

Education – Secondary Math/Science Option

The Education curriculum prepares students for transfer to baccalaureate-granting institutions by introducing them to the field of education while guiding them through a coherent sequence of liberal arts and sciences courses. By doing this, they prepare for careers in the field of education. After successful completion of this curriculum, students receive an Associate in Arts (A.A.) degree.

The Education – Secondary Math/Science Option is appropriate for students who plan to pursue careers in teaching mathematics, science or related fields in secondary schools.

The Education curriculum has fourteen transfer agreements with baccalaureate degree-granting institutions in the region. Because transfer institutions require specific courses to be taken prior to entry, it is highly recommended that students consult catalogues of schools to which they might transfer and transfer worksheets available in the Career and Transfer Center, as well as their advisors and mentors, in order to make appropriate selections for their elective courses. According to Pennsylvania mandates under Chapter 354, students will need a 3.0 G.P.A. for entry into teacher certification courses. In addition, they must pass Praxis I – Pre-Professional Skills Test (PPST) before entry into these courses.

STUDENT LEARNING OUTCOMES:

Upon completion of this program graduates will be able to:

- Identify career options open to an individual with a background in education and describe the path required to State Teacher Certification and tenure.
- Explain the history of the American education system, philosophical perspectives, and the social and cultural mores that shape contemporary practices in education.
- Demonstrate an understanding of school structure, governance and finance.
- Demonstrate an understanding of classroom dynamics including: motivation, teacher expectations, classroom management / behavior modification, special education and the inclusive classroom models, discourse of the discipline, teaching techniques, and curriculum planning and organization.

- Demonstrate competence in the use of technology for teaching through teacher record keeping and differentiating instruction.
- Demonstrate effective oral and written communication skills.
- Demonstrate an understanding of how various theoretical frameworks apply to learning and development.

PROGRAM ENTRY REQUIREMENTS:

Students interested in the field of education may enroll in this curriculum. They must take College placement tests prior to or at the time of entry in order to receive correct course placement.

If needed, students must complete developmental work in English and/or mathematics before enrolling in Education courses. Since students in the Math/Science Option begin mathematics with Calculus I, it is necessary for those students who have not tested into it to take the prerequisite math courses (MATH 161 and MATH 162, or their equivalents at another college) either before enrolling or while enrolled in the program.

PROGRAM OF STUDY AND GRADUATION REQUIREMENTS:

A minimum of 62 credits and a grade point average of 2.0 are required for graduation.

EDUCATION – SECONDARY MATH/SCIENCE OPTION

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
FIRST SEMESTER			
ENGL 101 – English Composition I		3	ENGL 101
MATH 171 – Calculus I	MATH 162 or permission of dept. head	4	Mathematics
PSYC 101 – Introduction to Psychology		3	Social Sciences
Art/Music/Philosophy/Foreign Language course		3	Humanities
ART 103 – History of Art I or ART 104 – History of Art II or MUS 103 – Music for Listeners or MUS 105 – Bach to Beethoven or MUS 106 – Great Romantic Music or MUS 120 – Music of Black Americans or MUS 121 – Modern American Music or PHIL 101 – Introduction to Philosophy or PHIL 211 – Ethical Problems or PHIL 251 – World Religions or PHIL 252 – Philosophy of Religion or Foreign language: any 100 or 200-level course ¹			
HIST 101 – U.S. & Pennsylvania History: The Colonial Period or HIST 102 – U.S. & Pennsylvania History: 19th Century or HIST 103 – U.S. & Pennsylvania History: 20th Century or ECON 181 – Principles of Economics (Macroeconomics) or ECON 182 – Principles of Economics (Microeconomics) ¹		3	
SECOND SEMESTER			
For Secondary Ed. Math/Physics Teachers:		4 or 5	Natural Science
PHYS 111 – General Physics I or PHYS 140 – Mechanics, Heat and Sound ¹	MATH 162 or permission of dept. head MATH 171 or permission of dept. head		
For Secondary Ed Biol, Chem or General Science Teachers:			
CHEM 121 – College Chemistry	CHEM 110 (or permission of dept. head) and MATH 118		
ENGL 102 – English Composition II	ENGL 101	3	ENGL 102, Info Lit
MATH 172 – Calculus II	MATH 171	4	
EDUC 201 – Introduction to Education	ENGL 101 which may be taken concurrently	3	

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EDUCATION – SECONDARY MATH/SCIENCE OPTION, *continued*

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
THIRD SEMESTER			
EDUC 202 – Introduction to the Foundations of Education Field Experience		3	Writing Intensive
For Secondary Ed. Math/Physics Teachers:		4 or 5	
PHYS 112 – General Physics II or	PHYS 111 or permission of dept. head		
PHYS 241 – Electricity, Magnetism and Light ¹	PHYS 140, MATH 172, or permission of dept. head		
For Secondary Ed. Biol, Chem or General Science Teachers:			
BIOL 123 – Cellular and Molecular Biology or	CHEM 121 or CHEM 110 and High School Biology or permission of dept. head		
CHEM 122 – College Chemistry	CHEM 121 with “C” or better		
EDUC 225 – Educational Psychology ¹	PSYC 101	3	
Literature Elective or	ENGL 101	3	
HUM 101 or HUM 102 – Cultural Traditions ²	ENGL 101 which may be taken concurrently		
MATH 270 – Linear Algebra	MATH 171 and MATH 172	3	
For Secondary Ed. Science Teachers:	(172 can be concurrent)		
BIOL 123 or 124 or CHEM 121 or 122 or	See prerequisites listed above		
PHYS 111 or PHYS 241 or other Biology, Chemistry or Physics ¹			
FOURTH SEMESTER			
EDUC 226 – Technology for Teachers	CIS 103	3	Tech Comp
ANTH 112 – Cultural Anthropology or		3	
SOC 101 – Introduction to Sociology or			
GEOG 101 – Introduction to Geography or			
GEOG 103 – Cultural Geography or			
GEOG 180 – Urban Geography or			
GEOG 222 – World Regional Geography ¹	GEOG 101 or GEOG 103		
PSYC 215 – Developmental Psychology	PSYC 101 or SSCI 101	3	
ENGL 115 – Public Speaking	ENGL 101 which may be taken concurrently	3	
For Secondary Ed. Math/ Physics Teachers:		4	
MATH 271 – Calculus III ¹	MATH 172		
For Secondary Ed. Biol, Chem or General Science Teachers:			
BIOL 124 – Organismal Biology or	BIOL 123		
CHEM 122 – College Chemistry	CHEM 121		
PHYS 112 – General Physics I	PHYS 111		
MINIMUM CREDITS NEEDED TO GRADUATE		62	

General Education Requirements

All General Education requirements are met through required courses (as indicated above) except for the Interpretive Studies requirement and the American/Global Diversity requirement. Therefore, in order to graduate, students in this program must choose one course that is designated Interpretive Studies and one course that is designated American/Global Diversity. The same course may be used to fulfill both requirements. A list of courses that fulfill these requirements and a more detailed explanation of the College's general education requirements appear elsewhere in this Catalog and on www.ccp.edu.

1 Consult with your advisor and use transfer worksheets to determine the best course choice.

2 Literature is strongly recommended; consult with advisor and transfer worksheets for best choice of courses.

For More Information Contact:

The Division of Liberal Studies, Room BR-21, 1700 Spring Garden Street, Philadelphia, PA 19130, Telephone (215) 751-8450; or the College Information Center (215) 751-8010.