

Miami University

Physics Bachelor of Arts

EffEffective beginning Academic Year 2022-23 (Last revised August 31, 2023)

The following table outlines how transfer credits will be applied to the Bachelor of Arts degree at Miami University for students who completed an Associate of Science degree via the Ohio Guaranteed Physics Transfer Pathway. The OGTP designation guarantees the transfer and applicability of credits, but does not guarantee admission to a program. Some bachelor-degree granting programs may be competitive, and students should check with individual institutions for their program admission requirements.

COURSE EQUIVALENCIES FROM THE ASSOCIATE DEGREE	Course Number	Credit Hours
GENERAL EDUCATION REQUIREMENTS/OHIO TRANSFER 36		
Any Ohio Transfer 36 approved First Writing (TME001) course	ENG 111	3
Calculus I (TMM005)	MTH 151	5
Any Ohio Transfer 36 approved Arts and Humanities course	Ohio Transfer 36 Elective*	3
Any Ohio Transfer 36 approved Arts and Humanities course	Ohio Transfer 36 Elective*	3
Any Ohio Transfer 36 approved Social and Behavioral Sciences course	Ohio Transfer 36 Elective*	3
Any Ohio Transfer 36 approved Social and Behavioral Sciences course	Ohio Transfer 36 Elective*	3
Calculus-Based Physics I with lab (OSC016)	PHY 191	5
Calculus-Based Physics II with lab (OSC017)	PHY 192	5
Calculus II (TMM006)	MTH 249 or MTH 251	4-5
General Chemistry I with lab (OSC008)	CHM 141 and CHM 144 ¹	5
Ohio Transfer 36 approved elective [Recommended: Any Ohio Transfer 36 approved Second Writing (TME002) course or General Chemistry II (OSC009)]	CHM 142 and CHM 145 ¹	5
PRE-MAJOR/BEGINNING MAJOR		
Calculus III (OMT018)	MTH 252	4
Elementary Linear Algebra (OMT019)	MTH 222	3
Elementary Differential Equations (OMT020)	MTH 245	3
OTHER RECOMMENDATIONS		
General Electives as needed (May include FYE or Orientation course) ²	Varies*	6-8
TOTAL HOURS FROM ASSOCIATE DEGREE:		60-65
Advising Notes:		

Advising Notes:

- (*) Indicates that coursework will be evaluated for applicable equivalency upon transfer at the university. If a Transfer Assurance Guide (TAG) course is taken, the approved course equivalency will be awarded.
- ¹The chemistry courses CHM 141, CHM 144, CHM 142, CHM 145 completed during the first 60 credit hours will count toward the requirement of 10 credits in related hours upon transfer to Miami University.
- ² Miami University recommends two semesters of foreign language be taken during the associate degree if possible, or that credit has been earned via an approved Advanced Placement or International Baccalaureate exam through the end of the beginning level (or higher). The College of Arts & Sciences (CAS) requires that students earn credit in a foreign language at or beyond the 202-level. If not taken during the associate degree, up to four semesters of foreign language may need to be taken upon transfer.

SPECIAL NOTES

Students with plans of pursuing a pre-professional or graduate studies track in the future should work closely with their academic advisor and receiving institution starting in the first year of their program in order to adequately prepare themselves for those types of tracks. Some pre-professional degrees include pre-medicine, pre-veterinary, pre-law, and pre-dentistry.



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The following additional coursework will be required to complete the Bachelor of Arts degree at Miami University after a student has completed their Associate of Science Ohio Guaranteed Physics Transfer Pathway degree. Some bachelor-degree granting programs may be competitive and admission into the program is not guaranteed. Students should check with individual institutions for their program admission requirements.

