TEACHER EDUCATION PROGRAMS

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Education Department
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https://www.ursinus.edu/academics/education/
URSINUS COLLEGE TEACHER PREPARATION PROGRAM

MISSION STATEMENT

The Ursinus College Teacher Education Program is dedicated to preparing education professionals who can inspire, motivate, and educate all of their students for positive participation in a diverse, democratic society.

This includes:

Valuing a rigorous, liberal arts approach to the study of education, including a focus on the social, political, cultural, historical, and philosophical contexts in which teaching and learning take place.

Applying academic learning to educational problems and practices, in schools as well as society.

Shaping classrooms characterized by a culture of learning, respect for differences, and the pursuit of individual and collective growth

Developing curriculum plans, teaching strategies, and assessments that engage all students and make a lasting impact on their lives.

Demonstrating a commitment to ethical standards and professionalism, including continual growth.

To fulfill our mission, the Education Department establishes working partnerships with Ursinus College faculty across several disciplines and with educators in surrounding communities. Together we seek to inspire and guide pre-professional students through a program that incorporates high academic standards; content mastery in the liberal arts with intense focus in the area(s) of certification; foundational coursework; and common intellectual experiences that engage them in critical thinking, writing, presentation, and dialogue.

We support our mission as well by emphasizing technology skill-building, while providing courses in general and special methods, guest workshops on critical topics, and field explorations that expose the multicultural, socioeconomic, pedagogical and human influences on school climate and student progress. Capping the preparation phase is a supervised student-teaching experience that represents the laboratory and the lens through which we assess the fulfillment of our goals.

Our mission takes its strength from a departmental conviction that active learning and critical reflection are essential for effective teaching and learning. Education students practice the thoughtful approach to learning that they are expected to develop in their own classrooms when they student teach. This stress on individual responsibility for learning is also reflected in various opportunities to peer evaluate and self evaluate.
URSINUS COLLEGE TEACHER CERTIFICATION PROGRAM

Ursinus College is approved by the Pennsylvania Department of Education (PDE) to offer initial Teacher Certification in the following subject areas:

**Grades 7-12**
- Biology
- Chemistry
- English
- General Science*
- Mathematics
- Physics
- Social Studies

**Grades K-12**
- French
- German
- Japanese
- Latin
- Spanish
- Health/Physical Education

*This certification area is only offered in conjunction with Biology, Chemistry or Physics certification.

NOTE: The department does not offer certification in elementary education (though as noted above, some subject area certifications span grades K–12).

**Course Requirements**

To pursue one of these subject area certifications, students must major in that subject and complete 38 credits in the Education department as follows:

- Core/foundational courses: EDUC-100, 265, and 320;
- Methodological courses: EDUC-350W, 360 (two credits), 375, and 443 (two credits) (Students seeking certification in Health and Physical Education are required to complete HEP-355 and 356 instead of EDUC-350W and 443.)
- EDUC-453 (student teaching, 12 credits) and 454 (two credits).

Students who complete the teaching certification program may also earn the department's Educational Studies major as a second major (in addition to the major in the content area) with the addition of eight credits in the Education department. At least one of the additional courses must be EDUC-280 or EDUC/PHIL-310W. Other possible courses are EDUC-270, 290, 330, 346, 380, and PSYC-240, 340 or 342. For such students, the combination of EDUC-453 and 454 will serve as the capstone for the Educational Studies major and fulfill the oral presentation requirement. Health and Physical Education students who wish to earn the second major should include EDUC/PHIL-310W as one of their two courses, to ensure fulfillment of the “W” requirement in Education.

**Field Experiences**

Most courses in the certification program require field experience hours in local public schools. Students must arrange transportation for all field experiences and student teaching. To be eligible to visit schools and complete these required hours, students must obtain the necessary security clearances: 1) Act 34, Pennsylvania State Criminal History Record; 2) Act 114, FBI Fingerprint (Federal Criminal History Record); 3) Act 151, Pennsylvania Child Abuse Background Check; and 4) Tuberculosis test.
Program Requirements

Admission to the Program
Students must fulfill the following requirements—usually by the end of sophomore year—before being admitted into the teaching certification program:

- Completion of 48 hours of college-level study;
- Completion of CIE-100 and CIE-200 (fulfills Pennsylvania state English requirement)*;
- Completion of one course in mathematics/statistics and one four-credit Q course; or two four-credit courses in mathematics/statistics*;
- Completion of EDUC-100 (usually in the 2nd or 3rd semester);
- Passing scores on basic skills tests: either the Pre-Service Academic Performance Assessment (PAPA) or ETS core exams in Reading, Writing, and Mathematics; or qualifying SAT or ACT scores*. Scores should be submitted to the Education department by the end of sophomore year.
- Cumulative GPA of 3.00
  *Post-baccalaureate students no longer need to meet these requirements as per the PDE.

Admission to Student Teaching
Students must fulfill the following requirements in order to be eligible for student teaching:

- Cumulative GPA of 3.00
- GPA of 3.00 in Education courses (100, 265, 320, 350W, 360, 375, and 443. Health and Physical Education candidates: HEP-355 and 356 instead of EDUC-350 and 443)
- Specified GPA in the candidate’s major department/certification area
- Completion of EDUC-350W and EDUC-443 (or equivalent HPE methods courses) with satisfactory evaluations from Ursinus Education faculty and field placement teachers (for EDUC-443), in terms of performance and professionalism.
- Application for EDUC-443 and Student Teaching: to be completed and approved by the Education department during EDUC-350W (HPE candidates complete the application during or upon completion of HEP-355/356).
- Recommendation by the candidate’s major department and approval by Education department faculty, based on academics and professionalism.
- Completion of a new set of security clearances, by spring break (fall student teaching) or fall break (spring student teaching)
- Note: Post-baccalaureate candidates who are not 9th semester Ursinus graduates must also pass Praxis II examinations prior to student teaching.

