2017 First Year Presentation

Department of Chemistry
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Office Location: 104 Chemistry Building
Office Number: (979) 845-0520
Office Hours: Monday-Friday
             8:00am – 12pm; 1:00pm – 5:00pm
Chemistry: The Central Science

- Biology
- Physics
- Materials
- Engineering
- Environment
- Medicine

American Chemical Society  http://www.acs.org
http://www.acs.org/content/acs/en/careers/college-to-career.html
TAMU has one of the largest and best Chemistry Departments in the US!

~65 faculty
~300 chemistry majors
~280 graduate students

>15000 seats in undergraduate classes and labs last fall

>5000 students in first-year chemistry/fall

~$15 million in research funding
Ranked 8th among public institutions and 19th overall by US News & World Report
Careers of our Former Students

- Research scientists (e.g. Proctor & Gamble, Haliburton, ExxonMobil, INEOS, Celanese, Dow, Lynntech)
- Professors
- Teachers in high schools across Texas (and the U.S.!)  
- Physicians, Dentists, Pharmacists
- Environmental Monitors
- Forensic Scientists and Criminalists for DPS, DEA
- Editor of scientific textbooks
- Research Assistant, Children’s Hospital
- Clinical Allergy Specialist

http://www.chem.tamu.edu/undergraduate/employers.php
## Undergraduate Chemistry Degrees

<table>
<thead>
<tr>
<th></th>
<th>B.S.</th>
<th>B.A.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designed for</td>
<td>Laboratory careers; graduate school; research</td>
<td>Other careers (medicine, pharmacy, teaching)</td>
</tr>
<tr>
<td>Hours of Chemistry</td>
<td>56 credits</td>
<td>40 credits</td>
</tr>
<tr>
<td>Hours of Math</td>
<td>15 credits</td>
<td>8 credits</td>
</tr>
<tr>
<td>Hours of Physics</td>
<td>8 credits</td>
<td>8 credits</td>
</tr>
<tr>
<td>Remaining core curriculum</td>
<td>27 credits</td>
<td>27 credits</td>
</tr>
<tr>
<td>Hours of Undirected Electives</td>
<td>14 credits</td>
<td>37 credits</td>
</tr>
<tr>
<td>Minor or Track (hours will vary)</td>
<td>Optional</td>
<td>Required</td>
</tr>
<tr>
<td>Research</td>
<td>Required</td>
<td>Optional</td>
</tr>
</tbody>
</table>
**Typical First Semester Schedule**

All chemistry majors will need to take the courses or categories below.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>*First-Year Chemistry Seminar</td>
<td>1</td>
</tr>
<tr>
<td>*Chemistry course + lab</td>
<td>4 or 5</td>
</tr>
<tr>
<td>*Math course</td>
<td>4</td>
</tr>
<tr>
<td>Electives</td>
<td>3 or 6</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>12 to 16</strong></td>
</tr>
</tbody>
</table>

* Mandatory
First Year Chemistry Seminar

CHEM 100: Horizons in Chemistry

- Weekly meeting of all incoming chemistry majors
- No text book, exams
- Clicker used for attendance
- Graded on small projects, attendance
- Guest presentations to acquaint you with campus services and career opportunities

<table>
<thead>
<tr>
<th>Library</th>
<th>Pharmacy Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Success Center</td>
<td>R&amp;D Manager, Los Alamos</td>
</tr>
<tr>
<td>Study Abroad</td>
<td>Forensic Analyst, Houston Forensic Science Center</td>
</tr>
<tr>
<td>Environmental Health &amp; Safety</td>
<td>Chemistry teacher, Katy ISD</td>
</tr>
</tbody>
</table>
## Chemistry Course Options

<table>
<thead>
<tr>
<th></th>
<th>CHEM 101</th>
<th>CHEM 102</th>
<th>CHEM 227</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>General chemistry – 1st semester</td>
<td>General chemistry - 2nd semester</td>
<td>Organic Chemistry</td>
</tr>
<tr>
<td><strong>Audience</strong></td>
<td>Chemistry Majors</td>
<td>Everyone</td>
<td>Chemistry Majors</td>
</tr>
<tr>
<td></td>
<td>Honors Students</td>
<td></td>
<td>Honors Students</td>
</tr>
<tr>
<td><strong>Class size</strong></td>
<td>~50</td>
<td>250</td>
<td>~60</td>
</tr>
<tr>
<td><strong>Lecture Section Numbers</strong></td>
<td>511 or 512 (majors) 201 (honors)</td>
<td>any</td>
<td>501 (majors) 200 (honors)</td>
</tr>
<tr>
<td><strong>Accompanying Lab</strong></td>
<td>CHEM 111 (1)</td>
<td>CHEM 112 (1)</td>
<td>CHEM 231 (2)</td>
</tr>
<tr>
<td><strong>Lab Section Numbers</strong></td>
<td>&gt;580 (majors) 201-203 (honors)</td>
<td>Any</td>
<td>Any</td>
</tr>
<tr>
<td><strong>No college credit for chemistry/do not want to accept college credit</strong></td>
<td>No college credit for chemistry/do not want to accept college credit</td>
<td>3 on AP exam</td>
<td>4-5 on AP exam or other college credit for 101/102</td>
</tr>
</tbody>
</table>
Expected Chemistry Progress