REMAINING COURSEWORK	TO COMPLETE BACHELOR'S DEGREE	Course Number	Credit Hours
Major Core Course:	Contemporary Physics I: Foundations	PHY 281	3
Major Core Course:	Contemporary Physics II: Frontiers	PHY 282	3
Major Core Course:	Contemporary Physics Laboratory	PHY 293	2
Major Core Course:	Electronic Instrumentation	PHY 292	2
Major Core Course:	Laboratory in Electronic Instrumentation	PHY 294	2
Major Core Course:	Introduction to Computational Physics	PHY 286	3
Major Core Course:	Physics Assessment Examination	PHY 401	0
Major Core Course:	Intermediate Thermodynamics and Introduction to Statistical Physics	PHY 437	4
Major Core Course:	Classical Mechanics	PHY 451	4
Major Core Course:	Electromagnetic Theory	PHY 461	4
Major Core Course:	Mathematical Methods in Physics	PHY 483	4
Major Core Course:	Introduction to Quantum Mechanics I	PHY 491	4
Major Core Course:	Advanced Lab Course	Varies	3-4
Major Core Course:	Physics Elective	Varies	3-4
Capstone:	Research Capstone in Physics	PHY 488	3
Divisional Requirement:	First (if needed) and Second year of selected foreign language sequence	101, 102, 201, and 202	6-14
General Education:	Advanced Writing	ENG 313 or MTH 331	3
General Education:	Experiential Learning Requirement	Varies	0-3
General Education:	Intercultural Consciousness Course	Varies	3
General Education:	Global Inquiry Courses	Varies	6
General Education:	DEI course (if not taken as part of the associate degree)	Varies	3
Divisional Requirement:	Biological Science Course	BIO 161 (recommended)	3
REMAINING COURSEWORK	TO COMPLETE BACHELOR'S DEGREE TOTAL:2		65-73

Advising Notes:

² Miami University requires a total of 124 credit hours for degree completion. The total number of hours to complete the bachelor's degree represents a range of hours that may be needed depending on the individual course selections made during the associate degree program.

COMPLETE BACHELOR'S DEGREE	Total Credit Hours
BACHELOR'S DEGREE TOTAL:	124

¹Students are required to attend an orientation session and will meet with an advisor to review the coursework coming in, as well as what they should register for the following semester. At this time, the divisional requirements for CAS will be addressed so that students are able to be efficient in their course selection.



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SPECIAL NOTES

For more information, please contact:
College of Arts & Sciences Advising Office
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(513) 529-3031
http://miamioh.edu/cas/academics/advising/

SAMPLE DEGREE MAP

THIRD YEAR

SEMESTER 5		
Course Name & Number	Credit Hours	
PHY 281 Contemporary Physics I: Foundations	3	
PHY 292 Electronic Instrumentation	2	
PHY 294 Laboratory in Electronic Instrumentation	2	
Foreign Language 201	3	
MTH 331 Advanced Writing	3	
Intercultural Consciousness	3	
Total Semester 5 Credit Hours	16	

SEMESTER 6		
Course Name & Number	Credit Hours	
PHY 282 Contemporary Physics II: Frontiers	3	
PHY 293 Contemporary Physics Laboratory	2	
PHY 286 Introduction to Computational Physics	3	
Foreign Language 202	3	
Global Inquiry Course	3	
Biological Science Course	3	
Total Semester 6 Credit Hours	17	

FOURTH YEAR

SEMESTER I		
Course Name & Number	Credit Hours	
PHY 483 Mathematical Methods in Physics	4	
PHY 451Classical Mechanics	4	
PHY 437 Intermediate Thermodynamics and Introduction to Statistical Physics	4	
Advanced Lab Course	3-4	
Experiential Learning (PHY 477)	1	
Total Semester 7 Credit Hours	16-17	

SEMESTER 7

SEMESTER 8		
Course Name & Number	Credit Hours	
PHY 401 Physics Assessment Examination	0	
PHY 488 Research Capstone in Physics	3	
PHY 491 Introduction to Quantum Mechanics I	4	
PHY 461 Electromagentic Theory	4	
PHY Elective	3-4	
Global Inquiry Course	3	
Total Semester 8 Credit Hours	17-18	