

**Faculty:**

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A major in Education provides a career program based upon a knowledge of subject content, a knowledge of the teaching and learning processes, and a background in the liberal arts. The program integrates bodies of knowledge with the art of teaching. Students who major in Education will be prepared to teach at the secondary school level in the following subjects: Agriculture, Biology, Chemistry, English, General Science, Mathematics and Business Education.

A program sequence of courses for each content area and certification is prescribed. The program sequence of courses strives for thorough knowledge of subject area, classroom management skills, communication skills and the development of rational analysis and critical judgment as it applies to education. A Student Teacher Handbook is available and specifically defines requirements for each content area and certification, provides program sequences for each subject area and outlines protocols and responsibilities for the Education major including information regarding Praxis examinations. Recent changes in the testing program will require sophomore students to begin the examinations. A student teaching application must be completed sometime in the junior year.

The Education curriculum is a blend of professional studies, teaching competencies and the subject area concentration. A student may enter the Education program as a major in education or as a major in an academic discipline seeking teacher certification.

The total number of credits required for graduation with a degree in Education is 128 – 136, which includes 12 credits earned for successful completion of Student Teaching and Professional Seminar.

The admission requirements are:

- Three credits of college-level English Literature; three credits of college-level English Composition; and six credits of college-level Mathematics.
- A GPA of 3.0 or higher by the completion of forty-eight credit hours. The 3.0 GPA must be maintained through graduation in order for Delaware Valley College to recommend the individual for PA certification.
- All transfer students must enter with a 3.0 GPA in order to be admitted to the Education Program. A 3.0 GPA must be maintained in order to receive recommendation for certification.
- All students will be reviewed after they complete forty-eight credit hours. If the GPA falls below 3.0 during the 2004-05 academic year, or anytime thereafter, the Education Department will place the student on probation until such time as the GPA is raised to acceptable levels.
- Successful completion of the Praxis PPST tests in Reading (10710), Writing (20720), and Mathematics (10730).

The program completers for the 1999-2000 academic year have achieved a passing rate of 100% for the PPST tests and their content major testing. Students in the 2000-2001 academic year achieved an 87% pass rate of the Principles of Teaching and Learning 7-12 test. Students in the aggregate content areas received a 70% pass rate while in the career/technical content areas a 100% pass rate was achieved. Program completers for 2001-2002 were less than ten and not counted. During the 2002-2003 academic year, the latest year tabulated, there were fewer than ten students in the content areas and not scored. The pass rate for PPST tests was 93%. Students will not be allowed to progress in the professional sequence of the program until the testing and grade standards are met. Once students are on probation, they will be re-examined with the next class the following spring. This may mean that the student will have to repeat courses and stay longer than eight semesters.

## **Recommended Course Sequence**

### ***Freshman Year***

#### ***First Semester or Second Semester***

| <u>Course No.</u> | <u>Course Title</u> | <u>Credits</u> | <u>Hours</u> |
|-------------------|---------------------|----------------|--------------|
| ED 1010           | American Education  | 3              | (3-0)        |

### ***Sophomore Year***

#### ***First Semester***

| <u>Course No.</u> | <u>Course Title</u>    | <u>Credits</u> | <u>Hours</u> |
|-------------------|------------------------|----------------|--------------|
| ED 2230           | Educational Psychology | 3              | (3-0)        |

#### ***Second Semester***

|         |                             |   |       |
|---------|-----------------------------|---|-------|
| ED 2210 | Reading in Secondary School | 3 | (3-0) |
| ED 2040 | Field Experience            | 1 | (1-0) |

**Junior Year**

**First Semester**

| Course No. | Course Title           | Credits | Hours |
|------------|------------------------|---------|-------|
| ED 3120    | Tests and Measurements | 3       | (3-0) |

**Second Semester**

|         |                                     |   |       |
|---------|-------------------------------------|---|-------|
| ED 3230 | Multicultural Education             | 3 | (3-0) |
| ED 3010 | Secondary School Curriculum Methods | 3 | (3-0) |

**Senior Year**

**First Semester**

| Course No. | Course Title               | Credits | Hours |
|------------|----------------------------|---------|-------|
| ED 3011    | Special Methods in Subject | 2       | (2-0) |
| ED 3040    | Field Experience II        | 1       | (1-0) |

**Second Semester**

|         |   |    |        |
|---------|---|----|--------|
| ED 4010 | Student Teaching and Professional Seminar | 12 | (0-12) |
|---------|---|----|--------|

