

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 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

Fall		Semester Credit Hours
CHEM 107	General Chemistry for Engineering Students ^{1,4}	3
CHEM 117	General Chemistry for Engineering Students Laboratory ^{1,4}	1
ENGL 103 or ENGL 104	Introduction to Rhetoric and Composition ¹ or Composition and Rhetoric	3
ENGR 102	Engineering Lab I - Computation ¹	2
MATH 151	Engineering Mathematics I ^{1,2}	4
University Core Curriculum (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/) ³		3
Semester Credit Hours		16

Spring

ENGR 216/ PHYS 216	Experimental Physics and Engineering Lab II - Mechanics ¹	2
MATH 152	Engineering Mathematics II ¹	4
PHYS 206	Newtonian Mechanics for Engineering and Science ¹	3
University Core Curriculum (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/) ³		3
Select one of the following:		3-4
CHEM 120	Fundamentals of Chemistry II ⁴	

University Core Curriculum (<http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/>)^{3,5}

Semester Credit Hours	15-16
Total Semester Credit Hours	31-32

- 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, 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 freshman chemistry, which may be satisfied by CHEM 119 or CHEM 107/CHEM 117 and CHEM 120; Credit by Examination (CBE) for CHEM 119 plus CHEM 120; or 8 hours of CBE for CHEM 119 and CHEM 120. BMEN, CHEN and MSEN should 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.

Second Year

Fall		Semester Credit Hours
COMM 205 or ENGL 210	Communication for Technical Professions or Technical and Business Writing	3
ENGR 217/ PHYS 217	Experimental Physics and Engineering Lab III - Electricity and Magnetism ¹	2
ITDE 201	Foundations of Interdisciplinary Engineering ¹	1
MATH 251	Engineering Mathematics III ¹	3
PHYS 207	Electricity and Magnetism for Engineering and Science ¹	3
Math/Science Elective ^{1,7}		3
Technical Electives ^{1,6}		3
Semester Credit Hours		18

Spring

MATH 308	Differential Equations ¹	3
University Core Curriculum (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/) ³		6

Technical Electives ^{1,6}	9
Semester Credit Hours	18
Summer	
ITDE 399 High Impact Experience for Interdisciplinary Engineers	0
Semester Credit Hours	0
Third Year	
Fall	
Select one of the following:	3
MATH 304 Linear Algebra ¹	
MATH 311 Topics in Applied Mathematics I ¹	
MATH 323 Linear Algebra ¹	
MATH 401 Advanced Engineering Mathematics ¹	
University Core Curriculum (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/) ³	3
Technical electives ^{1,6}	10
Semester Credit Hours	16
Spring	
University Core Curriculum (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/) ³	3
Technical electives ^{1,6}	12
Semester Credit Hours	15
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 ^{8,9}	8
Semester Credit Hours	15
Spring	
Upper level LAW electives ^{8,9}	15
Semester Credit Hours	15
Sixth Year	
Fall	
ENGR 401 Interdisciplinary Design ^{1,10}	3
Technical Electives ^{1,6,10}	3

Upper level LAW electives ^{8,9,10}	9
Semester Credit Hours	15
Spring	
ENGR 402 Interdisciplinary Design II ^{1,10}	3
ITDE 499 Degree Plan Approval for ITDE	0
Technical Electives ^{1,6,10}	3
Upper level LAW electives ^{8,9,10}	9
Semester Credit Hours	15
Total Semester Credit Hours	157

⁶ A total of 40 semester credit hours of technical electives are required. To be selected in consultation with ITDE advisor.

⁷ 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; GEOL 101,

⁸ 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.

⁹ One LARW III course is required.

¹⁰ Courses taken for credit for both the undergraduate and professional degree for a combined total of 30 semester credit hours: ENGR 401, ENGR 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