Information for Microbiology and Clinical Science Majors

Advising Session
Information for Microbiology and Clinical Science Majors

- Clinical Science major has been merged into the Microbiology major

- 2 tracks are now offered in the Microbio major--a general track and a Clinical Science track

- We are no longer accepting students into the Clinical Science major
2 Microbiology Tracks: Which One Should You Follow?

Follow the track appropriate for your intended career

**General Track**
- Clinical Microbiologist
- Food/drug Analyst
- Industrial Microbiologist
- Public Health Microbiologist
- Public Health Admin
- QC Microbiologist
- Sanitary Microbiologist
- Environmental Microbiologist
- Research Lab Technician
- HS or College Teaching

**Clinical Science Track**
- Clinical Lab Scientist
- Physician Assistant
- Dentistry
## Lower Division Requirements

### General Track

- Chem 115 & 215/216
- Phys 111/112 & 121/122
- Biol 230 & 240
- Math 226
  - and
  - Math 227 or
  - Math 124 or
  - Csc 210 or
  - Biol 458

### Clinical Science Track

- Chem 115 & 215/216
- Phys 111/112 & 121/122
- Biol 230 & 240
- Math 226
  - or
  - Math 124
  - or
  - Biol 458
Organic Chemistry Requirements

**General Track**

Chem 333 & 335

* Required by CA Health Dept. for CLS trainees

**Clinical Science Track**

Chem 130

and

*Chem 320

Fall 2010 CHEM 333 renumbered to CHEM 233
Upper Division Requirements

**General Track**
- Chem 340 or 349
- Biol 355
- Biol 442/443

**Clinical Science Track**
- Chem 349
- Biol 355
- Biol 401/402
- Biol 612
# Upper Division Micro Electives

<table>
<thead>
<tr>
<th>General Track</th>
<th>Clinical Science Track</th>
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</thead>
<tbody>
<tr>
<td>11 units min, including 2 labs</td>
<td>13-14 units, including 2 labs</td>
</tr>
<tr>
<td>Biol 420</td>
<td>*Biol 430</td>
</tr>
<tr>
<td>Biol 425</td>
<td>*Biol 435</td>
</tr>
<tr>
<td>Biol 430 (431 lab)</td>
<td>*Biol 625 (lab)</td>
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<tr>
<td>Biol 435 (436 lab)</td>
<td>Biol 431 (lab)</td>
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<tr>
<td>Biol 453 (454 lab)</td>
<td>Biol 436 (lab)</td>
</tr>
<tr>
<td>Biol 699 (lab)</td>
<td>Biol 420</td>
</tr>
<tr>
<td>Chem 343 (lab)</td>
<td>Biol 453 (454 lab)</td>
</tr>
<tr>
<td>Biol 350, 351 (lab), 357</td>
<td>Chem 343 (lab)</td>
</tr>
</tbody>
</table>
When are the microbiology courses generally offered?

<table>
<thead>
<tr>
<th>Fall Classes</th>
<th>Spring Classes</th>
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</thead>
<tbody>
<tr>
<td>Biol 401/402</td>
<td>Biol 401/402</td>
</tr>
<tr>
<td>Biol 420</td>
<td></td>
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<tr>
<td>Biol 425</td>
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<tr>
<td>Biol 431</td>
<td>Biol 430</td>
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<td>Biol 435</td>
<td>Biol 435</td>
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<td></td>
<td>Biol 436</td>
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<td></td>
<td>Biol 442 / 443</td>
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<tr>
<td></td>
<td>Biol 453 / 454</td>
</tr>
<tr>
<td></td>
<td>Biol 625</td>
</tr>
</tbody>
</table>
Special Study in Biology (BIOL 699)

• Involves research in someone’s lab
• You need to find a mentor yourself
  Read the descriptions of research in various labs and choose the ones that sound most interesting to you
• If there is room available in a lab, you and your mentor will work out a project for you, how you will be evaluated, number of units you’ll sign up for etc
• Sign up for the units officially during the add period of spring and fall semesters (no official credit given for 699 during the summer)
• Can only use 699 units to satisfy one elective course requirement
Principles in Choosing Classes

