



CHEMISTRY, GRADES 9-12

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| EDUCATOR PREPARATION PROGRAM NAME Avila University | EDUCATOR PREPARATION PROGRAM CODE 511932 |
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INSTRUCTIONS

Please complete Educator Preparation Program (EPP) Name & EPP Code above.

Certification Requirements

- **Course Number** – List the course number(s) for the course(s) or groups of competencies that align with the specific section of the requirements. It is possible to have more than one course or group listed.
- **Course Title** – List the course title(s) for the course(s) or groups of competencies that align with the specific section of the requirements. It is possible to have more than one course or group listed.
- **Semester Hours** – List the number of semester hours for each specific section. It is possible to use decimals (to the nearest tenth) to indicate partial use of a course to meet a requirement. The total number of semester hours must meet or exceed the minimum required number of semester hours.

Email the completed cover sheet, curriculum matrix, and advising/program information to DESE.MoSPETransition@dese.mo.gov on or before the date established in the Transition Plan.

QUESTIONS: Contact Educator Preparation, 573-751-1668 or DESE.MoSPETransition@dese.mo.gov

A. Professional Requirements (Minimum of 26 semester hours)

1. Content Planning and Delivery

| | Course Number | Course Title | Semester Hours |
|--|--------------------------|---|----------------|
| a. Curriculum and Instructional Planning | ED 185/585 ED 315/515 | Practicum General Methods & Differentiated Learning | 1.0 1.0 |
| b. Instructional Strategies and Techniques in Content Area Specialty | ED 455/555 | Special Methods | 1.0 |
| c. Assessment, Student Data, and Data-Based Decision-Making | ED 315/515 | General Methods & Differentiated Learning | 1.0 |
| | ED 320/520 | Technology in Education | 1.0 |
| | ED 495/595 or ED 596 | Final Clinical Experience or Internship | 1.0 |
| d. Strategies for Content Literacy | ED 375/575 | Reading Strategies & Interventions in the Content Area I | - |
| | ED 376/576 | Reading Strategies & Interventions in the Content Area II | - |
| e. Critical Thinking and Problem Solving | ED 185/585 | Practicum | - |
| | ED 320/520 | Technology in Education | 1.0 |
| | ED 495/595 or ED 596 | Final Clinical Experience or Internship | 1.0 |
| f. English Language Learning | ED 287/587 | Multicultural Foundations of Education | 1.0 |

2. Individual Student Needs

| | Course Number | Course Title | Semester Hours |
|--|---------------|---|----------------|
| a. Psychological Development of the Child and Adolescent | ED 229/529 | Developmental & Educational Psychology | 1.5 |
| b. Psychology/Education of the Exceptional Child | ED 235/535 | Psychology of the Exceptional Child | 2.0 |
| c. Differentiated Learning | ED 315/515 | General Methods & Differentiated Learning | 1.0 |
| | ED 320/520 | Technology in Education | 1.0 |
| | ED 455/555 | Special Methods | 1.0 |
| d. Classroom Management | ED 419/519 | Managing the Learning Environment | 2.0 |
| e. Cultural Diversity | ED 287/587 | Multicultural Foundations of Education | 2.0 |
| f. Educational Psychology | ED 229/529 | Developmental Educational Psychology | 1.5 |

3. Schools and the Teaching Profession

| | Course Number | Course Title | Semester Hours |
|--------------------------------------|---------------|-------------------------------------|----------------|
| a. Consultation and Collaboration | ED 185/585 | Practicum | 1.0 |
| | ED 494/594 | Final Clinical Experience Seminar | 2.0 |
| b. Legal/Ethical Aspects of Teaching | ED 235/535 | Psychology of the Exceptional Child | 1.0 |
| | ED 419/519 | Managing the Learning Environment | 1.0 |

| 4. Secondary Literacy (Minimum of 6 semester hours) | | | |
|---|--|---|---------------------------------------|
| | Course Number | Course Title | Semester Hours |
| a. Reading and Writing in the Content Area | ED 375/575 | Reading Strategies & Interventions in the Content Area I | 3.0 |
| b. Instructional Interventions for Students with Reading Deficits | ED 376/576 | Reading Strategies & Interventions in the Content Area II | 3.0 |
| Professional Requirements - Total Semester Hours | | | 32.0 |
| B. Field and Clinical Experiences (Minimum of 10 semester hours) | | | |
| | Course Number | Course Title | Semester Hours |
| 1. Early Field Experiences (Minimum of 1 semester hour with a minimum of 30 clock hours) | ED 185/585 | Practicum | 1.0 |
| 2. Mid-Level Field Experiences (Minimum of 1 semester hour with a minimum of 45 clock hours) | ED 455/555 | Special Methods in the Content Area | 1.0 |
| 3. Culminating Clinical Experiences (Minimum of 8 semester hours with a minimum of 12 weeks in 1 placement) | ED 495/595 <i>or</i> ED 596 | Final Clinical Experience <i>or</i> Internship | 8.0 |
| Field and Clinical Experiences - Total Semester Hours | | | 10.0 |
| C. Chemistry Content Knowledge Area (Minimum of 35 semester hours) | | | |
| | Course Number | Course Title | Semester Hours |
| 1. History/Philosophy of Science and Technology (Minimum of 3 semester hours) | NS 380 <i>OR</i> IS 369 | Special Topics: History/Philosophy of Science & Technology <i>OR</i> Reasoning, History & Social Implications of Science | 3.0 |
| 2. Chemistry Coursework – Minimum of 20 semester hours which must include | | | |
| a. Inorganic Chemistry | CH 135 | General Chemistry I | 4.0 |
| b. Analytical Chemistry | CH 321 | Analytical Chemistry | 4.0 |
| c. Organic Chemistry | CH 216 | Organic Chemistry | 5.0 |
| d. Physical Chemistry | CH 350 | Physical Chemistry for the Biological Sciences | 3.0 |
| e. Biochemistry | CH 342 | Biochemistry I | 3.0 |
| f. Chemistry Electives | CH 137 | General Chemistry II | 4.0 |
| 3. Additional Science Coursework – Minimum of 12 semester hours which must include | | | |
| a. Biology | BI 111 BI 112 | General Biology: Cells and Genes <i>OR</i> General Biology: Ecology & Evolution | 4.0 |
| b. Physics | PH 117 <i>OR</i> PH 231 | Physics Concepts <i>OR</i> General Physics I | 4.0 <i>or</i> 5.0 |
| c. Earth Science | NS 221 | Physical Geology | 4.0 |
| d. Environmental Science | BI 115 <i>OR</i> BI 360 <i>OR</i> BI 363 | Humans & the Environment Ecology Conservation Biology | 4.0 <i>or</i> 3.0 <i>or</i> 3.0 |
| Content Knowledge Area - Total Semester Hours | | | 41-43 |

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