**Teaching Field Specializations**

**Agriculture:**

| <u>Courses required for this certification.</u> |   | <u>Credits</u> |
|---|---|----------------|
| BY 1116   | Biological Science I                              | 3              |
| BY 1217   | Biological Science II                             | 3              |
| CH 1103   | Chemistry I                                       | 4              |
| CH 1203   | Chemistry II                                      | 4              |
| AS 1006   | Introduction to Animal Science                    | 3              |
| AS 2116   | Livestock Evaluation                              | 3              |
| AE 2004   | Soils   | 3              |
| HT 2101   | Botany of Vascular Plants                         | 3              |
| AB 3126   | Agricultural Sales and Marketing                  | 3              |
| BA 3141   | Small Business Management                         | 3              |
| AB 4113   | Farm Management                                   | 3              |
| AE 2013   | Agricultural Machinery                            | 3              |
| AE 2100   | Agricultural Building Practices and Materials     | 3              |
| AE 2201   | Agricultural Engines and Power Applications       | 3              |
|   | Agriculture Concentration (additional coursework) | 15             |

One or More Areas: (Agricultural Mechanics, Agricultural Production, Agricultural Products/Processing, Agricultural Resources, Agricultural Services and Supplies, Horticulture, Ornamental Horticulture and Environmental Design)

Other experiences required:

Employment Program (2 credit hours)  
 FFA Chapter field experience in ED 2040 and ED 3040  
 (Field Experience/Pre-Student Teaching I and II)

**Biology:**

| <u>Courses required for this certification.</u> |  | <u>Credits</u> |
|---|--|----------------|
| BY 1113   | Biology I                                    | 4              |
| BY 1214   | Biology II                                   | 4              |
| CH 1103   | Chemistry I                                  | 4              |
| CH 1203   | Chemistry II                                 | 4              |
| CH 2120   | Organic Chemistry I                          | 4              |
| CH 2220   | Organic Chemistry II                         | 4              |
| CH 2203   | Biochemistry                                 | 4              |
| MP 2119   | Physics I                                    | 4              |
| MP 2219   | Physics II                                   | 4              |
| CH 2006   | Safety in the Laboratory                     | 1              |
| BY 2001   | Botany                                       | 4              |
| BY 2108   | Ecology                                      | 4              |
| BY 2003   | Genetics                                     | 3              |
| BY 3008   | Intro to Earth and Space Science             | 3              |
| BY 2223   | Comparative Anatomy                          | 4              |
| BY 3002   | General Microbiology                         | 4              |
| MP 1204   | Calculus I                                   | 4              |
| MP 3231   | Statistics for Research                      | 3              |
|   | Dual Certification Granted — General Science |                |

**Business, Computers, and Information Technology:**

| <u>Courses required for this certification.</u> |                                    | <u>Credits</u> |
|---|------------------------------------|----------------|
| BA 1005   | Introduction to Business           | 3              |
| BA 2017   | Principles of Marketing            | 3              |
| BA 2123   | Principles of Accounting I         | 3              |
| BA 2161   | Business Law I                     | 3              |
| BA 2224   | Principles of Accounting II        | 3              |
| BA 2261   | Business Law II                    | 3              |
| BA 3016   | Consumer Behavior                  | 3              |
| BA 3023   | E-Commerce                         | 3              |
| BA 3028   | Supervision and Management         | 3              |
| BA 3138   | Intermediate Accounting I          | 3              |
| BA 3239   | Intermediate Accounting II         | 3              |
| BA 4233   | Personal Finance                   | 3              |
| BA 4239   | International Trade                | 3              |
| IT 1031   | Intermediate Computer Applications | 3              |
| IT 2216   | Introductory Programming           | 3              |
| IT 3103   | Information Systems                | 3              |
| IT 4109   | Data Communications                | 3              |
| EN 2226   | Business Communications            | 3              |
| IT 3202   | Office Automation                  | 3              |

Other experiences required:

Employment Program (2 credit hours)

**Chemistry:**

| <u>Courses required for this certification.</u> | <u>Credits</u> |
|---|----------------|
| CH 2005 Chemistry of Hazardous Materials        | 1              |
| CH 2006 Safety in the Laboratory                | 1              |
| CH 2120 Organic Chemistry I                     | 4              |
| CH 2203 Biochemistry                            | 4              |
| CH 2220 Organic Chemistry II                    | 4              |
| CH 3125 Physical Chemistry I                    | 4              |
| CH 3130 Analytical Chemistry                    | 5              |
| CH 3157 Inorganic Synthesis                     | 2              |
| CH 3224 Physical Chemistry II                   | 4              |
| CH 4126 Advanced Inorganic Chemistry            | 2              |

Other required courses:

|  |   |
|--|---|
| IT 1031 Intermediate Computer Applications | 3 |
| BY 1116 Biological Science I               | 3 |
| BY 1217 Biological Science II              | 3 |
| MP 2119 Physics I                          | 4 |
| MP 2219 Physics II                         | 4 |

