Which Chemistry Class is Right for Me?

New students at Rice who take Chemistry generally take one of the following classes in the first year. The purpose of this document is to help you and your advisor decide which class is right for you.

CHEM 121/123 – General Chemistry and General Chemistry Laboratory

CHEM 121 is the chemistry course that most freshmen enroll in. It is an introduction to chemical phenomena emphasizing problems and methods in Chemistry. CHEM 121 students must also register for CHEM 123, the laboratory course that accompanies the lecture. All sections of CHEM 121 will share the same lecture schedule, syllabus, textbooks, homework assignments, exams, grading, and laboratories. CHEM 121 is being taught using the “Student Centered Active Learning at Rice” (SCALAR) approach. In the SCALAR approach, students sit around tables and work collaboratively to answer questions and problems and to develop concepts. The professor and other instructors do short presentations and facilitate the group work, while also bringing conclusion to the discussions in each class period.

CHEM 151/153 – Honors Chemistry and Honors Chemistry Laboratory

CHEM 151 is a first year chemistry course aimed at students who plan on majoring in chemistry or a chemistry-related field and/or taking upper division chemistry courses later in their college career. It is a deeper introduction to chemical phenomena emphasizing principles and theories in chemistry. This course is strongly recommended for chemistry majors. Students must also register for CHEM 153, the laboratory course that accompanies the lecture.

CHEM 211 – Organic Chemistry

CHEM 211 is typically taken during the second year at Rice, but some students with very strong chemistry backgrounds opt to take this course as freshmen. The course covers organic chemistry of aliphatic and aromatic compounds with emphasis on structure, functional groups, bonding, and reaction mechanisms. CHEM 211 may be taken in the fall or the spring, and the organic chemistry laboratory course is NOT a co-requisite.

KEY INFORMATION REGARDING LAB ENROLLMENT FOR STUDENTS CONSIDERING CHEM 121

- CHEM 123 is a co-requisite for CHEM 121 unless instructor permission is obtained
- Any student interested in taking the course MUST attend a safety lecture and course intro in the FIRST WEEK OF CLASSES (during the course time slot)
- Actual labs will start the 2nd week of classes
- The course format is 1 week of lab followed by 1 week of discussion
- Each day has 2 concurrent sections listed in the registrar’s course schedule; these are equivalent courses, they only differ in which week the lab is performed vs the discussion

Example schedule:

<table>
<thead>
<tr>
<th>Week</th>
<th>Section 1</th>
<th>Section 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Safety lecture</td>
<td>Safety lecture</td>
</tr>
<tr>
<td>2</td>
<td>Lab 1</td>
<td>No Lab</td>
</tr>
<tr>
<td>3</td>
<td>Discussion 1</td>
<td>Lab 1</td>
</tr>
<tr>
<td>4</td>
<td>Lab2</td>
<td>Discussion 1</td>
</tr>
<tr>
<td>5</td>
<td>Discussion 2</td>
<td>Lab 2</td>
</tr>
</tbody>
</table>
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The decision tree below is designed to help students select the appropriate chemistry course. Refer to the following notes to help you with the questions:

Notes:

1. **“Need more Chemistry?”**: Not all students require Chemistry beyond the first year. Some majors that require Chemistry only require one year. You can also use your AP credit for Chemistry towards your Group 3 distribution requirement. Of course, you can also pursue additional Chemistry without it being a requirement for your major or degree plan.

2. **“Confident?”**: Many students who have AP credit for Chemistry are not confident in their knowledge of Chemistry. This may depend on the quality and rigor of your high school course, or it may depend on how many years it has been since you took your AP course. Many students find it helpful to take General Chemistry at Rice and thus forgo their AP credit, to solidify their background in Chemistry for advanced course work or professional school requirements.

3. **“Consult OAA”**: OAA is the Office of Academic Advising, which handles health professions advising. Some medical schools do not accept AP credit as sufficient for application for medical school. As such, you should seek advice about whether to take your AP credit or take the course. You can ask OAA at the Academic Fair or by making an appointment with the office.

4. **“Chem 211”**: Organic Chemistry is typically taken by 2nd year students. First year students with AP credit generally have appropriate background to do well in Organic Chemistry. First-year students who take CHEM 211 first semester tend to have bimodal grades. First-year students are overrepresented in the “A” range, suggesting that some students with AP credit have either stronger background or deeper interest than other students. First year students are also overrepresented in bottom quartile of CHEM 211, frequently because they did not adapt quickly enough to the more demanding college curriculum. First year students who have a challenging fall semester can benefit from postponing CHEM 211 to Spring semester of the first year. Consult with your divisional advisor about whether first or second semester CHEM 211 is better for you.