Certification
Students must meet the following criteria to apply and be recommended for certification:

- Cumulative GPA of 3.00 at the end of student teaching, including the grade for EDUC-453 (Student Teaching) and EDUC-454 (Professional Seminar)
- Grade of B or higher in student teaching
- Satisfactory PDE 430 Evaluation by college supervisor
- Passing score on Praxis II (Content Area) exams (NOTE: Post-baccalaureate students must take and pass Praxis II before being placed for student teaching.)
- Demonstration of good moral character as defined by the PA Department of Education

Reciprocal agreements extend certification eligibility to more than forty other states, though some states require additional standardized tests. Candidates who wish to teach outside Pennsylvania should contact state education departments for further information. Eligibility for permanent certification in any state depends upon successful full-time teaching and professional development requirements which vary among individual states.
Course Sequence

The following are the recommended course sequences for teacher certification. Students and advisors should consult the Education department, especially in cases that do not conform to these sequences. All Education coursework must be completed prior to student teaching. Advising sheets for each certification subject area are available through the Education Department.

Note: Field experience hours in local public schools are required in EDUC-265, 320, 350W, 375, and 443. **Students must arrange transportation for all field experiences and student teaching.**

The courses listed below are four credits unless noted otherwise.

First Year

*Fall or Spring:*
EDUC-100: Critical Issues in Education (EDUC-210 through spring of 2018)

Sophomore Year

*Fall or Spring:*
EDUC-265: Educational Psychology (10 hours field experience; clearances required) *Note: EDUC-265 may also be taken in the first year.*

*Spring*
EDUC-320: Diversity of Learners (10 hours field experience; clearances required).

Junior Year

*Fall:*
EDUC-350W: Curriculum and Instruction (15 hours field experience; clearances required)
EDUC-375: The Inclusive Classroom (15 hours field experience; clearances required).

*Spring*
EDUC-360: Teaching English Language Learners (2 credits)
EDUC-443 Methods Practicum (2 credits) (25 hours field experience; clearances required)

Senior Year

*Fall or Spring:*
EDUC-453/493 Student Teaching (12 credits)
EDUC-454 Professional Seminar (2 credits)

*Note: EDUC-453 and EDUC-454 must be taken concurrently and should not be scheduled during a student’s participation in athletics or employment. No other courses, day or evening, may be scheduled. While most students complete student teaching during their senior year, some students elect to student teach in a 9th semester; see the Education department for details.*

**Health and Physical Education (HPE) certification students** do not take EDUC-350W and EDUC-443; instead, they should take HEP-356 (fall semester only; 28 hours field experience) and HEP-355 (spring semester only; 12 hours field experience). Both courses require clearances. Please contact the HEP department for information on when these courses are offered.
By the end of the student teaching experience, students will demonstrate proficiency in the following competencies:

1. Content Mastery - demonstrates knowledge of standards, major principles and concepts, tools of inquiry, methods and resources of the subject matter and presents subject matter effectively.

2. Lesson Planning - writes detailed and easy-to-follow instructional plans to achieve stated objectives though use of appropriate procedures, sequences, materials and technology.

3. Classroom Management - sets and maintains appropriate behavior standards that foster self-discipline, mutual respect, and positive interpersonal relations, handling discipline fairly and consistently.

4. Learning Environment - effectively organizes time, space, materials, and equipment conducive to individual and group inquiry and interaction honoring human growth and development in terms of the teaching-learning process.

5. Monitoring Student Progress - effectively assesses student academic needs and progress through diagnosis, regular constructive feedback, oral/written testing, appropriate questioning techniques, and well-designed projects or exhibitions of knowledge.

6. Classroom presence - demonstrates personal enthusiasm, self-confidence, poise and professionalism in conducting class.

7. Individualization - provides for the needs of exceptional students by collaborating with colleagues, consulting IEP’s, and providing appropriate instruction.

8. Student Self-Concepts - fosters positive self concepts through sensitivity, patience, empathy and respect for all students, honoring racial, cultural, gender and religious diversity.

9. Pupil Participation - provides instructional activities that draw upon student prior knowledge and consider learning abilities and styles, active learning, critical thinking, problem solving and student generated comments questions and performance.

10. Communication - communicates effectively orally and in writing with students through proper English usage, clarity and tact.