• Don’t take too many majors classes at the same time
  Take ≤ 2 major classes at the same time your first couple of years

• Generally better to take fewer classes/semester and stay an extra semester
  “Quality over Quantity”

• All prerequisite classes must be passed with a grade of C- or better

• All chemistry prerequisite classes must be passed with a grade of C or better in order to take the next CHEMISTRY course in the series
**One Road Map to Graduation**

Semester 1: MATH 226; CHEM 115  
Semester 2: BIOL 230; PHYS 111/112  
Semester 3: BIOL 240; CHEM 215/216  
Semester 4: CHEM 333; PHYS 121/122  
Semester 5: BIOL 355; CHEM 335  
Semester 6: BIOL 401/402; Elective I; CHEM 340 or 349  
Semester 7: MATH 124 or 227; Elective II  
Semester 8: BIOL 442/443; Elective IIII  

If you keep getting frozen out of lower division classes, try taking them at a junior college.
What if you want to take classes at another school?

1. Check on [www.assist.org](http://www.assist.org) to see which courses have already been approved as being equivalent to SFSU courses.

2. If there is no equivalent course at the school you want to attend, then see an advisor BEFORE you take the class to ensure it is the equivalent and complete a course equivalency form.

3. If you’ve already taken the class and need to have it transferred officially, then see an advisor to complete a course equivalency form (the Registrar giving you credit for units taken, does NOT necessarily mean they can be used for the major).
   - Bring a transcript from the school.
   - If the course is not listed on [www.assist.org](http://www.assist.org), bring a syllabus or course description.
# Course Equivalency Form

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**YOU MUST PROVIDE A PRINTOUT FROM ASSIST.ORG AND/OR A COURSE DESCRIPTION AND/OR A SYLLABUS TO YOUR ADVISOR**

**EQUIVALENCY AUTHORIZATION**

for Biology Major Course Requirements

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Student Name: ___________________________ E-mail: ___________________________ SFSU ID: ___________________________

*It is the student’s responsibility to keep this form and submit it with his/her graduation petition.*

*Community college transfer units CANNOT be used to meet UPPER DIVISION UNIT REQUIREMENTS*

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I request the following course:

<table>
<thead>
<tr>
<th>Institution</th>
<th>Course No.</th>
<th>Title</th>
<th>Units</th>
<th>Term (Sem or Qtr?)</th>
</tr>
</thead>
</table>

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to be used as an equivalent for the following SFSU course requirement:

**SFSU**

<table>
<thead>
<tr>
<th>Institution</th>
<th>Course No.</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
</table>

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This course equivalency was determined by:

- □ A formal articulation agreement
- □ evaluation by faculty advisor from course materials

I have determined this course to be:

- □ Lower Division
- □ Upper Division
- □ Course Content only/ No Unit Credit
Common mistakes in transferring classes

1. Expecting that courses taken at a Junior College can be used for upper division credit at SFSU
   - XX at City College cannot be transferred and counted as YY at SFSU, at least for credit
   - You can get credit for the content, but not the units

2. You get credit for fewer units than you expected for course when transferring a class
   - A four unit class at one school may only be equivalent only to a three unit class at SFSU—you’ll get credit for three units, not four
   - The equivalent course at SFSU may be four units, but the course you are transferring is only three units—you’ll get credit for three units, not four

3. Not completing course equivalency forms until you plan to graduate
   - Last minute surprises the semester you plan to graduate are difficult and stressful
Minors and Double Majors

- Can major in only one area of biology

- Chemistry Minor
  Generally, a couple of additional chemistry courses will earn a minor
Microbiology Faculty Advisors (Spring 2010)

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3. Robert Ramirez (rramirez@sfsu.edu)