



ASSOCIATE OF SCIENCE

PHYSICS

The catalog in force is assigned to students based on the academic year they first applied to the college, and changes only when students change their major or request the change in writing. Refer to Policy No. 3357:15-13-28.

2024-25 Catalog

Effective Summer 2024

7107

Arts and Sciences Division

Physics Department

Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year
FRESHMAN EXPERIENCE:				
SSC101	Student Success Seminar^^	1	Take first semester	
CONCENTRATION CORE: 18 credit hours required				
PHY221	General Physics I with Calculus (lab)▲-	5	MTH223 and Co-MTH224	
PHY222	General Physics II with Calculus (lab)▲+	5	PHY221 and MTH224 and Co-MTH225	
MTH224	Analytic Geometry and Calculus II	4	MTH223	
MTH225	Analytic Geometry and Calculus III	4	MTH224	
NATURAL SCIENCES: 8 credit hour minimum				
PHY105	Astronomy (lab)	4		
CHM105	Introduction to Forensic Science (lab)	3		
CHM141	General Chemistry I (lab) (required)	5	(CHM101 or Proficiency) or (MTH024 or MTH025 or Proficiency)	
CHM142	General Chemistry II (lab)	5	CHM141	
CHM205	Forensic Chemistry (lab)	3	CHM123 or CHM141 or CHM105	
GEO141	Physical Geology	4		
BIO141	General Biology I	4		
BIO142	General Biology II	4		
MATHEMATICS, STATISTICS, AND LOGIC: 4 credit hours minimum				
MTH135	Precalculus^ – A student may take MTH125 (College Algebra) and MTH130 (Trigonometry) over two semesters to satisfy this requirement.	5	(MTH093 and MTH094) or Proficiency	
MTH223	Analytic Geometry and Calculus I^	4	MTH135 or (MTH125 and MTH130) or Proficiency	
MTH226	Linear Algebra▲-	3	MTH224	
MTH227	Ordinary Differential Equations▲+	3	MTH224	
ENGLISH COMPOSITION AND ORAL COMMUNICATION: 6 credit hours required				
ENG124	College Composition^ (required)	3	Co-ENG024 or Co-ENG011 or Proficiency	
ENG221	Technical Report Writing (recommended)	3	ENG124	
ENG231	College Composition II	3	ENG124	
COM121	Effective Speaking	3		
COM122	Interpersonal Communication	3		

^ Based on SSC placement scores

^^To promote student success, this course should be taken in the first semester

▲-Fall only courses. Please see your academic advisor for availability.

▲+Spring only courses. Please see your academic advisor for availability.

Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year
ARTS AND HUMANITIES: 6 credit hours across two disciplines				
ENG233	British Literature: Med to 1785	3	ENG124	
ENG234	British Literature: 1785 to Present	3	ENG124	
ENG236	American Literature: Colonial to 1865	3	ENG124	
ENG237	American Literature: 1865 to Present	3	ENG124	
ENG240	Women's Literature	3	ENG124	
HIS121	U.S. History I to 1877	3		
HIS122	U.S. History II from 1877	3		
HIS221	World Civilization to 17 th Century	3		
HIS222	World Civilization From 17 th Century	3		
PHL122	Ethics	3		
SOCIAL AND BEHAVIORAL SCIENCES: 6 credit hours across two disciplines				
BUS122	Basic Economics [^]	3	IDS102 or Proficiency	
BUS221	Microeconomics [^]	3	IDS102 or Proficiency	
BUS222	Macroeconomics [^]	3	IDS102 or Proficiency	
PSY121	General Psychology [^]	3	IDS102 or Proficiency	
PSY124	Industrial/Organizational Psychology	3		
PSY220	Social Psychology	3	PSY121	
PSC121	U.S. Government and Politics	3		
SOC225	Diversity in American Society (required)	3	IDS102 or Proficiency	
ELECTIVES: Select additional credits from Natural Sciences, Mathematics, or the electives categories to complete the total of 60-65 credit hours				
CSE122	Programming Logic and Problem Solving	3		
CST121	Modeling & Simulation	3	MTH221 or MTH223	
ITD122	Computer Applications for Professionals [^]	3	ITD100 or Proficiency	
SOC121	Sociology [^]	3	IDS102 or Proficiency	
SOC122	Society and Technology	3		
SCI271	Special Topics in Science I	1		
SCI272	Special Topics in Science II	2		
SCI273	Special Topics in Science III	3		
SSC201	Study Away	1		
TOTAL CREDIT HOURS <i>(60 credits minimum)</i>		60-65		

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▲ +Spring only courses. Please see your academic advisor for availability.