11. Creativity - incorporates originality in design and implementation of lesson plans.

12. Professionalism - demonstrates ethical behavior with responsibility for professional growth and development, working collaboratively with colleagues and administrators to enact policies, procedures, and curricula of the school district, respecting the rights and responsibilities of students, parents and community.
CERTIFICATION AREAS OF CONCENTRATION OFFERED AT URSINUS COLLEGE

ENGLISH

FOREIGN LANGUAGES
FRENCH
GERMAN
JAPANESE
LATIN
SPANISH

HEALTH AND PHYSICAL EDUCATION

MATHEMATICS

SCIENCES
BIOLOGY
CHEMISTRY
GENERAL SCIENCE
PHYSICS

SOCIAL STUDIES
The person certified in **English** should:

1. Be familiar with major historical and literary periods
2. Be familiar with various types of literary genres
3. Demonstrate competency in grammar
4. Demonstrate competency in writing for different purposes
5. Demonstrate competency in speaking for different purposes
6. Have an understanding of how students develop language skills
7. Be able to integrate reading, critical listening, speaking, and writing in individual lessons
8. Be competent in designing and producing a variety of instructional media
9. Utilize audio-visual aids and student in-class work and homework to reinforce content
10. Teach according to objectives and intended outcomes
11. Employ a variety of instructional methods that respond to students’ learning styles
12. Create a friendly but business-like classroom atmosphere
13. Design tests and authentic assessments that focus on previously established objectives
14. Provide students with clear expectations of their behavior that are consistently upheld
15. Maintain a professional appearance of dress, mannerisms, and speech.

Copies of the Pennsylvania Standards for Program Approval in **English** Certification are available in the Education Department.
Required courses and activities for certification in English.

Like all English majors, candidates for certification must complete at least ten (10) courses in English including English 290W plus one 200 level literature class, four 300-level Colloquia, a senior seminar, and electives. These ten courses should include literary genres, themes, historical movements and major writers. Post-baccalaureate candidates for teacher certification in English must have taken at least one 300 level English course at Ursinus College.

To meet state education department guidelines, candidates must select the following courses:

Writing/Language/Composition
ENG 214 Structure of the English Language
ENG 290W Methods in Literary Studies
(ENG 214 counts as an elective for the English major.)

Speaking and Listening
ENG 400 level: Oral Presentation in senior seminar or honors project

Evaluating Media: Film (ONE of the following)
MCS 205 Media and Society or any course in Film Studies

The following areas of study are not required but are very strongly recommended:
Shakespeare (English 240, or 300-level Colloquium on Shakespeare)

Experiences
It is strongly recommended that the candidate participate in journalism or theater activities (to prepare for future advising responsibilities.)

Note: The English Department requires a GPA in the major 3.0.

In addition to these requirements, the candidate for certification must complete the professional education sequence, the necessary PAPA or CORE* and Praxis II exams, and maintain the overall GPA required by the State in order to be recommended for certification. The Education Department requires a GPA of 3.00 in Education courses in order to student teach. See the Education Department for additional information regarding the overall GPA requirement for eligibility by the State.

*Note that the PDE now accepts SAT and ACT scores – see department staff for details.

03/19
URSINUS COLLEGE COMPETENCIES FOR FOREIGN LANGUAGE

FOREIGN LANGUAGE PROGRAMS OFFERED

FRENCH
GERMAN
JAPANESE
LATIN
SPANISH

The person certified in Foreign Languages should:

1. Demonstrate knowledge of the elements for successful lesson planning with emphasis on balance, time, variety, materials, number of activities, order of activities, and skill development.
2. Demonstrate the ability to teach all four language skills (listening, speaking, reading, and writing), using appropriate and varied techniques and materials.
3. Possess knowledge of the history of foreign language education in the United States with emphasis on current research about methodology
4. Plan meaningful lessons which include the teaching of culture within the context of the lesson at hand, using authentic materials whenever possible
5. Demonstrate the ability, through the teaching of vocabulary, grammar, and culture, to create testing devices for language skills which challenge students’ abilities and meet the given objectives
6. Encourage and motivate students to become proficient in the target language by collecting practical, effective, and creative ideas (an idea file) to teach vocabulary, grammar, and culture in all languages, at all language levels, and at all grade levels.
7. Stay current regarding foreign language trends and terminology
8. Enroll in one of the various professional organizations for foreign language teachers.
9. Preview and be aware of sources for teaching materials (such as visuals, tapes, supplementary books, realia) to enhance his/her classroom teaching.

Copies of the Pennsylvania Standards for Program Approval in Foreign Language Certification are available in the Education Department.
Required courses and activities for certification in French.

Candidates for certification must complete a minimum of twenty-four (24) credit hours at the 200, 300 and 400 levels and maintain a GPA of 3.00 in French courses. **Post-baccalaureate students will be considered on a case-by-case basis.**

French

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>251</td>
<td>Introduction à la Littérature Française et Francophone</td>
</tr>
<tr>
<td>252</td>
<td>Le Monde Francophone</td>
</tr>
<tr>
<td>317</td>
<td>Culture Populaire et Questions Contemporaines en Europe Francophone</td>
</tr>
<tr>
<td>328</td>
<td>Advanced Grammar and Translation</td>
</tr>
</tbody>
</table>

Plus at least two (2) additional courses at the 300 or 400 level. In addition to the course requirements, students are required to pass a qualifying examination before they will be admitted to candidacy for certification and a competency examination before being certified. These tests will examine students’ linguistic competence, orally and in writing, testing phonetics, conversation, grammar and composition. The exit exam will also check their knowledge of French literature and culture, including the arts, history and geography.

Students and their advisers should consult the Ursinus College Education Department. Language majors and students preparing for certification are required to supplement their work at Ursinus by spending a summer, a semester or an entire year in a foreign country with a program approved by the department. Exceptions to this policy may be made by petition to the department chair.

The student is advised to take appropriate courses in Anthropology, History, Politics, Economics and Intercultural Communication.

