College of Engineering

Largest college at Texas A&M

More than 18,000 students in 14 departments

Nationally Recognized Programs

Undergraduate Program 8th

Departments Ranked in Top 10

Research Expenditures 3rd

SOURCES
Student enrollment includes undergraduate and graduate students from TAMU College Station, Galveston and Qatar campuses, and Engineering Academies.

2017 U.S. News & World Report Rankings of Public Universities
American Society for Engineering Education (2016 report)

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engineering.tamu.edu/easa
<table>
<thead>
<tr>
<th>Aerospace Engineering</th>
<th>Biological &amp; Agricultural Engineering</th>
<th>Biomedical Engineering</th>
<th>Chemical Engineering</th>
<th>Civil Engineering</th>
<th>Computer Engineering</th>
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<tr>
<td>Computer Science</td>
<td>Electrical Engineering</td>
<td>Electronic Systems</td>
<td>Industrial Distribution</td>
<td>Industrial Engineering</td>
<td>Interdisciplinary Engineering</td>
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<td></td>
<td>Engineering Technology</td>
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<tr>
<td>Manufacturing &amp;</td>
<td>Mechanical Engineering</td>
<td>Multidisciplinary</td>
<td>Nuclear Engineering</td>
<td>Ocean Engineering</td>
<td>Petroleum Engineering</td>
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<tr>
<td>Mechanical Engineering Technology</td>
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<td>Engineering</td>
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</table>
Minors

- Cybersecurity
- Engineering Project Management
- Aerospace Engineering
- Biomedical Engineering
- Chemical Engineering
- Computer Science
- Game Design and Development
- Electrical Engineering
- Embedded Systems Integration
- Industrial Engineering

- Materials Science and Engineering
- Analysis, Design and Management of Energy Conversion Systems
- Control of Mechanical Systems
- Design and Simulation of Mechanical Systems
- Nuclear Engineering
- Radiological Health Engineering
- Petroleum Engineering
Entry to a Major (ETAM)

Eligibility

- Good Academic Standing
  - 2.0 CGPA for General Engineering / 2.5 CGPA for Engineering Academy
- Two Semesters of Course Work at TAMU or Academy Sites
  - Two Engineering, Two Science\(^1\) and Two Math Courses
- Based upon courses completed at the end of the semester in which students apply

Automatic Admit Opportunity

- 3.5 CGPA after two semesters, having completed required courses
- Only available during first opportunity

\(^1\): ENGR 289 and MATH 150 students, who are not interested in biomedical engineering or chemical engineering, have only one science requirement

DID YOU KNOW?
For the Fall 2015 Cohort:

- 100% of eligible students are in a major
- 95% are in their first and second choice major
- 87% are in their first choice major
Program Highlights

Engineering Honors
Zachry Leadership Program
EnMed

Interdisciplinary Engineering
Engineering Entrepreneurship & Innovation
ENGR[X]
ENGR[x]
What’s your “X” factor?

another.

passion (pash’en)

ing emotion.

2 A
First-Generation Engineering Students Program (FGEn)

• More than 20 percent engineering undergraduate students are first-generation.
• FGEn seeks to enhance students’ educational and social experiences on campus.
• FGEn mentors will help students leverage resources, provide a sense of community, and help with their goals.
Bring Your Own Device

- **Required** for new undergraduate students
- **Enhances** technology-mediated instruction
- Cost of device can be included with the cost of attendance for financial aid
- 2017-2018 recommended systems:
  - HP Zbook
  - Lenovo ThinkPad P50
  - Dell 15” New Precision 5520
  - Apple MacBook Pro 13”

engineering.tamu.edu/byod
Bringing the Real World into the Classroom
The Aggie Engineering Experience

Knowledge Application
- Career Fair
- Certificates
- Engineering Innovation Center
- Engineering Project Showcase
- Internships
- Student Design Competitions

Undergraduate Research
- AggiE_Challenge
- Engineering Honors
- Undergraduate Summer Research Grants

Global Communities
- Engineering Student Organizations
- International Programs
Engineering Innovation Center Programs

- Design Competitions
- Aggies Invent
- Pop-Up Classes
- Engineering Project Showcase
The Aggie Engineering Experience

Knowledge Application
• Career Fair
• Certificates
• Engineering Innovation Center
• Engineering Project Showcase
• Internships
• Student Design Competitions

Undergraduate Research
• AggiE_Challenge
• Engineering Honors
• Undergraduate Summer Research Grants

Global Communities
• Engineering Student Organizations
• International Programs
Global Programs

Brazil (AERO, ECEN)
Qatar (CHEN, ECEN, MEEN, PETE)
China (CHEN, PETE, ECEN, IDIS)
Spain (CVEN, MEEN)
Italy (CVEN)
Germany (BMEN)
India (CSCE, AERO)

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Student Organizations

11 College-wide Student Organizations

• Aggies Communicate Through Engineering
• Engineers Without Borders
• Engineers Serving the Community
• National Society of Black Engineers
• Student Engineers’ Council
• Society for Asian Scientists and Engineers
• Society of Hispanic Professional Engineers
• Society of Mexican American Engineers & Scientists
• Society of Women Engineers
• Tau Beta Pi (Engineering Honor Society)
• Theta Tau (Co-ed Professional Engineering Fraternity)

Departmental Organizations

• More than 52 organizations in the departments
• All departments have an honor society and at least one professional society
Academic Advising

• **Get to know** your advisor this first year
• Advisors provide **recommendations** and inform you of **rules** and **requirements**
• **Questions** during the semester? Contact your **advisor**!
Please use your HOWDY portal for your recommended schedule!

