

**Michigan Technological University****Bachelor of Science Degree Audit****Major Program: Biochemistry and Molecular Biology, Biology Focus**

Program Code: SMBB, Academic Year 2020-21

Total credits required for the degree: 120

**Biology Requirements: 24 to 25 credits**

| Course                 | Credits |
|------------------------|---------|
| BL 1100 and<br>BL 1110 | 3<br>1  |
| BL 1200 and<br>BL 1210 | 3<br>1  |
| BL 2200 and<br>BL 2210 | 3<br>1  |
| BL 3210 or BL 3310     | 4/3     |
| BL 3300                | 3       |
| BL 4030                | 3       |
| BL 4840                | 3       |

**Chemistry Requirements: 23 credits**

| Course                 | Credits |
|------------------------|---------|
| CH 1150 and<br>CH 1151 | 3<br>1  |
| CH 1160 and<br>CH 1161 | 3<br>1  |
| CH 2430 and<br>CH 2411 | 3<br>1  |
| CH 2440 and<br>CH 2421 | 3<br>2  |
| CH 3510                | 3       |
| CH 3540                | 3       |

**Mathematics Requirements: 8 to 9 credits**

| Course             | Credits |
|--------------------|---------|
| MA 1160 or MA 1161 | 4/5     |
| MA 2160            | 4       |

**Physics Requirements: 8 credits**

| Course                 | Credits |
|------------------------|---------|
| PH 1100 and<br>PH 2100 | 1<br>3  |
| PH 1200 and<br>PH 2200 | 1<br>3  |

**Concentration Requirements: 27 to 29 credits****Concentration Courses: 20 credits**

| Course  | Credits |
|---------|---------|
| BL 1580 | 1       |
| BL 2700 | 3       |
| BL 3012 | 3       |
| BL 3020 | 3       |
| BL 3782 | 2       |
| BL 3820 | 2       |
| BL 4020 | 3       |
| MA 3715 | 3       |

**Biology Capstone Requirement: 4 credits**

Research credits in Biochemistry (BL 4995) may be taken individually and require arrangement with the instructor. Additional research credits beyond the capstone requirement count as free elective credits.

| Course                 | Credits |
|------------------------|---------|
| BL 4995 and<br>BL 4530 | 3<br>1  |

**Biochemistry and Molecular Biology Electives: 3 to 5 credits** *Select one of the following approved Biology electives:*

| Course  | Credits |
|---------|---------|
| BL 3190 | 3       |
| BL 3220 | 3       |
| BL 3640 | 3       |
| BL 4038 | 3       |
| BL 4070 | 3       |
| BL 4120 | 3       |
| BL 4135 | 3       |
| BL 4140 | 3       |
| BL 4145 | 3       |
| BL 4200 | 3       |
| BL 4300 | 3       |
| BL 4370 | 3       |
| BL 4410 | 3       |
| BL 4550 | 3       |
| BL 4752 | 3       |
| BL 4800 | 5       |

### General Education Core and HASS

Courses used to complete Core and HASS requirements may not be used to complete other degree requirements. Students must complete 12 credits of Core coursework and 12 credits of Humanities, Fine Arts, and Social Science (HASS) coursework. Repeatable courses may not be repeated for general education credit. Core and HASS courses can be found on the [General Education](#) page.

#### Core: 12 credits

| Course                                      | Credits |
|---|---------|
| UN 1015                                     | 3       |
| UN 1025 or an upper level modern language   | 3       |
| Critical and Creative Thinking              | 3       |
| Social Responsibility and Ethical Reasoning | 3       |

#### HASS: 12 credits

Six of the 12 HASS credits must be at the 3000 or 4000 level (an upper division language course in place of UN1025 does not meet this requirement). No more than three credits may come from the HASS Restricted course list.

| Course   | Credits   |
|--|-----------|
| Communication/ Composition   | Minimum 3 |
| Humanities and Fine Arts   | Minimum 3 |
| Social and Behavioral Sciences                                     | Minimum 3 |
| Course from any list above or from the Restricted HASS course list | 0 to 3    |

#### Co-curricular Activities: 3 credits

Required for graduation, but not included in the GPA calculation or in the overall credits required for the degree. Only courses on the co-curricular course list are eligible. Half credit (0.5) courses may be repeated to a maximum of one time for co-curricular credit. Find eligible courses on the [General Education](#) page.

| Course | Credits |
|--------|---------|
|        |         |
|        |         |
|        |         |
|        |         |
|        |         |
|        |         |

#### Free Electives: 2 to 6 credits

Any coursework is allowable, excluding co-curricular and coursework below the 1000-level.

| Course | Credits |
|--------|---------|
|        |         |
|        |         |
|        |         |
|        |         |