In addition to these requirements, the candidate for certification must complete the professional education sequence, the necessary PAPA or CORE* and Praxis II exams, and maintain the overall GPA required by the State in order to be recommended for certification. The Education Department requires a GPA of 3.00 in Education courses in order to student teach. See the Education Department for additional information regarding the overall GPA requirement for eligibility by the State.

*Note that the PDE now accepts SAT and ACT scores – see department staff for details.
Required courses and activities for certification in German.

Candidates for certification must complete a minimum of twenty-four (24) credit hours at the 200 level and above and maintain a GPA of 3.00 in German courses. Post-baccalaureate students will be considered on a case-by-case basis.

**German**

251  German Literature I  
252  German Literature II  
328  Advanced German Grammar

**Plus one of the following**

313  German Studies in Literature  OR  
314  German Studies in Literature and Culture  OR  
315  Germany Today  OR  
319  Contemporary German Literature  OR  
320  German Novelle

Plus two (2) additional courses at the 300 or 400 level. The student is advised to take appropriate courses in Anthropology, History, Politics, Economics and Intercultural Communication.

**Activities**

Pass a qualifying exam for admission to candidacy for certification, and pass a competency exam before being recommended for certification.

Spend a summer, a semester, or an entire year in a foreign country with a program approved by the Modern Languages Department.

In addition to these requirements, the candidate for certification must complete the professional education sequence, the necessary PAPA or CORE* and Praxis II exams, and maintain the overall GPA required by the State in order to be recommended for certification. The Education Department requires a GPA of 3.00 in Education courses in order to student teach. See the Education Department for additional information regarding the overall GPA requirement for eligibility by the State.

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Required courses and activities for certification in Japanese. 
Post-baccalaureate students will be considered on a case-by-case basis.

Japanese
311  Advanced Japanese I
312  Advanced Japanese II
328  Advanced Japanese Grammar

Three of the following:
EAS 299  Topics in East Asian Studies (when Japan is the main theme)
         May be taken more than once if topics are different.
EAS 314  Contemporary Japanese Culture
EAS 224  Japanese Literature in Translation
HIST 243 Japanese Society and Culture since the Days of Genji
or other courses on Japanese Studies approved by the Modern Languages Department.

The student is advised to take appropriate courses in Anthropology, History, Politics, Economics and Intercultural Communication.

Activities

Pass an assessment for admission to candidacy for certification and before being recommended for certification.

A six-week or longer summer program in Japan, or a semester or year-long program. Programs must be approved by the Modern Languages Department.

A GPA of 3.00 in Japanese courses is required of all prospective Japanese teachers. For the certified teacher, work in foreign language pedagogy and demonstration of teaching competency in Japanese are required. For the candidate without prior teacher certification, the candidate must complete the professional education sequence.

In addition to these requirements, the candidate for certification must complete the professional education sequence, the necessary PAPA or CORE* and Praxis II exams, and maintain the overall GPA required by the State in order to be recommended for certification. The Education Department requires a GPA of 3.00 in Education courses in order to student teach. See the Education Department for additional information regarding the overall GPA requirement for eligibility by the State.

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Latin
Five (5) courses are required, one of which must be 300 level or above.

History
261 The Pre-Modern World

English
214 Linguistics and Modern Grammar

Classics
One of the following:
321 Topics in Classical Studies (equivalent to English 230)
326 Mythology (equivalent to English 226)

Art
150 History of Art I: Ancient Through Early Christian and Byzantine

Anthropology
100 Introduction to Sociocultural Anthropology

NOTE: In order to be recommended for student teaching of Latin, the student must earn a “B” (3.00) average for courses in the certification program.

In addition to these requirements, the candidate for certification must complete the professional education sequence, the necessary PAPA or CORE* and Praxis II exams, and maintain the overall GPA required by the State in order to be recommended for certification. The Education Department requires a GPA of 3.00 in Education courses in order to student teach. See the Education Department for additional information regarding the overall GPA requirement for eligibility by the State.

*Note that the PDE now accepts SAT and ACT scores – see department staff for details.
Required courses and activities for certification in Spanish.  
**Post-baccalaureate students will be considered on a case-by-case basis.**

A minimum of 24 credit hours at the 200 level and above.

**Spanish**

251  Survey of Hispanic Cultures  
252  Introduction to Hispanic Cultural Studies  
317  The Hispanic World  
328  Advanced Spanish Grammar

Plus two additional courses at the 300 or 400 level. The student is advised to take appropriate courses in Anthropology, History, Politics, Economics and Intercultural Communication.

A GPA of 3.00 in Spanish courses is required of all prospective Spanish teachers.

**Activities**

Pass an assessment for admission to candidacy for certification and before being recommended for certification. This assessment includes an evaluation of the prospective teacher’s listening, speaking, reading and writing skills in Spanish as well as his/her cultural knowledge of Spanish-speaking countries.

Spend a summer, semester, or an entire year in a foreign country with a program approved by the Modern Languages Department.

In addition to these requirements, the candidate for certification must complete the professional education sequence, the necessary PAPA or CORE* and Praxis II exams, and maintain the overall GPA required by the State in order to be recommended for certification. The Education Department requires a GPA of 3.00 in Education courses in order to student teach. See the Education Department for additional information regarding the overall GPA requirement for eligibility by the State.