To remain a chemistry major you must complete

CHEM101/111 and CHEM102/112

OR

CHEM227/231 and CHEM228

with \textbf{Cs or better} by the end of your first academic year
# Math Course Options

<table>
<thead>
<tr>
<th></th>
<th>MATH 150 (4)</th>
<th>MATH 151 (4)</th>
<th>MATH 171 (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class</strong></td>
<td>Pre-Calculus</td>
<td>Calc. I</td>
<td>Calc. I</td>
</tr>
<tr>
<td><strong>Geared for</strong></td>
<td>Everyone</td>
<td>Engineers</td>
<td>Science/Math</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Practical; problem solving; 1 hour at computer</td>
<td>Theoretical; derivations</td>
<td>More demanding</td>
</tr>
<tr>
<td><strong>Lecture/Lab Hours</strong></td>
<td>3/2</td>
<td>3/2</td>
<td>4/0</td>
</tr>
<tr>
<td><strong>Class Size</strong></td>
<td>90/15</td>
<td>100/40</td>
<td>45</td>
</tr>
<tr>
<td><strong>Exams</strong></td>
<td>Common Exams at Night</td>
<td>Individually prepared by instructor; given in class</td>
<td></td>
</tr>
<tr>
<td><strong>Prerequisite</strong></td>
<td>MPE&lt;22</td>
<td>MPE≥22; passing MATH150</td>
<td>MPE≥22; passing MATH150</td>
</tr>
<tr>
<td>Count towards math requirement for chem degree?</td>
<td>No</td>
<td>Need a C or better as a chem major</td>
<td>Need a C or better as a chem major</td>
</tr>
</tbody>
</table>
### Math options with AP/other math credit

<table>
<thead>
<tr>
<th>Course Code</th>
<th>MATH 152 (4)</th>
<th>MATH 172 (4)</th>
<th>MATH 253 (4)</th>
<th>MATH 221 (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text</td>
<td>Calc 2</td>
<td>Calc 2</td>
<td>Calc 3</td>
<td>Calc 3</td>
</tr>
<tr>
<td>Designed for</td>
<td>Engineers</td>
<td>Math/Science (More demanding)</td>
<td>Engineers</td>
<td>Math/Science (More demanding)</td>
</tr>
<tr>
<td>Lecture/Lab</td>
<td>3/2</td>
<td>4/0</td>
<td>3/2</td>
<td>4/0</td>
</tr>
<tr>
<td>Class Size</td>
<td>90/30</td>
<td>30</td>
<td>70/25</td>
<td>25</td>
</tr>
<tr>
<td>AP Score recommended by MATH dept</td>
<td>5 Calculus AB, 4 Calculus BC</td>
<td>5 Calculus AB, 4 Calculus BC</td>
<td>5 Calculus BC</td>
<td>5 Calculus BC</td>
</tr>
</tbody>
</table>

MATH 251 (3) will be accepted as a substitute.

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You can’t enroll in Calculus 2 or 3 until your AP scores have been received, and you have accepted them. In the meantime, enroll in what you are qualified for today.
Expected Math Progress

• Complete first-year calculus by end of first academic year with Cs or better
  • 151/152
  or
  • 171/172

• Or complete one-semester of calculus (151/171) with a B or better by the end of the academic year and be enrolled in the next semester of calculus (152/172) for the following semester.
• University Core Curriculum
  • General Information → University Core Curriculum
  • http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/

• Chemistry Degree Plans
  • College of Science → Chemistry → Majors Tab
  • http://catalog.tamu.edu/undergraduate/science/chemistry/#majorstext

• Course Descriptions
  • Prerequisites
  • http://catalog.tamu.edu/undergraduate/course-descriptions/

• Appendix
  • Texas Common Course Numbering System
  • http://catalog.tamu.edu/undergraduate/appendices/texas-common-course-numbering-system/
University Core Curriculum

catalog.tamu.edu & core.tamu.edu

1. Communication (6 hours): ENGL104 + 3 credits
2. Mathematics (6 hours) √
3. Life and Physical Science (9 hours) √
4. Language, Philosophy & Culture (3 hours)
5. Creative Arts (3 hours)
6. Social and Behavioral Sciences (3 hours)
7. American History (6 hours): HIST 105 and 106 (or others)
8. Government/Political Science (6 hours): POLS206 and 207

A. International and Cultural Diversity Requirement (6 hours)
B. Writing Requirement (CHEM234 & CHEM481)
C. Foreign Language Requirement (2 years of high school)
# Common First-Semester Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Fulfills</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 105</td>
<td>History of the US</td>
<td>US History</td>
</tr>
<tr>
<td>HIST 106</td>
<td>History of the US</td>
<td>US History</td>
</tr>
<tr>
<td>HIST 226</td>
<td>Texas History</td>
<td>US History</td>
</tr>
<tr>
<td>POLS 206</td>
<td>American National Government</td>
<td>Political Science</td>
</tr>
<tr>
<td>POLS 207</td>
<td>State and Local Government</td>
<td>Political Science</td>
</tr>
<tr>
<td>PSYC 107</td>
<td>Introduction to Psychology</td>
<td>SBS</td>
</tr>
<tr>
<td>SOCI 205</td>
<td>Introduction to Sociology</td>
<td>SBS</td>
</tr>
<tr>
<td>ANTH 205</td>
<td>Peoples and Cultures of the World</td>
<td>LPC &amp; ICD</td>
</tr>
<tr>
<td>GEOG 202</td>
<td>Geography of the Global Village</td>
<td>LPC &amp; ICD</td>
</tr>
<tr>
<td>GEOG 301</td>
<td>Geography of the U.S.</td>
<td>LPC &amp; ICD</td>
</tr>
<tr>
<td>ENGL104</td>
<td>Composition &amp; Rhetoric</td>
<td>COMM</td>
</tr>
<tr>
<td>ARTS 150</td>
<td>Art History Survey II</td>
<td>CRA &amp; ICD</td>
</tr>
</tbody>
</table>

**DO NOT ACCEPT AP CREDIT BEFORE TALKING ABOUT IT WITH ADVISOR**
<table>
<thead>
<tr>
<th>MWF times</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>TR times</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-8:50</td>
<td></td>
<td>CHEM101-512 21085</td>
<td></td>
<td>CHEM101-512 21085</td>
<td></td>
<td>8:00-9:15</td>
</tr>
<tr>
<td>9:10-10:00</td>
<td>PSYC107-507 19546</td>
<td>PSYC107-507 19546</td>
<td>PSYC107-507 19546</td>
<td></td>
<td>9:35-10:50</td>
<td></td>
</tr>
<tr>
<td>10:20-11:10</td>
<td>POLS207-503 12487</td>
<td>POLS207-503 12487</td>
<td>POLS207-503 12487</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:30-12:20</td>
<td>MATH151-508 11871</td>
<td>MATH151-508 11871</td>
<td></td>
<td>11:10-12:25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:40-1:30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12:45-2:00</td>
<td></td>
</tr>
<tr>
<td>1:50-2:40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:00-3:50</td>
<td></td>
<td>CHEM111-588 22577</td>
<td></td>
<td>CHEM100-500 10521</td>
<td></td>
<td>2:20-3:35</td>
</tr>
</tbody>
</table>

- **3 hr. Lecture Patterns:**
  - MWF - 50 min.
  - MW or TR - 75 min.
  - Chem. Labs 170 min.
- **Class locations:** [Aggiemap.tamu.edu](http://Aggiemap.tamu.edu)
In the MyRecord tab you will find

Registration Information
  Search Class Schedule
  Add or Drop Classes
  Registration Status
    Times registration is open (from 2-6 p.m. today)
    Holds
  Lab Safety Acknowledgement (must accept every semester)

Grades
  Unofficial transcript
  Credit by Examination (do not accept AP credit before checking with advisor)
Next Task: Build a proposed schedule

• MUST have a plan before registration at 2 p.m.
  • Can use example schedules in packet
  • Can build your own from scratch (go to SCS or use laptop)
  • Can mix and match

• Every schedule must include
  • CHEM100
  • Chemistry majors (or honors) lecture and lab
  • Appropriate Math

• Remember
  • Prerequisites matter
  • Chart all class meetings to avoid class conflicts
  • Check course restrictions
  • Choose alternatives for popular electives
  • Required courses for Corps, Honors, Scholarships

• We will check your schedules at brief individual meetings before registration
Advising Meetings

• Sign up for a 15 minute meeting later today

• Come to **109 Chemistry building** 5 min before advising time & sign in

• Bring the following to the meeting
  • Completed course grid; include course & section numbers & CRNs
  • Completed Chemistry Major Information Sheet
  • Completed Comment Sheet
    What high school chemistry & when
    Last mathematics course & when; MPE score
    College credit that you have or are expecting
    e.g. 6/3/17 NSC: 2 years of chemistry in soph./sr. year; math through pre-calculus; MPE score of 20; dual credit for ENGL103/104

979-845-0520
advising@chem.tamu.edu
Registration Procedure

• Meet at SCC at 1:45 p.m.
• Logon to howdy
• Begin registering at exactly 2 p.m. TAMU time
• Register for scarce seats first
• Otherwise, can type in CRNS for all courses into separate boxes and then hit submit
• Registration order matters for pre-requisite/co-requisite courses
  • Register for chemistry lecture & lab on the same click
• When screen refreshes you will know immediately what courses you got.
• Common registration errors
  • **Student Attribute error**: didn’t accept lab safety agreement or are trying to register for a restricted class
  • **Closed section**: no seats are available
  • **Prerequisite/test core error**: you don’t have (or didn’t successfully register for) co- or prerequisite course
  • **Department/major restriction**: section is limited to students of a certain major
  • **Time conflict**: course overlaps with a course you are already registered for
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