### Additional Info
- Students must pay close attention to prerequisite course requirements of all chemistry courses.
- Students must receive a grade of “C” or better in Calculus-1 and Calculus-2 prior to enrolling in Physical Chemistry courses.
- Students must complete 45 advanced hours form major requirements and technical elective categories prior to graduation.

### Contact Info
- **Department Chair**
  - Dr. Yuanbing Mao
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- **Department Office**
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## Degree Info
Students receiving the BS Degree in Chemistry (Broadfield Major) can continue their academic studies into masters or doctoral programs in Chemistry or can use the degree to find employment as a chemist. This degree can also be combined with teacher certification work to enter a career as a secondary school teacher of chemistry. The Chemistry (Broadfield Major) degree is certified by the American Chemical Society.

### UTRio Grande Valley Blueprint
**CHEMISTRY (BS)**
**Catalog: 2019-20**
**COLLEGE OF SCIENCES**

### College of Sciences 2019-2020 Academic Plan

<table>
<thead>
<tr>
<th>Course</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 2412</td>
<td>FIRST YEAR</td>
</tr>
<tr>
<td>CHEM 2302</td>
<td>SECOND YEAR</td>
</tr>
<tr>
<td>CHEM 3304</td>
<td>THIRD YEAR</td>
</tr>
<tr>
<td>CHEM 4305</td>
<td>FOURTH YEAR</td>
</tr>
</tbody>
</table>

**Fourth Year**

- CHEM 2412: Analytical Chemistry
- CHEM 2302: Organic Chemistry I
- CHEM 3304: Physical Chemistry I
- CHEM 4305: Chemistry Capstone

**Third Year**

- CHEM 2413: Instrumental Analysis
- CHEM 2303: Analytical Chemistry Lab
- CHEM 3305: Physical Chemistry II
- CHEM 4306: Advanced Elective

**Second Year**

- CHEM 2411: General Chemistry I
- CHEM 2301: Analytical Chemistry
- CHEM 3302: Organic Chemistry II
- CHEM 4307: Advanced Elective

**First Year**

- CHEM 2410: General Physics I
- CHEM 2300: General Physics II
- CHEM 3303: Physical Chemistry I
- CHEM 4308: Advanced Elective

**Additional courses and electives** can be chosen from the College of Sciences General Education Core or the degree plan for this major. For more information, please visit www.utrgv.edu/degreeplans.
### Blueprint Experiences

#### MILESTONES

- **FIRST YEAR**
  - UTRio has a Handshake and a Learning Center. Make it a point to visit them!
  - Complete your core English classes (section 010) during your first year.
  - Complete 30 credit hours every year in order to graduate in 4 years.
  - Take MATH 2413 and MATH 2414 in your first year.

- **SECOND YEAR**
  - Complete major foundation classes, such as CHEM 1111/1311, 1112/1312, 2123/2323, 2125/2325.
  - Complete 30 credit hours.

- **THIRD YEAR**
  - Complete 30 credit hours.
  - Have you landed an internship or acquired research experience? This is the year to make it happen.

- **FOURTH YEAR**
  - “I have a plan for after graduation.” If this describes you, great! If not, visit your Faculty Advisor or Career Center!
  - Register for your Capstone/senior/portfolio project: CHEM 4305.
  - Complete at least 30 credit hours to graduate.
  - Submit your application(s) for graduate school, an apprenticeship, or for full-time employment.

#### ADVICE & SUPPORT

- **FIRST YEAR**
  - Meet with your academic advisor and bring your orientation folder with you to every session!
  - Choose a major with confidence: Visit my.UTRGV.edu and check out MyMajors.
  - Visit a faculty member during their office hours and ask a question about class.
  - Classes fill up fast. When registration opens, be sure to register on the first day for your group.
  - Cold or flu getting you down? We have Student Health Services on campus with free office visits.
  - Look for a service-learning course! For guidance, visit the Engaged Scholarship & Learning Office.
  - Participate in a campus-sponsored community service project.
  - Ask a student in class to study with you.

- **SECOND YEAR**
  - Want to explore different careers? Check out MyMajors!
  - Come ready with course suggestions and questions when you visit your academic advisor.
  - Visit the Communication Hauser Lab for help with your speeches.
  - Trouble making your tuition payment? The Financial Aid Office can help. Payment plans and emergency loans are also available.

- **THIRD YEAR**
  - Seek out research opportunities within your major and join a professional organization such as American Chemical Society.
  - Check DegreeWorks to make sure you are on track for graduation next year.
  - Apply for internship and/or job shadowing opportunities. Discuss this with your advisor, faculty mentor, or Career Center.

