

The following table outlines how transfer credits will be applied to the Bachelor of Science in Physics degree at Cleveland State 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 100 or ENG 101	3
Calculus I (TMM005)	MTH 181	4
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 241 or PHY 243	5
Calculus-Based Physics II with lab (OSC017)	PHY 242 or PHY 244	5
Calculus II (TMM006)	MTH 182	4
General Chemistry I with lab (OSC008)	CHM 261 and CHM 266 (to be submitted) ¹	4
Ohio Transfer 36 Approved Elective [Recommended: Any Ohio Transfer 36 approved Second Writing (TME002) course or General Chemistry II (OSC009)]	ENG 102 or CHM 262 and CHM 267	3-4
PRE-MAJOR/BEGINNING MAJOR		
Calculus III (OMT018)	MTH 281	4
Elementary Linear Algebra (OMT019)	MTH 288	3
Elementary Differential Equations (OMT020)	MTH 286	3
OTHER RECOMMENDATIONS		
General Chemistry II with lab (OSC009) (if not taken as part of the Ohio Transfer 36)	CHM 262 and CHM 267 (to be submitted) ¹	4
Electives	Varies*	6-9
TOTAL HOURS FROM ASSOCIATE DEGREE:		60-65
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. ¹ "To be submitted" indicates that the course does not currently carry the statewide course equivalency guarantee. However, the institution is working toward this goal and will act in good faith to ensure the appropriate equivalency is given that counts toward the degree.		

The following additional coursework will be required to complete the Bachelor of Science in Physics degree at Cleveland State University after a student has completed an Associate of Science Ohio Guaranteed Physics Transfer Pathway degree. CSU also offers a Bachelor of Arts in Physics. If students are interested in the B.A., they should consult with their CSU advisor to determine the required coursework. 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 Requirement:	Introduction to Modern Physics	PHY 330	3
Major Requirement:	Introduction to Theoretical Physics	PHY 325	3
Major Requirement:	Introduction to Computational Physics	PHY 320	3
Major Requirement:	Mechanics and Vibrations I	PHY 340	3
Major Requirement:	Thermal Physics	PHY 474	4
Major Requirement:	Mechanics and Vibrations II	PHY 341	3
Major Requirement:	Quantum Physics I	PHY 440	3
Major Requirement:	Statistical Physics	PHY 475	3
Major Requirement:	Electricity and Magnetism I	PHY 350	3
Major Requirement:	Optics and Electromagnetic Waves	PHY 450	3
Major Requirement:	Electricity & Magnetism II	PHY 351	3
Major Requirement:	Select two: Modern Physics Laboratory, Electronics Laboratory, Optics Laboratory	Select two: PHY 335, PHY 360, PHY 455	6
Major Requirement:	STEM Electives (300-/400-level)	Varies	6
General Education:	Writing Across the Curriculum Elective	Varies	3
General Electives:	General Electives	Varies	6-11
REMAINING COURSEWORK TO COMPLETE BACHELOR'S DEGREE TOTAL:¹			55-60
Advising Notes: ¹ CSU requires a total of 120 credits hours for the B.S. in Physics. 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:	120

SPECIAL NOTES
For more information, please contact: College of Sciences and Health Professions Advising Center coshpadvising@csuohio.edu (216) 687-9321 https://www.csuohio.edu/sciences/advising

SAMPLE DEGREE MAP

THIRD YEAR

SEMESTER 5	
Course Name & Number	Credit Hours
PHY 340 Mechanics and Vibrations I	3
PHY 474 Thermal Physics	4
STEM Elective (300-/400-level)	3
PHY 320 Introduction to Computational Physics	3
General Elective	0-3
Total Semester 5 Credit Hours	13-16

SEMESTER 6	
Course Name & Number	Credit Hours
PHY 330 Introduction to Modern Physics	3
PHY 325 Introduction to Theoretical Physics	3
PHY 341 Mechanics and Vibrations II	3
General Elective	3
General Elective	3
Total Semester 6 Credit Hours	15

FOURTH YEAR

SEMESTER 7	
Course Name & Number	Credit Hours
PHY 350 Electricity and Magnetism	3
PHY 450 Optics and Electromagnetic Waves	3
PHY 360 Electronics Laboratory	3
STEM Elective (300-/400-level)	3
Writing Across the Curriculum Elective	3
Total Semester 7 Credit Hours	15

SEMESTER 8	
Course Name & Number	Credit Hours
PHY 351 Electricity & Magnetism II	3
PHY 455 Optics Laboratory	3
PHY 440 Quantum Physics I	3
PHY 475 Statistical Physics	3
General Elective	0-2
Total Semester 8 Credit Hours	12-14