*Note that the PDE now accepts SAT and ACT scores – see department staff for details.
The person certified in Health and Physical Education should:

1. construct appropriate lesson objectives from the cognitive, affective, and psychomotor domains
2. determine appropriate standards of performance and conditions under which performance will be judged
3. provide for individual difference to maximize learning
4. effectively communicate educational objectives to the learner
5. select and organize learning activities which support lesson objectives
6. develop units of instruction and daily lesson plans
7. select appropriate teaching styles to achieve objectives
8. plan for adjustments within a lesson to accommodate the unforeseen
9. plan activities appropriate to the needs of special populations
10. provide for maximum safety within learning activities
11. plan for smooth transitions between activities
12. plan activities to maintain a focus of instruction and minimize off-task behavior
13. plan learning activities which foster growth within the dimensions of human movement
14. employ various teaching strategies to assist learners by providing examples, questions, clarifications, etc.
15. be sensitive to the needs and emotions of the learner, listen to and accept feedback from learners
16. provide positive reinforcement for a learner’s behavior
17. give clear, explicit directions and demonstrate skills within the learning activity
18. coordinate space, materials, equipment, and time to successfully complete the learning activity
19. use a variety of effective communication modes
20. self-evaluate teaching behavior and adjustments
21. diagnose, identify, and remedy sources of off-task behavior
22. involve the learner in the assessment and interpretation of her/his own progress
23. summarize and report on the learner’s progress
24. adjust teaching styles based on feedback
Ursinus College Teacher Certification Program
HEALTH AND PHYSICAL EDUCATION

Health & Exercise Physiology
HEP 100  Concepts of Wellness and Fitness
HEP 202  Concepts in Public Health
HEP 205/BIO 205  Anatomy & Physiology I
HEP 206/BIO 206  Anatomy & Physiology II
HEP 220  Critical Components of Conditioning
HEP 223  Teaching Games for Understanding: Team Sports
HEP 224  Theory and Analysis of Teaching Individual/Dual Sports
or  HEP 209 Martial Arts / HEP Tai Chi
or  HEP 209 Self Defense
HEP 232W  Current Trends in Health
HEP 235  Life Guarding or an approved swimming class with CPR and
         First Aid Certification
HEP 245  Leadership in Group Initiatives & Adventure Activities
HEP 333  Drugs and Alcohol – Use and Abuse in Modern Society
HEP 334  Nutrition
HEP 351  Structural Kinesiology
HEP 352  Exercise Physiology
HEP 355  Methods of Teaching Secondary Health and Physical Education
HEP 356  Methods of Teaching Elementary Health and Physical Education
HEP 446  Principles & Foundations of Health Fitness Management
HEP 464  Adapted Physical Education

Mathematics
STAT 141Q  Statistics I

Dance
DANC 200  Fundamental Dance Technique
or  an approved Dance elective

Capstone Experience: A requirement for an Ursinus degree in Exercise and Sport Science. One of
the following courses will meet the capstone experience:
HEP 381/382  Practicum
HEP 465  Health and Physical Education Teaching Seminar
HEP 491  Research /Independent Work

Note: Candidates for teaching certification must maintain a 2.8 GPA in HEP courses to be eligible for
student teaching. In addition to these requirements, the candidate for certification must complete the
professional education sequence, the necessary PAPA or CORE* and Praxis II exams, and maintain the
overall GPA required by the State in order to be recommended for certification. The Education
Department requires a GPA of 3.00 in Education courses in order to student teach. See the Education
Department for additional information regarding the overall GPA requirement for eligibility by the
State.

*Note that the PDE now accepts SAT and ACT scores – see department staff for details.
URSINUS COLLEGE COMPETENCIES FOR MATHEMATICS

The person certified in **Mathematics** should:

1. Create a learning environment that fosters the development of each student’s mathematical ability
2. Engage students in tasks that promote the understanding of concepts, procedures, and connections of mathematics with practical situations in everyday life
3. Be able to work with a diverse range of students individually, in small groups, and in large group settings to encourage every student to develop a positive disposition towards mathematics
4. Provide a classroom forum which will elicit, engage, and challenge each student’s thinking ability and refine his or her inductive and deductive reasoning skills
5. Stimulate students to make connections and develop a coherent mathematical framework, particularly as it is integrated with computers, physics, chemistry, and the other sciences
6. Conduct learning activities involving a variety of new technologies which allow students to make decisions and select the means by which exploration, representation, and data analysis aid in problem solving
7. Use a variety of assessment methods to determine students’ understanding of mathematics
8. Constantly be aware of new content and techniques for mathematics and be able to design a curriculum which actively engages students at appropriate levels
9. Provide and structure the classroom time for adequate problem solving strategies and mathematical modeling necessary for the teaching and learning of basic principles
10. Develop effective experiences which will encourage students to raise questions, formulate conjectures, and support ideas with mathematical reasoning.
Required courses and activities for certification in mathematics

**Math**
- Math 112 Calculus II
- Math 211 Multivariable Calculus
- Math 235 Linear Algebra
- Math 236W Discrete Mathematics
- Math 311W Analysis I
- Math 322 Modern Geometry
- Math 335 Abstract Algebra
- Math 341 Probability
- Math 350 Oral Presentation (must be some aspect of the History of Mathematics)*
- Math 442 Mathematical Statistics

**Computer Science**
- Math 173 Introduction to Computer Science

**Recommended courses**
- Stat 141Q Statistics I
- Stat 242 Statistics II
- Math 310 Differential Equations and Mathematical Models
- Math 421 Topology
- Math 434 Number Theory

**Note:** If a student can take Stat 141Q-242, they should be taken before Math 341-442.

**Experiences**

- A demonstration of a sample teaching lesson prior to student teaching.
- Observation during the student teaching experience by a member of the Mathematics Department.