- **FOURTH YEAR AND BEYOND**
  - Engage in an independent study project or an academic internship to complement your major, such as Dow Chemicals, Proctor and Gamble, etc.
  - Discuss future plans with your faculty mentor or advisor who includes employment, finances, and other life goals.
  - Apply for graduation one semester prior to your anticipated date. Visit the Academic Advising Center to ensure you are on track.

#### APPLY WHAT YOU LEARN

- **FIRST YEAR**
  - Set up your profile on the Engagement Zone through My.UTRGV.edu.
  - Attend a diversity-based campus or community event (e.g., MLK Day of Service).
  - Attend a departmental program such as Chemistry Major Get Together.
  - Join a student organization! Consider looking into Elliott Chemical Society or visit Vlink (utrgv.edu/vlink) for options.

- **SECOND YEAR**
  - To find undergraduate research opportunities, visit the Engaged Scholarship & Learning Office.
  - Consider attending the LeaderShape Institute or attend the Engaged Scholar Symposium.

- **THIRD YEAR**
  - Look at study abroad opportunities! Consider going to South America, Europe, Africa or Asia.
  - Check out a cultural campus or community event such as HESTEC or FESTIBA.
  - Join another student organization. Perhaps an organization that aligns with your interest or visit Vlink for options.
  - Check out a campus event that offers free lunch-bring a friend!

- **FOURTH YEAR AND BEYOND**
  - So show off your research, service-learning or creative works at the Engaged Scholar Symposium!
  - Sharpen your writing skills! Take an intensive writing course such as ENGL 3351 Creative Writing I or become the secretary for your organization.

#### GLOBAL, CAMPUS & COMMUNITY ENGAGEMENT

- **FIRST YEAR**
  - Create a résumé and set up your profile on the Handshake icon: (My.UTRGV.edu).
  - Set your summer plans! Visit Career Center and ask about places to do some job shadowing.
  - Research shows that students who work on campus perform better than those who work off campus. Look for a job on Handshake!
  - Check your UTRGV email for the daily Messenger- locate and attend one student workshop.

- **SECOND YEAR**
  - Update your resume in Handshake and have it reviewed.
  - Visit the Career Center site to find a job fair to attend. At the event, approach a recruiter and discuss internships.
  - Will a minor expand your career options? We recommend minor that would help in your career plans or meet a chemistry advisor for guidance.
  - Explain to someone how your academic program aligns with your strengths and interests.

- **THIRD YEAR**
  - Check out the Chemistry department website for postings on career/graduate school.
  - Think about three people you can ask for letters of recommendation (professors, mentors, advisors, supervisors, etc.). Give them at least two weeks’ notice.
  - When is the deadline for your graduate school application? Visiting the program admissions webpage. Most do not accept late applicants!

- **FOURTH YEAR AND BEYOND**
  - Identify employers of interest and seek them out at job fairs, online, at on-campus information sessions, staffing agencies, etc. The Career Center can help.
  - Before a job interview, schedule a mock interview with the Career Center or speech coaching with the Communication Hauser Lab.

#### LIFE AFTER GRADUATION

- **FIRST YEAR**
  - Set up your profile on the Engagement Zone through My.UTRGV.edu.
  - Attend a diversity-based campus or community event (e.g., MLK Day of Service).

- **SECOND YEAR**
  - Consider attending a diversity-based campus or community event (e.g., MLK Day of Service).

- **THIRD YEAR**
  - Consider serving on a campus life/community committee or become a student leader and make a difference.

- **FOURTH YEAR AND BEYOND**
  - Identify employers of interest and seek them out at job fairs, online, at on-campus information sessions, staffing agencies, etc. The Career Center can help.
  - Before a job interview, schedule a mock interview with the Career Center or speech coaching with the Communication Hauser Lab.
  - Have you received your acceptance for graduate school or an employment offer? If not, network: talk to faculty, the Career Center, and get on LinkedIn.
  - Formulate and implement a strategy for life after graduation: attend career fairs, graduate fairs, apply to fellowships, etc.
  - Update your information with Alumni Relations. Enjoy alumni mixers, events and continued access to Career Center services!
  - Remember to do your exit loan counseling on studentloans.gov.

#### CAREERS

- **Product development**
- **Process development**
- **Analysis**
- **Testing**
- **Biotechnology (using living organisms or cell processes to make useful products)**
- **Consulting**
- **Quality assurance/Quality control**
- **Management**
- **Environmental analyses**
- **Forensics**
- **Universities and colleges**
- **Medical and other professional schools**
- **Public and private schools, K-12**

For additional info, visit the Career Center website and check out “What Can I Do With This Major?” [www.utrgv.edu/careercenter](http://www.utrgv.edu/careercenter)