Dual Certification Option/General Science:

|   |   |
|---|---|
| BY 2108 Ecology                                 | 4 |
| BY 2003 Genetics                                | 3 |
| BY 3008 Introduction to Earth and Space Science | 3 |

**English:**

| <u>Courses required for this certification.</u> | <u>Credits</u> |
|---|----------------|
| EN 1101 English I                               | 3              |
| EN 1201 English II                              | 3              |
| EN 2005 History of the English Language         | 3              |
| EN 2010 Linguistics                             | 3              |
| EN 2028 Introduction to Literature              | 3              |
| EN 2129 Structure of English                    | 3              |
| EN 2134 Literary Interpretation                 | 3              |
| EN 2135 Literature Before 1660                  | 3              |
| EN 2136 Early American Literature               | 3              |
| EN 2238 American Literature After 1865          | 3              |
| EN 2240 Theory of Writing                       | 3              |
| EN 3008 Journalism                              | 3              |
| LA 3235 Mass Communications                     | 3              |
| EN 3239 Literature of the Renaissance           | 3              |
| EN 4157 Literature of the Enlightenment         | 3              |
| EN 4258 Romantic and Victorian Literature       | 3              |
| EN 4152 Senior Seminar                          | 3              |
| Writing Electives                               | 6              |

**General Science:**

| <u>Courses required for this certification.</u>    | <u>Credits</u> |
|--|----------------|
| BY 1113 Biology I                                  | 3              |
| BY 1214 Biology II                                 | 3              |
| MP 1203 Elementary Functions                       | 3              |
| MP 3231 Statistics for Research                    | 3              |
| CH 1103 Chemistry I                                | 4              |
| CH 1203 Chemistry II                               | 4              |
| CH 2003 Principles of Organic Chemistry            | 4              |
| CH 2203 Biochemistry                               | 4              |
| MP 2119 Physics I                                  | 4              |
| MP 2219 Physics II                                 | 4              |
| BY 2108 Ecology                                    | 4              |
| BY 2003 Genetics                                   | 3              |
| BY 3002 General Microbiology                       | 4              |
| BY 3008 Introduction to Earth and Space Science    | 3              |
| CH 2006 Safety in the Laboratory Science Electives | 1<br>6         |

**Mathematics:**

| <u>Courses required for this certification.</u> | <u>Credits</u> |
|---|----------------|
| MP 1206 Geometry                                | 3              |
| MP 2121 Calculus II                             | 4              |
| MP 2126 Linear Algebra                          | 3              |
| MP 2223 Differential Equations                  | 3              |
| MP 3037 Modern Algebra/Number Theory            | 3              |
| MP 3123 Advanced Calculus                       | 3              |
| MP 2114 Business Statistics I                   | 3              |
| MP 3241 History of Mathematics                  | 3              |
| MP 4115 Math Seminar                            | 1              |
| MP 4132 Symbolic Logic                          | 4              |

Required computer courses:

|  |   |
|--|---|
| IT 1031 Intermediate Computer Applications | 3 |
| IT 2216 Introductory Programming           | 3 |
| IT 3203 Hardware/Software                  | 3 |

Electives:

Math or Computer Electives (select two courses) 6

## Course Descriptions

### ***ED 0015 College Reading***

The needs of the students enrolled in this course will determine the techniques used to build skill in reading. Included among the reading skills to be developed will be recognizing stated and implied ideas, designating major and minor supporting details, identifying types of sequencing and appropriate ordering, restating questions, using contextual clues, and differentiating literal and inferential information. 3 hours Lecture and Discussion—3 institutional credits (Institutional credit will not be applied to either required or elective credits, but will be counted toward determining full-time status.)

### ***ED 0016 Learning Strategies***

This course involves instruction and practice in techniques of time management, notetaking, reading for greater retention, test taking and memory. Students identify and use a range of campus and community resources, including the library. Effective listening techniques and communication skills are presented as well as ways to enhance creativity and stimulate critical thinking. Students explore their own styles of learning and personal value systems as they contribute to becoming successful students. 3 hours Lecture and Discussion—3 institutional credits (Institutional credit will not be applied to either required or elective credits, but will be counted toward determining full-time status.)

### ***ED 0018 CHOICES Seminar***

CHOICES students will continue to integrate skills gained in Learning Strategies and apply them across the curriculum through structured activities. Students will continue to clarify academic career and personal goals as well as develop skills in rational analysis and critical thinking. The seminar will maintain focus on the students' selection of a major and assist in the transition process. This course is limited to CHOICES students. 2 hours Lecture and Discussion – 2 institutional credits (Institutional credit will not be applied to either required or elective credits, but will be counted toward determining full-time status.)

