**Microbiology**  
*College of the Environment & Life Sciences (CELS)*

**Department:** Cell and Molecular Biology, 874-2201, [http://www.uri.cels/cmb](http://www.uri.cels/cmb)

**UC Advisor:** Bethany Jenkins, [bjenkins@uri.edu](mailto:bjenkins@uri.edu), 874-7551

**Credits:** 120

**The Major:** Microbiology is an exciting field with challenging frontiers that include genetic engineering, cancer research, cellular mechanisms of infection, basic research in cell and molecular biology, and microbial ecology. Microbiologists today apply new technical approaches such as gene cloning, electron microscopy, and computer technology, to bacteria, viruses, algae, protozoa, fungi, and to animal and plant cells.

**Career Options:** A BS in microbiology prepares a person for working at the bench in a number of areas, including: some hospital laboratories, the federal government (EPA, FDA, USDA) and industry. It is also an excellent basic foundation for graduate school and for professional schools, like dental school, medical school, veterinary school and podiatry school.

**Transfer out of UC:** Must have completed at least 24 credits, minimum GPA of 2.00, and received permission from the UC major advisor.

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The following is an example of the typical course schedule for the first 4 semesters for a student majoring in Microbiology. These are recommended course selections for CMB majors in University College; there will be variation based on course availability and schedule restraints. Some classes are not offered every semester. It is important to plan ahead and consult with your advisor to allow yourself time to enroll in the classes you wish to take.

**Semester I (Fall)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>URI 101</td>
<td>1</td>
</tr>
<tr>
<td>COM 100</td>
<td>3</td>
</tr>
<tr>
<td>CHM 101/102</td>
<td>4</td>
</tr>
<tr>
<td>BIO 101/103</td>
<td>4</td>
</tr>
<tr>
<td>MTH 111 or MTH 131 or MTH 141</td>
<td>3</td>
</tr>
<tr>
<td>General Ed. (Cat. S, A, L, or F)*</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total credits: 15-18**

**Semester II (Spring)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 102/104 Principles of Biology II</td>
<td>4</td>
</tr>
<tr>
<td>CHM 112/114 Chemistry II, Lab</td>
<td>4</td>
</tr>
<tr>
<td>WRT 104/105 or 106 Composition</td>
<td>3</td>
</tr>
<tr>
<td>Free Elective (or MTH131)</td>
<td>3</td>
</tr>
<tr>
<td>General Ed. (Cat. S, A, L, or F)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total credits: 17**

**Semester III (Fall)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIC 211</td>
<td>4</td>
</tr>
<tr>
<td>General Ed. or Elective (3)</td>
<td>3</td>
</tr>
<tr>
<td>CHM 227</td>
<td>3</td>
</tr>
<tr>
<td>Supporting Elective</td>
<td>3</td>
</tr>
<tr>
<td>General Ed. (Cat. S, A, L, or F)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total credits: 16-17**

**Semester IV (Spring)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 226/228 Organic Chemistry II</td>
<td>5</td>
</tr>
<tr>
<td>MIC Elective</td>
<td>3</td>
</tr>
<tr>
<td>Supporting Elective or General Ed.</td>
<td>3</td>
</tr>
<tr>
<td>Supporting Elective or General Ed.</td>
<td>3</td>
</tr>
<tr>
<td>General Ed. (Cat. S, A, L, or F)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total credits: 17**

*Students may want to consider taking 15 credits the first semester by postponing taking this General Ed.*

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*For more information about the major contact the CBM University College advisor listed above.*
Effective Fall 2012

General Education (38 credits): All Category MQ (Mathematical & Quantitative Reasoning) and N (Natural Sciences) General Education requirements (11 cr.) are satisfied by courses taken as part of the major. Thus, to satisfy URI’s General Education requirements, CMB students should take COM 100, WRT 104/105 or 106, 6 cr. in Category S (Social Sciences), and only 15 credits of General Education courses from Category A (Fine Arts & Literature), L (Letters), or F (Foreign Language/Culture). See the URI Course Catalog (also on the web at http://www.uri.edu/catalog/catalog.html/index.html) for a listing of all General Education courses.

Introductory Professional Courses (4 credits):
MIC 211 or 201 Introductory Microbiology

Basic Sciences (45 credits) - 11 credits applicable to General Education:
BCH 311 Introductory Biochemistry
BIO 101/103 Principles of Biology I
BIO 102/104 Principles of Biology II
BIO 352 Genetics
CHM 101, 102 General Chemistry I, Lab
CHM 112, 114 General Chemistry II, Lab
CHM 226 Organic Chemistry Lab
CHM 227 Organic Chemistry I
CHM 228 Organic Chemistry II
MTH 111 or 132 or 142 Pre-calculus or Applied Calculus II or Intermediate Calculus with Analytic Geometry
MTH 131 or 141 Applied Calculus or Introductory Calculus with Analytic Geometry
PHY 111, 185 General Physics I, Lab
PHY 112, 186 General Physics II, Lab

Concentration (26 credits):
MIC 333 Immunology and Serology
MIC 413, 415 Advanced Microbiology I, Lab
MIC 414, 416 Advanced Microbiology II, Lab
MIC 495 Seminar in Microbiology
MIC (other courses in MIC, up to 6cr MIC491/2 or selected courses in BIO)

Free Electives (17 credits)
You may take 17 credits of your choice.
MICROBIOLOGY, 120 CREDITS
College of the Environment & Life Sciences (CELS)
Department of Cell & Molecular Biology

STUDENT______________________________

General Education (28 credits +11 Basic Sciences)
URI101 ___(1)
C: COM 100____(3), CW: WRT _____(3)
MQ: (3 cr. from Basic Science Requirements)
N: (8 cr. from Basic Science Requirements)
S: _________(3) ____________(3)
(15 credits from L, A, and F)
L: ___________ ___________
A: ___________ ___________
F: ___________ ___________

Introductory Professional Courses (4 credits)
MIC 211* _____(4)
*MIC 211 is highly recommended but students may substitute it for MIC 201.

Basic Sciences (44 credits)
BCH 311____(3)
BIO 101/103____(4), BIO 102/104____(4)
BIO 352_____ (3)
CHM 101____(3), 102____(1)
CHM 112____(3), 114____(1)
CHM 226____(2), 227____(3), 228____(3)
MTH 111____(3), or 132____(3), or 142____(3)
or STA 307/8 ____ (3)
MTH 131____(3) or MTH 141____(3)
PHY 111____(3), 185____(1)
PHY 112____(3), 186____(1)
*8 credits apply to N category & 3 credits apply to MQ for General Ed credits.

Concentration (26 credits)
MIC 333____(3) MIC 413____(3)
MIC 415____(2) MIC 414____(3)
MIC 416____(2) MIC 495____(1)

Select from the following courses to fulfill the reminder 12 credits needed.
MIC 190____(3) MIC 334____(3)
MIC 412____(3) MIC 422____(3)
MIC 432____(3) MIC 435____(3)
MIC 450____(3) MIC 483____(3)
MIC 576____(4) BIO 327____(3)
BIO 341____(3) BIO 437____(3)
MIC491/492 ____ (up to 6 credits)

Free Electives (18 credits)
Students may take courses of their choice.

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120 credits required

Student Total________

ADVISORY COMMENTS: