

## Biology/with Microbiology Concentration, B.S.

C. S. Mott Community College

This transfer guide displays required courses for NMU’s B.S. degree in **Biology with a Microbiology Concentration**. This emphasis is appropriate for pre-professional students in pre-medicine, pre-dentistry, and pre-veterinary medicine. It provides students a foundation for introductory positions of employment in such fields as pharmaceuticals, manufacturing of biological products and monitoring of health and environmental standards. It can also serve as a foundation for graduate studies in special areas of microbiology.

A 2.00 Grade point average is required for all Biology courses taken in the department. Exceptions must be requested via petition to the department’s academic programs committee.

NMU’s Biology Department offers the following majors: Biology/Botany, Biology/General Biology, Biology/Ecology, Biology/Microbiology, Biology/Physiology, Biology/Zoology, Fisheries & Wildlife Management, and Biology/Secondary Education. *Note: Students planning to pursue a Biology related major other than the one represented in this transfer guide should refer to the appropriate transfer guide when selecting courses.*

**Michigan Transfer Agreement (MTA):** Students who transfer to Northern Michigan University from a Michigan community college who have *Michigan Transfer Agreement Satisfied* posted on their transcript will be considered to have met the requirements of NMU’s Liberal Studies/General Education program. Students will still be expected to complete all other degree requirements, including graduation requirements (world cultures, health promotions, and lab) and any courses listed as “Other Required Courses” that may also be Liberal Studies/General Education courses. Degree requirements can be found at [www.nmu.edu/catalog](http://www.nmu.edu/catalog). Transfer students who do not complete the entire block of courses required by the MTA will receive credit for courses they do complete on the basis of individual evaluation and established transfer equivalencies.

C.S. Mott Community College Course Title / Course Title / Comments	Credit Hours	NMU Equivalent	NMU Degree Requirements
When selecting courses, students should refer to their community college’s Michigan Transfer Agreement (MTA). <i>Students pursuing the MTA must successfully complete at least 30 credit hours and earn a minimum grade of “C” in each course.</i>	30		General Education Degree
The list of courses following this section will fulfill major, minor, and/or other degree requirements. If any of these courses are taken to fulfill the MTA, students will take advantage of “double counting” (fulfilling more than one requirement with one course).			
Students will fulfill NMU’s world cultures requirement by completing one of the following courses: ANTH 211, ART 116, GEOG 142, HIST 265, HIST 266, MUS 183, or PHIL 251	3-4		World Cultures Requirement
BIOL 111/111L, Fundamentals of Biology	4	BI 111	Biology Core
BIOL 125/125L, Zoology/Zoology Lab and BIOL 126/126L, Botany/Botany Lab	9	BI 112 and NSLB	Biology Core
BIOL 220, Ecology	4	BI 210	Biology Core
<i>Mott CC does not offer an equivalent course.</i>	4	BI 215	Biology Core
<i>Mott CC does not offer an equivalent course.</i>	4	BI 218	Biology Core
<i>Mott CC does not offer an equivalent course.</i>	4	BI 312	Biology Core
<i>Mott CC does not offer an equivalent course.</i>	0	BI 489	Biology Core
CHEM 131/131L, General Chemistry I & Lab	5	CH 111	Other Required
CHEM 132/132L, General Chemistry II & Lab	5	CH 112	Other Required
CHEM 237/237L, Organic Chemistry I & Lab	5	CH 321	Other Required
PHYS 281, General College Physics 1 or PHYS 287, General Physics 1	4-5	PH 201 or PH 220	Other Required
<i>Mott CC does not offer an equivalent course.</i>	5	BI 303	Microbiology Concentration
CHEM 238/238L, Organic Chemistry II & Lab	5	CH 322	Microbiology Concentration
<i>Mott CC does not offer an equivalent course.</i>	4	CH 450	Microbiology Concentration
PHYS 282 General Physics 2 or PHYS 288, General Physics 2	4-5	PH 202 or PH 221	Microbiology Concentration
BIOL 156/156L, Microbiology for Health Sciences & Lab	4	BI 203	Microbiology Concentration
<i>Mott CC does not offer an equivalent course.</i> Select three courses: BI 288, BI 327, BI 402, BI 404, BI 405, BI 406, BI 412, BI 413, BI 418, BI 423, BI 431, or BI 488	15		Microbiology Concentration
Select courses with assistance from your advisor or an NMU transfer admissions counselor.	1-12		General Electives

<p style="text-align: center;">Total credit hours required for this degree:</p> <p><i>Note: A maximum of 64 semester credits and an additional 4 semester credits in physical education activity courses may transfer from a two-year community or junior college. Not including courses you may complete towards your general electives, there are 82-85 semester credits of specific courses included in the transfer guide for this college.</i></p>	124		

*Note: The transfer credit information provided reflects the current evaluation of courses from this college. Changes will occasionally take place at NMU and your college, so the information provided in this guide is subject to change. Students should contact an NMU transfer admissions counselor to keep informed of these changes. Final responsibility for verifying all transfer information lies with the student; a transfer guide is not intended to be a contract with NMU.*

For further information regarding the selection and transfer of courses, contact one of NMU's Transfer Admissions Counselors, at 800.682.9797 or 906.227.2650 or [transfer@nmu.edu](mailto:transfer@nmu.edu).

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