**NOTE:** Prospective student teachers in mathematics must have a 2.50 average in their courses taken in the Mathematics and Computer Science Department at the Ursinus College day school at the time the Department considers them for student teaching. Non-traditional and transfer students will be considered on an individual basis.

In addition to these requirements, the candidate for certification must complete the professional education sequence, the necessary PAPA or CORE** and Praxis II exams, and maintain the overall GPA required by the Commonwealth in order to be recommended for certification. The Education Department requires a GPA of 3.00 in Education courses in order to student teach. See the Education Department for additional information regarding the overall GPA requirement for eligibility by the State.

*See UC catalogue Courses of Instruction for Mathematics (Secondary Certification).

** Note that the PDE now accepts SAT and ACT scores – see department staff for details.
The person certified in **Science** should:

1. Build a knowledge base of educational resources in science education
2. Apply effective classroom techniques and procedures
3. Direct the use of computers in science education
4. Teach the scientific method and relate it to everyday experiences
5. Implement appropriate laboratory exercises in which students take part in the scientific process
6. Assist in addressing current ethical issues and new technologies in science
7. Implement classroom activities which will generate critical thinking and potential solutions to environmental issues
8. Have knowledge of appropriate laboratory safety with regard to disposal of dangerous chemicals in the high school laboratories.
9. Work appropriately with exceptional students in lecture and laboratory situation
10. Become active in the development of Outcomes-Based Education in their school district.
Ursinus College Teacher Certification Program
BIOLOGY

Required Biology Core
Biology 101Q Issues in Ecology and Evolution
Biology 102Q Cell Biology
Biology 201W Genetics
Biology 415W Ecology (Course fulfills the Population/Ecology group)

Distribution Courses: One course from each group

Molecular/Cellular
Bio 220 Innovation in Biology; Bio 224 Within the Cell; Bio 225 Glial Cell Biology; Bio 328 Protein Biogenesis; Bio 345 Microbiology; Bio 346 Developmental Biology; Bio 425W Molecular Genetics; Bio 426W Molecular; Biology; Bio 429W Structural Biology; Bio 431W Cellular Neurobiology; Bio 433W Molecular Neurobiology; Bio 435W Developmental Neurobiology; Bio 444W Advanced Integrative Physiology; Bio 449W Immunology; Bio 459W Virology, BCMB 351 Biochemistry I

Animal Biology
Bio 305 Human Anatomy; Bio 306 Human Physiology; Bio 325 Insect Biology; Bio 359 Animal Behavior; Bio 365 Ornithology; Bio 442W Mammalogy

Plant Biology
Bio 334 Plant Biology; Bio 350 The Nature of Food (course number will be changing)

Population/Ecology
Bio 310 Biological Oceanography; Bio 320 Biology of the Neotropics; Bio 324 Darwin and Evolution; Bio 330 Marine Biology; Bio 336 Freshwater Biology; Bio 415W Ecology; Bio 455W Conservation Biology

Capstone Courses
Bio 415W Ecology; Bio 424W Evolution; Bio 425W Molecular Genetics; Bio 426W Molecular Biology; Bio 429W Structural Biology; Bio 431W Cellular Neurobiology; Bio 433W Molecular Neurobiology; Bio 435W Developmental Neurobiology; Bio 442W Mammalogy; Bio 444W Advanced Integrative Physiology; Bio 449W Immunology; Bio 455W Conservation Biology; Bio 459W Virology; 492W Honors Research, BCMB 452W Biochemistry II;

Ancillary Courses
Chem 105, 105L General Chemistry I: Foundations, Lab
And choice of
Chem 106, 106L Organic Chemistry I, Lab
OR
Chem 206, 206L General Chemistry II: Analysis, Lab

Geology 102Q or 105 Earth Around Us or Environmental Geology

Physics 100Q Introductory Physics
OR
Physics 111Q General Physics

Math/Computer Science;
Two of the Following:
Math 111 Calculus I; Math 112 Calculus II; Stat 141Q Statistics I; Stat 242 Statistics II; Stat 243W Biostatistics; CS 173 Introduction to Computer Science

Activities:
Work as a laboratory assistant or participate in training. In addition to these requirements, the candidate for certification must complete the professional education sequence, the necessary PAPA or CORE* and Praxis II exams and maintain the overall GPA required by the State in order to be recommended for certification. The Education Department requires a GPA of 3.00 in Education courses in order to student teach. The Biology Department requires that undergraduate candidates attain a GPA of 2.50 in biology coursework in order to be recommended for student teaching and in order to obtain certification. Additional certification in General Science is only available to certified biology, chemistry or physics majors. See the Education Department for additional information regarding overall GPA requirements for eligibility in the State. *Note that the PDE now accepts SAT and ACT scores – see department staff for details.
Required courses for certification in chemistry.*

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 105, 105L</td>
<td>General Chemistry I with laboratory</td>
</tr>
<tr>
<td>CHEM 206, 206LQ</td>
<td>General Chemistry II with laboratory</td>
</tr>
<tr>
<td>CHEM 106, 106L</td>
<td>Organic Chemistry I with laboratory</td>
</tr>
<tr>
<td>CHEM 205, 205L</td>
<td>Organic Chemistry II with laboratory</td>
</tr>
<tr>
<td>CHEM 309, 309L</td>
<td>Physical Chemistry I with laboratory</td>
</tr>
<tr>
<td>OR BCBM 307, 309L</td>
<td>Physical Chemistry for the Life Sciences with laboratory</td>
</tr>
<tr>
<td>CHEM 322, 322L</td>
<td>Inorganic Chemistry with laboratory</td>
</tr>
<tr>
<td>ENV 100</td>
<td>Issues in Environmental Studies</td>
</tr>
<tr>
<td>OR CHEM 101</td>
<td>Introduction to Environmental Chemistry</td>
</tr>
</tbody>
</table>

* These are the required chemistry courses required by the Commonwealth for certification in Chemistry. Additional courses are required for a degree in chemistry. For degree requirements please consult the latest College catalogue.

