MEDICAL LABORATORY SCIENCE  
College of the Environment & Life Sciences (CELS)

Department:  Cell and Molecular Biology, 874-2201, www.uri.cels/cmb  
UC Advisor:  Dr. Gregory Paquette, gregcls@uri.edu, 874-5947  
Credits:  120

The Major:  The Medical Laboratory Science major is concerned with the diagnosis, treatment, and prevention of disease using analytical methods in the clinical laboratory. The clinical program includes lecture and laboratory instruction in clinical chemistry, clinical microbiology, hematology, immunology, immunohematology and molecular pathology, and prepares the student for the national certification examinations and state licensure.

Career Options:  Job availability for Medical Laboratory Science graduates is usually extensive, and it is increasing. A recent report issued by the United States Department of Labor indicates an increasing demand for professionals in all areas of health care, including clinical laboratory science. Graduates of the program have an opportunity for careers in clinical practice, laboratory supervision and management, health regulatory agencies, sales and technical representation for scientific equipment companies, research, and education.

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

The following is an example of the typical course schedule for the first 4 semesters for a student majoring in Medical Laboratory Science. 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.

<table>
<thead>
<tr>
<th>Semester I (Fall)</th>
<th>Semester II (Spring)</th>
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<tbody>
<tr>
<td>URI 101 Freshman at URI ......................... 1</td>
<td>WRT 104/105 or 106 Composition ...........3</td>
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<tr>
<td>COM 100 Communication Fundament ........3</td>
<td>BIO 102/104 Principles of Biology II ..........4</td>
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<td>CHM 101/102 or CHM 103/105 .................4</td>
<td>CHM 112/114 Chemistry II, Lab .................4</td>
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<tr>
<td>BIO 101/103 Principles of Biology I ........4</td>
<td>MTC 102 Intro. Clinical Lab. Science .......1</td>
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<td>MTH 111 or MTH 131 or MTH 141 ..........3</td>
<td>General Ed. (Cat. S, A, L, or F) .................3</td>
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<td>Total credits: 15</td>
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<th>Semester III (Fall)</th>
<th>Semester IV (Spring)</th>
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<tr>
<td>MIC 211 Intro. Microbiology (or 201) ..........4</td>
<td>CHM 228 Organic Chemistry II .................3</td>
</tr>
<tr>
<td>BIO 121 Human Anatomy .........................4</td>
<td>BIO 242 Intro. Human Physiology .............3</td>
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<tr>
<td>CHM 227 Organic Chemistry I ....................3</td>
<td>PHY 111, 185 Physics I .........................4</td>
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<td>Supporting Elective ................................3</td>
<td>General Ed. (Cat. S, A, L, or F) .................3</td>
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<td>Total credits: 17</td>
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* For more information about the major contact the CBM University College advisor listed above.
General Education (27 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 (5 credits):
MTC102 Introduction to Clinical Laboratory Science
MIC 211 or 201 Introductory Microbiology

Basic Sciences (41 credits)*:
BIO 101/103 Principles of Biology I
BIO 102/104 Principles of Biology II
CHM 101, 102 General Chemistry I, Lab
MTH 111 Precalculus , MTH131 Applied Calculus or MTH 141 Calculus
PHY 111, 185 General Physics I, Lab
BIO 121 Human Anatomy
BIO 242 Introductory Human Physiology
CHM 112, 114 General Chemistry II, Lab
CHM 226 Organic Chemistry Lab
CHM 227 Organic Chemistry I
CHM 228 Organic Chemistry II
BCH 311 Introductory Biochemistry
(*8 credits apply to N category & 3 credits apply to MQ)

Concentration (40 credits):
MIC 333 Immunology and Serology
MIC 432 Pathogenic Bacteriology
MTC 483 Diagnostic Microbiology

Clinical Internship:
MTC 102 Intro. Clinical Laboratory Science
MTC 405 Molecular Pathology
MTC 406 Clinical Immunology
MTC 409 Clinical Microbiology I
MTC 410 Clinical Microbiology II
MTC 411 Clinical Chemistry I
MTC 412 Clinical Chemistry II
MTC 413 Immunohematology I
MTC 414 Immunohematology II
MTC 415 Hematology I
MTC 416 Hematology II

Free Electives (7 credits)
You may take 7 credits of your choice.
**MEDICAL LABORATORY SCIENCE, B.S. 120 CREDITS**

*College of the Environment & Life Sciences (CELS)*  
Department of Cell & Molecular Biology

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<th>STUDENT ____________________________</th>
<th>ADVISOR ____________________________</th>
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**General Education (27 credits +11 Basic Science)**  
C: COM 100 ______ (3),  CW: WRT ______ (3)

MQ: (3 cr. from Basic Science)

N: (8 cr. from Basic Science)

S: _______ (3) ________ (3)

(15 credits from L, A, and F)

L: _______  ________

A: _______  ________

F: _______  ________

**Introductory Professional Courses** (4 credits)

- MLS 102 ______ (1)
- MIC 211 ___ (4) or MIC 201 ___ (4)

**Basic Sciences** (41 credits)*

- BCH 311 ______ (3)
- BIO 101/103 ____ (4)  BIO 102/104 ____ (4)
- BIO 121____ (4)  BIO 242____ (3)
- CHM 101____ (3)  CHM 102____ (1)
- CHM 112____ (3)  CHM 114____ (1)
- CHM 226____ (2), 227____ (3)  and 228____ (3)
- MTH 111____ (3)  or 131____ (3),  or 141____ (3)
- PHY 111____ (3)  PHY 185____ (1)

**Concentration** (41 credits)

- MIC 333 _____ (3)  MIC 432 ____ (3)
- MLS 483 ____ (3)

**Clinical Internship:**

- MLS 405____ (2)  MLS 406____ (2)
- MLS 407____ (2)  MLS 409____ (4)
- MLS 410____ (4)  MLS 411____ (4)
- MLS 412____ (4)  MLS 413____ (2)
- MLS 414____ (2)  MLS 415____ (3)
- MLS 416____ (3)

**Free Electives** (6 credits)

Students may take courses of their choice.

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*8 credits apply to N category & 3 credits apply to MQ.

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120 credits required

**Student Total________**

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**ADVISORY COMMENTS:**