### ***ED 1010 American Education***

An examination of American education with emphasis on history, aims, organization, and control of public schools. Emphasis is placed on the development of American educational ideas and institutions in a multicultural society. Study of the school curriculum/overview. Strongly recommended as the first Education course. 3 hours Lecture and Discussion—3 credits

### ***ED 2040 and ED 3040 (1 each) Field Experience/Pre-Student Teaching I and II***

Practical experiences in the classroom and the school prior to student teaching designed to acquaint the student with classroom problems and school problems and school practices. Direct experience with pupils and educational professionals in the school on a paraprofessional basis through organized activities. Minimum 40 clock hours —20 hours in the sophomore and the junior years respectively. Prerequisites: sophomore standing and American Education. 1-2 hours Lecture, Discussion and Practicum—1 credit

### ***ED 2230/LA 2230 Educational Psychology***

A practical treatment of the theory and practice of psychology as it applies to teaching, learning, student development and the classroom environment. Topics include: growth and development, learning and achievement, motivation, learning disabilities and psychoeducational aspects of adolescents. Strongly recommended as the second Education course. ED 2230 open to Education majors, all others enroll as LA 2230.

3 hours Lecture and Discussion—3 credits

### ***ED 2210 Reading in the Secondary School***

This course examines the reading process with emphasis placed on understandings and skills needed by secondary school students in their subject fields. 3 hrs Lecture & Discussion—3 credits

### ***ED 3010 Secondary School Curriculum: Methods and Materials***

A study of teaching procedures and learning activities in the secondary school; a critical examination of lesson plans. Methodology for creating a learning situation, developing the subject matter and teaching field, use of appropriate methods and techniques, and classroom management. Student will be guided in the analysis of specific content and techniques for teaching that content. "Micro teaching" experience. Prerequisites: American Education, Educational Psychology, and Practicum I. Also, students must have junior status, be formally accepted into the certificate program and have achieved passing scores on Praxis Level I tests.

3 hours Lecture and Discussion—3 credits

### ***ED 3120 Tests and Measurements***

Course is designed to acquaint the student with intelligence and achievement tests and to give a working knowledge of various standard tests and scales available for classroom use. In addition, elementary statistics, construction of teacher-made tests, and performance assessment will be studied. Prerequisite: American Education. Also, students must have junior status, be formally accepted into the certificate program and have achieved passing scores on Praxis Level I tests.

3 hours Lecture and Discussion—3 credits

### ***ED 3230 Multicultural Education and Classroom Diversity***

Students will develop an understanding of our multicultural-pluralistic society and acquire the pedagogical skills and concepts needed to provide optimum learning opportunities for all students in the secondary classroom. Prerequisites: American Education and Educational Psychology. Also, students must have junior status, be formally accepted into the certificate program and have achieved passing scores on Praxis Level I tests.

3 hours Lecture and Discussion—3 credits

***ED 4010 Student Teaching and Professional Seminar***

Student teaching in an approved secondary school under the direct supervision of a cooperating teacher. Seminar and individual conferences are held by supervisors. Prerequisites: senior standing, completion of Education core, subject area courses, and Praxis tests in Content area and Core Battery. 1-2 hours seminar meetings and semester length practicum—12 credits

***Special Methods in Content Area******ED 3011 Teaching Science: Methods and Experiences***

A study of various methodologies and experiences that will be unique to the teaching of science at the secondary level. Prerequisites: American Education and Educational Psychology. 2 hours Lecture, Discussion and Practicum—2 credits

***ED 3012 Teaching Mathematics:  
Methods and Experiences***

A study of various methodologies and experiences that will be unique to the teaching of mathematics at the secondary level. Prerequisites: American Education and Educational Psychology. 2 hours Lecture, Discussion and Practicum—2 credits

***ED 3013 Teaching English: Methods and Experiences***

A study of various methodologies and experiences that will be unique to the teaching of English at the secondary level. Prerequisites: American Education and Educational Psychology. 2 hours Lecture, Discussion and Practicum—2 credits

***ED 3014 Teaching Agriculture:  
Methods and Experiences***

A study of various methodologies and experiences that will be unique to the teaching of agriculture at the secondary level. Prerequisites: American Education and Educational Psychology. 2 hours Lecture, Discussion and Practicum—2 credits

***ED 3015 Teaching Business: Methods and Experiences***

A study of various methodologies and experiences that will be unique to the teaching of business at the secondary level. Prerequisites: American Education and Educational Psychology. 2 hours Lecture, Discussion and Practicum—2 credits