_Students taking CHEM-151 (Advanced General Chemistry) can substitute for both CHEM-105 and CHEM-206 (the usual two-semester sequence of general chemistry)._  

Required Activities:

Work as a laboratory assistant and participate in training for that job. Participate actively in the Beardwood Chemical Society.

NOTE: Prospective student teachers in chemistry must have a 2.50 GPA in chemistry and receive a departmental evaluation which considers, in addition to academic performance, the student’s interpersonal and communication skills. Also, a member of the Chemistry Department must observe prospective student teachers during their student teaching experience.

The candidate for certification in chemistry is advised that, in order to teach comprehensive general science at the junior high or middle school level, additional certification in general science may be required.

Additional certification in general science is only available to certified biology, chemistry or physics teachers.

In addition to these requirements, the candidate for certification must complete the professional education sequence, the necessary PAPA or CORE* and Praxis II exams, and maintain the overall GPA required by the State in order to be recommended for certification. The Education Department requires a GPA of 3.00 in Education courses in order to student teach. See the Education Department for additional information regarding the overall GPA requirement for eligibility by the State.

*Note that the PDE now accepts SAT and ACT scores – see department staff for details.
Candidates must obtain certification in biology, chemistry, or physics in order to be eligible for certification in general science.

Required courses and activities for certification in general science.*

Biology
101Q Issues in Ecology and Evolution
102Q Cell Biology

Chemistry
105, 105L General Chemistry I: Foundations, Lab
106, 106L Organic Chemistry I, Lab

Physics
111Q, 112 General Physics I, II

Earth & Space Sciences
PHYS 101Q Stars and Galaxies
GEOL 102Q Earth Around Us or
or 105 Environmental Geology

Mathematics
Any two (2) of the following courses:
Math 111, 112 Calculus I, II
CS 173 Introduction to Computer Science
Stat 141Q, 242 Statistics I, II

Activities
Work as a laboratory assistant or participate in training.

*The candidate for certification in general science is advised that this credential is most appropriate for junior high or middle school comprehensive general science teaching and for high school courses in general science.

In addition to these requirements, the candidate for certification must complete the professional education sequence, PAPA or CORE** and Praxis II exams, and maintain the overall GPA required by the State in order to be recommended for certification. The Education Department requires a GPA of 3.00 in Education courses in order to student teach. See the Education Department for additional information regarding the overall GPA requirement for eligibility by the State.

** Note that the PDE now accepts SAT and ACT scores – see department staff for details.
# Ursinus College Certification Program

## PHYSICS

Required courses and activities for certification in physics.*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>121Q</td>
<td>Spacetime and Quantum Physics</td>
</tr>
<tr>
<td>122Q</td>
<td>Electricity, Magnetism, and Waves</td>
</tr>
<tr>
<td>201</td>
<td>Introductory Classical Mechanics</td>
</tr>
<tr>
<td>207</td>
<td>Modern Physics</td>
</tr>
<tr>
<td>299</td>
<td>Mathematical Physics I</td>
</tr>
<tr>
<td>450</td>
<td>Senior Seminar</td>
</tr>
</tbody>
</table>

Any three of:
- 304 (Thermal Physics)
- 401 (Applications of Quantum Mechanics)
- 409 (Electrodynamics)
- 410 (Advanced Classical Mechanics)

Any two of:
- 328W (Analog Electronics)
- 329W (Digital Electronics)
- 338W (Advanced Physics Laboratory I)
- 339W (Advanced Physics Laboratory II)

## Mathematics

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>112</td>
<td>Calculus II</td>
</tr>
</tbody>
</table>

## Computer Science

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>173</td>
<td>Introduction to Computer Science</td>
</tr>
</tbody>
</table>

## Biology

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>101Q</td>
<td>Issues in Ecology and Evolution</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>102Q</td>
<td>Cell Biology and Genetics of Health and Disease</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>ENV 100</td>
<td>Issues in Environmental Studies</td>
</tr>
</tbody>
</table>

## Activities

Work as a laboratory assistant or help session staff.

*The candidate for certification is advised that, in order to teach comprehensive general science at the junior high/middle school, additional certification in general science may be required.

**NOTE:** To be approved for student teaching, a candidate must have 1) attained an average of 2.50 in required physics and mathematics courses and 2) demonstrated the interpersonal and communication skills necessary to convey ideas and concepts to others.

In addition to these requirements, the candidate for certification must complete the professional education sequence, the necessary PAPA or CORE** and Praxis II exams, and maintain the overall GPA required by the State in order to be recommended for certification. The Education Department requires a GPA of 3.00 in Education courses in order to student teach. See the Education Department for additional information regarding the overall GPA requirement for eligibility by the State.

