CHECKLIST FOR FULFILLMENT OF DEGREE REQUIREMENTS

1. 30 credits at UMUC, including at least half of the major and minor and 15 upper-level credits.
2. 45 upper-level credits, including half the credit for the major and for the minor.
3. All required courses and minimum number of credits for major and minor.
4. Prerequisites for major and minor courses, if needed.

UMUC DEGREE REQUIREMENTS

<table>
<thead>
<tr>
<th>MC COURSES</th>
<th>UMUC EQUIVALENCY</th>
<th>CREDITS FROM MC</th>
<th>CREDITS NEEDED AT UMUC</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRTG 101 or WRTG 101S Introduction to Writing (3)</td>
<td>ENGL 102 or ENGL 103</td>
<td>WRTG 101 or 293</td>
<td>3</td>
</tr>
<tr>
<td>WRTG 293 (3) Or other 3-credit WRTG course except 288, 388, 486A, 486B. ENGL 102 and JOUR 201 apply</td>
<td>ENGL 101</td>
<td>WRTG</td>
<td>3</td>
</tr>
<tr>
<td>COMM 202 (3) Or other communication, writing, or speech</td>
<td>COMM 108 or 112</td>
<td>SPCH 100 or SPCH</td>
<td>3</td>
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<tr>
<td>WRTG 393 (3) Or other upper-level advanced writing</td>
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</tbody>
</table>

ARTS AND HUMANITIES

| HUMN 100 (3) Or other arts/humanities | Arts or Humanities Distribution | Arts & Humanities | 3 |
| HIST 125 (3) Or any ARTH or HIST from a 2nd discipline | | | 3 |

BEHAVIORAL AND SOCIAL SCIENCES

| ECON 103 (3) Or other first behavioral/social science | Behavioral & Social Sciences Distribution | Behavioral & Social Sciences | 3 |
| BEHS 103 (3) Or other behavioral/social science from a 2nd discipline | | | 3 |

BIOLOGICAL AND PHYSICAL SCIENCES

| Related science coursework with lab (4) Fulfills GenEd requirement~ | BIOL 150 | BIOL 103 | 4 |
| Related science coursework (3) Fulfills GenEd requirement~ | CHEM 131 | CHEM 103 | 4 |

MATHEMATICS

| MATH 106 or higher-level math course (3) | MATH 110 Recom’d Mathematics Foundation | MATH 106 | 3 |

INTERDISCIPLINARY OR EMERGING ISSUES

| LIBS 150 Introduction to Research (1) | | | 1 |
| IFSM 201 Concepts & Applications of Information Technology or CMST 301 Digital Media and Society (3) | | | 3 |
| CMIS 111 Social Networking and Cybersecurity Best Practices (3) Or another computing course appropriate to the academic major | | | 3 |

Legend/Notes

- required course for the major or minor
- course meets content requirement but not upper-level minimum
- UL – UL stands for upper-level junior/senior courses and denotes the minimum upper-level credit that must be taken at UMUC for graduation
- only 21 credits of vocational technical are permitted for transfer at UMUC
- Students seeking the BTPS or BS must complete all related science coursework including the 15 credit in the major before arriving at UMUC.

The BTPS is available only to students with the AAS from a community college with which UMUC has an articulation agreement. Courses placed in the ELECTIVES/MINOR section may meet degree requirements depending on which course the student takes from the list of courses offered for the associate’s degree. Any credit applied to the associate’s degree must also meet UMUC’s transfer credit policy.
<table>
<thead>
<tr>
<th>UMUC DEGREE REQUIREMENTS</th>
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<tbody>
<tr>
<td><strong>BIOTECHNOLOGY MAJOR</strong></td>
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<tr>
<td>General microbiology with lab (4)~</td>
<td>BIOL 210</td>
<td>BIOL 230</td>
<td>4</td>
<td>12</td>
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<tr>
<td>General genetics with lab (4)~</td>
<td>BIOL 220 or 222</td>
<td>BIOL 220 or 222</td>
<td>4</td>
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<tr>
<td>Biotechnology applications and techniques with lab (7)~</td>
<td>BIOT 120 &amp; 200</td>
<td>BIOT</td>
<td>7</td>
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<td>BIOL 325 Inquiries in Biological Science (3)</td>
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<td>BIOL 350 Molecular and Cellular Biology (3)</td>
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<td>BIOL 357 Bioinformatics (3)</td>
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<td>NSCI 301 Laboratory Management and Safety (3)</td>
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<tr>
<td><strong>INTERNSHIP FOR MAJOR</strong></td>
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<tr>
<td>BIOL 486B Workplace Learning in Biology (6) or other 6-credit internship through Workplace Learning required for major. Courses numbered 486 A or B in any discipline, but learning proposal must show relationship to biotechnology major. Note: additional internships may be used in supplemental credits but a maximum total internship credit in degree is 45.</td>
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<td><strong>CAPSTONE COURSE FOR MAJOR</strong></td>
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<td>BIOL 495 Current Trends and Applications in Life Sciences (3)</td>
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<tr>
<td><strong>ADDITIONAL REQUIREMENTS</strong></td>
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<tr>
<td>Related science coursework (3) May include any coursework related to biotechnology, including biotechnology, biochemistry, cell biology, chemistry, genetics, immunology, microbiology, molecular biology, physics, and virology courses~</td>
<td>BIOT 230</td>
<td>BIOT</td>
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<tr>
<td>Related science coursework (3)~</td>
<td>CHEM 150 or 203</td>
<td>CHEM 104 or 233</td>
<td>4-5</td>
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<tr>
<td>Related science coursework (4)~</td>
<td>BIOT 240</td>
<td>BIOT</td>
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<tr>
<td>Electives/Minor</td>
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<tr>
<td>Choose any electives to meet degree requirements. Note minimum requirements for upper-level coursework.</td>
<td>BIOT 110</td>
<td>BIOT</td>
<td>2</td>
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<tr>
<td>See requirements of individual minor.</td>
<td>Health Foundation</td>
<td>Elective</td>
<td>1</td>
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<tr>
<td>Recommended electives: BMGT 317, FINC 331, SPCH 482</td>
<td>Elective</td>
<td>Elective</td>
<td>4</td>
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<td><strong>ELECTIVES/MINOR</strong></td>
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<td>Elective</td>
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<tr>
<td>Upper-Level Electives at UMUC</td>
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<tr>
<td>Any Electives at UMUC</td>
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<tr>
<td><strong>Total Minimum Credits Needed for Graduation: 120</strong></td>
<td>Total Credits:</td>
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<td>59-60</td>
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