howdy.tamu.edu
First-Year Curriculum

All majors in the College of Engineering are required to complete the following first year courses:

- ENGR 111 and ENGR 112
- MATH 151 and MATH 152 (based on MPE)
- CHEM 107/117*
- PHYS 218 (exception, MATH 150/ENGR 289 students)

*Biomedical Engineering and Chemical Engineering have a two-semester chemistry sequence. Computer Science prefers students to have a two-semester chemistry, but will allow students to use CHEM 107/117 with CHEM 102/112 or another approved science.
# Math Placement Exam

<table>
<thead>
<tr>
<th>MPE Score</th>
<th>MATH Course Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>22-33</td>
<td>Enroll in MATH 151 (Engineering Calculus I)</td>
</tr>
<tr>
<td>15-21</td>
<td>Enroll in MATH 150 (Pre-calculus)</td>
</tr>
<tr>
<td>0-14</td>
<td>Enroll in ENGR 289 (Algebra &amp; Trigonometry)</td>
</tr>
</tbody>
</table>
## Advanced Placement Scores - Calculus

<table>
<thead>
<tr>
<th>Exam</th>
<th>Score</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus AB</td>
<td>4 or 5 and MPE score ≥ 22</td>
<td>Take MATH 151</td>
</tr>
<tr>
<td>Calculus BC</td>
<td>3 or 4 and MPE score ≥ 22</td>
<td>Take MATH 151</td>
</tr>
<tr>
<td>Calculus BC</td>
<td>5 and MPE score ≥ 22</td>
<td>Take MATH 151 or MATH 152</td>
</tr>
</tbody>
</table>

AP scores reported to Texas A&M University can be viewed in HOWDY.
## Advanced Placement Scores - Physics

<table>
<thead>
<tr>
<th>Exam</th>
<th>Score</th>
<th>Recommendations</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics C - Mechanics</td>
<td>5</td>
<td>Accept credit for PHYS 218 (only <em>after</em> completion of MATH 151)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Students interested in Mechanical Engineering are <strong>not encouraged</strong> to accept</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>AP credit for PHYS 218</td>
<td></td>
</tr>
<tr>
<td>Physics C – Electricity and</td>
<td>5</td>
<td>Accept credit for PHYS 208 (only <em>after</em> completion of MATH 151 &amp; PHYS 218)</td>
<td></td>
</tr>
<tr>
<td>Magnetism</td>
<td></td>
<td>• Students interested in Electrical, Nuclear and Computer Engineering are <strong>not</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>encouraged to accept AP credit for PHYS 208</td>
<td></td>
</tr>
</tbody>
</table>
Strategies for Success

• Anticipate 3 hours of study per week for each credit hour – lost time cannot be regained

16 credits X 3 hrs. study = 48 hours of study PER WEEK

• Study in groups

• Ask for help, early
Distinguished Students

• Within a semester
  • Complete 15 credit hours
  • Earn grades of C or higher in all classes
  • Do not use any q-drops
  • Achieve a semester grade point ratio of at least 3.5

Dean’s Honor Roll
• Meet requirements above
• Achieve a semester grade point ratio of at least 3.75
Guiding Principles

• Transform the educational experience
• Increase accessibility to engineering education
• Deliver affordable engineering education
Teaching of 25 by 25

100% Classes less than 100 students

54% Undergraduate Classes less than 50 students

94% Graduate level Classes less than 50 students
Professors of Practice

Julie Ingram
Professor of Practice
Vice President, Riser and Flowline Systems at Subsea Engineering Technologies
President, Ingram Subsea Services

Greg Chamitoff
Professor of Practice

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Zachry Engineering Education Complex

A high tech, active learning environment for undergraduate engineering education.

Summer 2018
Informal Learning Spaces
Formal Learning Spaces
Green Roof/Terrace
Future Growth

- New CS Graduate Students (3%)
- Retention (50%)
- Remote Sites (29%)
- Online Masters (9%)
- New CS Undergraduate Students (9%)
- Online Masters (9%)

Retention (50%)

Remote Sites (29%)

New CS Undergraduate Students (9%)

Online Masters (9%)

New CS Graduate Students (3%)
What 25 by 25 means for you

- Enriched engineering education
- More engagement with industry
- New hands-on learning
- ENGR\textsuperscript{x} opportunities
- Better prepared for employers
- Expanded Aggie engineering network
- State-of-the-art facilities
- Multidisciplinary research
<table>
<thead>
<tr>
<th>Time</th>
<th>Student Agenda</th>
<th>Family Agenda</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:30 a.m. – 11:00 a.m.</td>
<td>Group Advising with your Academic Advisor</td>
<td></td>
</tr>
<tr>
<td>11:15 a.m. – 12:45 p.m.</td>
<td>Lunch and Student/Family Schedule Building</td>
<td></td>
</tr>
<tr>
<td>*1:00 p.m. – 5:00 p.m.</td>
<td>Schedule Building &amp; Registration</td>
<td>Q&amp;A with Academic Dean &amp; Faculty Panel</td>
</tr>
<tr>
<td></td>
<td>*Please see mini schedule for location.</td>
<td>*Please see your agenda for start time and location.</td>
</tr>
</tbody>
</table>
The Engineering Ambassadors are ready to help!
Thanks and Gig ‘em!

Questions?

Engineering Academic and Student Affairs
Engineering Activities Building B
979.845.7200
Email: easa@tamu.edu

engineering.tamu.edu/easa