, a six-hour experiential requirement, and a 30-hour pro bono requirement. Students must complete their degree requirements within 72 months of starting law school, which occurs at the start of the fourth year of this combined program.

**Total Semester Credit Hours for Combination Program** 188