



Transfer Articulation Guide for Associate in Arts in Biology to Bachelor of Science in Biochemistry and Molecular Biology

Pursuant to the Articulation Partnership between Missouri Western State University (MWSU) and the North Central Missouri College (NCMC), this document serves as the Transfer Articulation Guide between MWSU and NCMC for the degree program of ***BS-Biochemistry and Molecular Biology***. This Transfer Articulation Guide is entered into pursuant to the Articulation Partnership between MWSU and NCMC and is effective beginning Fall 2025.

This transfer guide is provided as a service and is updated as needed. Degree requirements at the institutions are subject to change. To ensure you have the most accurate up to date information about the program, it is important you meet with an advisor at the transfer institution.

Program Entrance Requirements

- Overall GPA of 2.0 or higher
- Bachelor's degree program listed above officially declared on the MWSU student record (indicated at time admission or upon meeting with an advisor.)

Degree Requirements

- Earn a minimum of 120 hours (100 level and higher, maximum of 6 CED credit hours applicable).
- Earn a minimum of 30 credit hours in upper division courses. Lower division transfer courses accepted as meeting upper division departmental course requirements cannot be used to fulfill this requirement.
- Earn 30 of the last 45 credit hours at MWSU in institutional course work (exclusive of credit by exam).
- Participate in required departmental and campus wide assessments.
- Earn an overall GPA of at least a 2.0 and a major GPA of at least a 2.0.
- Fulfill the Missouri Constitution requirement.
- Successfully pass the Missouri Higher Education Civics Achievement exam.

For more information, please contact:

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OR

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North Central Missouri College		Missouri Western State University	
GENERAL EDUCATION CORE COMPLETE WITH AA COMPLETION			
PROGRAM-TO-PROGRAM TRANSFERABLE COURSES			
Courses not taken at NCMC must be taken at MWSU.			
Note: Some of these courses may be taken as part of General Education.			
Course	Credit hours	Course	Credit hours
MT 150 Geometry and Calculus I	5	MAT 167 Calculus with Analytic Geometry I	5
MT 250 Geometry & Calculus II OR MT 260 Geometry & Calculus III (Required for ASC Certification option only)	5	MAT 177 Calculus with Analytic Geometry II OR MAT 287 Multivariable Calculus	5
AG 105 and AG 106 Plant Science and Lab OR AG 107 and AG 108 Animal Science and Lab OR BI 101 General Botany OR BI 103 General Zoology	5	BIO 105 Organismal Biology	4
BI 110 Ecology	5	BIO 225 Ecology	4
CH 110 General Chemistry I	5	CHE 111 General Chemistry I	5
CH 112 General Chemistry II	5	CHE 120 General Chemistry II with Qualitative Analysis	5
CH 210 Organic Chemistry I *	5	CHE 310 Organic Chemistry I AND CHE 311 Organic Chemistry I Laboratory	5
CH 215 Organic Chemistry II * (Required for ASC Certification option only)	5	CHE 312 Organic Chemistry II AND CHE 313 Organic Chemistry II Laboratory	5
PS 185 College Physics I	4	PHY 110 College Physics I	4
PS 186 College Physics II	4	PHY 111 College Physics II	4
COURSES TO BE COMPLETED AT MISSOURI WESTERN STATE UNIVERSITY			
Course			Credit hours
BIO 106 Principles of Cell Biology			4
BIO 205 Genetics			4
BIO 310 Molecular Cell Biology OR BIO 430 Molecular Basis of Disease			4
CHE 321 Quantitative Analysis			4
CHE 340 Foundations of Physical Chemistry			4
CHE 370 Biochemistry I			4
CHE 470 Biochemistry II			3
AND			
No Certification Option			
Select a minimum of 12 credit hours of upper division Biology or Chemistry courses			12
OR			
ACS Certification Option			
CHE 326 Instrumental Analysis			4

CHE 441 Advanced Inorganic Chemistry	3
CHE 480 Advanced Physical Chemistry	4
Restricted Elective Courses in Biology and/or Chemistry (select in consultation with advisor to reach a total of 120 credit hours)	

*** Equivalent course but does not count toward Missouri Western State University upper-division requirement (30 credit hours of 300+ numbered courses).**