**Note that the PDE now accepts SAT and ACT scores – see department staff for details.
URSINUS COLLEGE COMPETENCIES FOR SOCIAL STUDIES

The person certified in Social Studies should:

1. Understand the Pennsylvania Social Studies requirements for secondary schools
2. Demonstrate a knowledge of sources for preparing units of study
3. Demonstrate knowledge and use of criteria for evaluating textbooks and other teaching materials
4. Develop an understanding of techniques in dealing with controversial topics in the classroom
5. Learn the characteristics of a good Social Studies teacher
6. Learn various methods of teaching current events
7. Develop an understanding of various methods of teaching Social Studies

Copies of the Pennsylvania Standards for Program Approval in Social Studies are available in the Education Department.
Ursinus College Teacher Certification Program
SOCIAL STUDIES (Two Pages)

Note: Post-baccalaureate Social Studies certification candidates who have not taken the required Methodology course as an undergraduate will be required to take HIST-200W as their Methodology course at Ursinus.

Required courses and activities for Social Studies certification:
A. Students must major in American Studies, Anthropology, Business and Economics, East Asian Studies, History, International Relations, Politics, Psychology, or Sociology. To be admitted to student teaching, a Social Studies certification candidate must have a 2.67 GPA for courses in his or her major.

B. Students must complete both semesters of the Ursinus College Common Intellectual Experience course sequence (CIE100 & CIE 200). Note: History 261-262 (or their equivalent) may be substituted for CIE100/200 for eligible transfer or post-baccalaureate candidates.

C. Students must take the following courses: (total 9 courses = 36 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td>1</td>
<td>any Anthropology course (Anthropology 100 is recommended)</td>
</tr>
<tr>
<td>Business &amp; Economics</td>
<td>1</td>
<td>ECON120 Contemporary Economic Issues or ECON 102 Principles of Macroeconomics</td>
</tr>
<tr>
<td>History</td>
<td>3</td>
<td>262 The Modern World and one pre-1877 U.S. History course, from: 113 American History, 1500-1877 or 222 African American History I or 321 Colonial America or 323 Civil War America and one post-1877 U.S. History course, from: 114 Modern American History, 1877-Present or 223 African American History II or 327 Topics in Modern United States History or Note: HIST-220 (Philadelphia Story: The City as Text), HIST-225 (Native North America), HIST 322 (Making American Empire: Violence and the Rise of the United States), HIST/GWMS-328 (Women in American History) or HIST-329 (Topics in African American History) may be taken to fulfill either the pre-1877 or post-1877 U.S. History course requirement.</td>
</tr>
<tr>
<td>Politics</td>
<td>2</td>
<td>218 American Government and one additional Politics course; either 242 Comparative Government or 252 International Relations (is recommended) (POL 237 fulfills this requirement as well)</td>
</tr>
<tr>
<td>Sociology</td>
<td>1</td>
<td>any Sociology course (Sociology 100 is recommended)</td>
</tr>
<tr>
<td>Methodology</td>
<td>1</td>
<td>one from: Anthropology/Sociology {200 Methods in Anthropology &amp; Sociology and {200L ANSO 200 Lab</td>
</tr>
<tr>
<td>Business &amp; Economics</td>
<td>1</td>
<td>STAT141Q Statistics I</td>
</tr>
<tr>
<td>History</td>
<td>1</td>
<td>200W Historiography</td>
</tr>
</tbody>
</table>
Politics

300 Research Methods in Politics  
418W Seminar in American Government or  
437W Seminar in Political Philosophy or  
442W Seminar in Comparative Politics or  
452W Seminar in International Politics or  
IR 400W Research in International Relations

Psychology

200WQ Introductory Research Methods and Statistics

NOTES:

1. Students who enter with Advanced Placement credit in U.S. History or American Government should substitute another History or Politics course in their required course sequence, if their schedule permits. Completing either of these requirements through CLEP tests is not recommended.

2. While the required number of course/credits is high, the program overlaps with other requirements for various majors or minors and the college core requirements. For example, many of the courses listed above will fulfill the student’s Humanities, Social Science, Diversity, (D), Global Studies (G) and even laboratory science and Q-course requirements.

3. In addition to these requirements, candidates for certification in Social Studies must complete all the Education courses required by the Education Department for teaching certification. IMPORTANT: All Teaching Certification students must take both their (4-credit) Mathematics course and their lab science/Q course at Ursinus College and not at another institution, in order to meet PDE standards.

4. To be admitted to student teaching, a student must have a minimum GPA of 3.00 in those Education courses, 2.67 GPA for courses in the major and passing scores for the PAPA or CORE* exam. *Note that the PDE now accepts SAT and ACT scores – see department staff for details.
URSINUS COLLEGE TEACHER CERTIFICATION APPEAL PROCEDURE

A student who desires to appeal a decision by the College not to recommend him/her for student teaching or for state certification should indicate this intent orally and in writing to the Chair of the Education Department. The Chair will review the steps of the appeal procedure with the student.

Within fifteen (15) days of the appeal, the Chair of the Education Department will convene a review panel of five members: the Chair of the student’s major department, the Education Department Chair, and three other persons representing departments in which this student has had classes.

This review panel will meet with the student and request any additional information deemed appropriate. Within ten (10) days after this meeting, the student will be notified in writing of the decision and the reasons for that decision.

The decision of the panel will be final unless appeal is made in writing to the President. Such written appeal must be received by the President within five (5) days of the date on the written notice of the panel’s decision. The decision of the President shall be final.

MARCH 1996