FULL-TIME STUDENT ADVISING NOTES

Academic Advising

Students should make an appointment to see their advisor before registering for classes each semester to discuss their academic progress as well as career plans.

Course Sequence

The semester-by-semester listing below provides the normal scheduling option for full-time associate degree students who plan to finish in four years.

Elective Additional Credit

Self-selection of courses and not following the approved degree program could adversely affect graduation, transfer to a 4-year institution, and financial aid. Visit the website of the university and program to which you are transferring for their course requirements. Also visit <https://www.transferology.com/> to assist in developing a plan for transferring to another college or university. Students should select Ohio Transfer 36 approved and TAG approved courses.

Bachelor's Degree

Bachelor's degree requirements and course transferability are controlled by the institution to which the student plans to transfer.

<u>First Semester</u>		<u>Credit Hours</u>	<u>Pre- and Co-requisites</u>
SSC101	Student Success Seminar ^{^^}	1	<i>Take first semester.</i>
<i>Natural Science Elective</i> ⁴		3-5	<i>Check for prerequisite</i>
ENG124	College Composition [^] (required)	3	Co-ENG024 or Co-ENG011 or Proficiency
SOC225	Diversity in American Society (required)	3	IDS102 or Proficiency
MTH223	Analytic Geometry and Calculus I [^]	<u>4</u>	MTH135
		14-16	
<u>Second Semester</u>			
<i>English Composition and Oral Communication Elective</i> ¹		3	<i>Check for prerequisite</i>
CHM141	General Chemistry I (required)	5	(CHM101 or Proficiency) or (MTH024 or MTH025 or Proficiency)
<i>Natural Science or Mathematics or Other Elective</i> ^{4,5,6}		3-4	<i>Check for prerequisite</i>
MTH224	Analytic Geometry and Calculus II [^]	<u>4</u>	MTH223
		15-16	
<u>Third Semester</u>			
<i>Arts and Humanities Elective</i> ³		3	<i>Check for prerequisite</i>
<i>Social and Behavioral Science Elective</i> ²		<u>3</u>	<i>Check for prerequisite</i>
		6	
<u>Fourth Semester</u>			
PHY221	General Physics I with Calculus (lab) ^{▲-}	5	MTH223 and Co-MTH224
MTH225	Analytic Geometry and Calculus III	4	MTH224
<i>Arts and Humanities Elective</i> ³		<u>3</u>	<i>Check for prerequisite</i>
		12	
<u>Fifth Semester</u>			
PHY222	General Physics II with Calculus (lab) ^{▲+}	5	PHY221 and MTH224 and Co-MTH225
<i>Natural Science Elective</i> ⁴		4	<i>Check for prerequisite</i>
<i>Natural Science or Mathematics or Other Elective</i> ^{4,5,6}		<u>4-5</u>	<i>Check for prerequisite</i>
		13-15	
	TOTAL CREDITS	60-65	

[^]Based on SSC placement scores

^{^^}To promote student success, this course should be taken in the first semester

¹ English Composition and Oral Communication Electives: COM121, COM122, ENG221, ENG231

² Social and Behavioral Science Electives: BUS122, BUS221, BUS222, PSC121, PSY121, PSY124, PSY220

³ Arts and Humanities Electives: ENG233, ENG234, ENG236, ENG237, ENG240, HIS121, HIS122, HIS221, HIS222, PHL122

⁴ Natural Science Electives: PHY105, CHM105, CHM142, CHM205, BIO141, BIO142, GEO141

⁵ Electives: CSE122, SOC121, SOC122, ITD122, SCI271, SCI272, SCI273, SSC201

⁶ Select additional courses to complete the total of 60-65 credit hours

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▲+Spring only courses. Please see your academic advisor for availability.