



CHEMISTRY, GRADES 9-12 (MAT)

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| EDUCATOR PREPARATION PROGRAM NAME MISSOURI STATE UNIVERSITY | EDUCATOR PREPARATION PROGRAM CODE 119119 |
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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 | | | |
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| | Course Number | Course Title | Semester Hours |
| a. Curriculum and Instructional Planning | SFR797 | Advanced Studies in Teaching and Learning | 2(9) |
| b. Instructional Strategies and Techniques in Content Area Specialty | SFR797 | Advanced Studies in Teaching and Learning | 2(9) |
| c. Assessment, Student Data, and Data-Based Decision-Making | SFR797 | Advanced Studies in Teaching and Learning | 2(9) |
| d. Strategies for Content Literacy | RDG710 | Content Area Literacy | .25(3) |
| e. Critical Thinking and Problem Solving | SFR797 | Advanced Studies in Teaching and Learning | 1(9) |
| f. English Language Learning | RDG710 | Content Area Literacy | 0(3) |
| | RDG640 or | Analysis and Correction of Difficulties in Literacy | .5(3) |
| | RDG574/624 | Analysis and Correction of Difficulties in Adolescent Literacy | .5(3) |
| 2. Individual Student Needs | | | |
| | Course Number | Course Title | Semester Hours |
| a. Psychological Development of the Child and Adolescent | PSY710 | Psychology of Education | 1.25(3) |
| b. Psychology/Education of the Exceptional Child | SPE715 | Foundations in Special Education | 3 |
| c. Differentiated Learning | SFR797 | Advanced Studies in Teaching and Learning | 1(9) |
| | RDG710 | Content Area Literacy | .25(3) |
| | RDG640 or RDG574/624 | Analysis and Correction of Difficulties in Literacy Analysis and Correction of Difficulties in Adolescent Literacy | 0(3) 0(3) |
| d. Classroom Management | SFR797 | Advanced Studies in Teaching and Learning | .25(9) |
| | PSY710 | Psychology of Education | .25(3) |
| | SEC783 | Internship in Teaching I | 1(3) 1(3) |
| e. Cultural Diversity | RDG560 or RDG660 | Diversity Issues in Literacy and Content Area Instruction | 2(3) |
| | or RDG665 | Cultural Diversity in Literacy and Instruction: Classrooms and Community | 2(3) |
| | SFR797 | Advanced Studies in Teaching and Learning | .25(9) |
| f. Educational Psychology | PSY710 | Psychology of Education | 1.5(3) |

| 3. Schools and the Teaching Profession | | | |
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| | Course Number | Course Title | Semester Hours |
| a. Consultation and Collaboration | SFR797 RDG710 SEC784 | Advanced Studies in Teaching and Learning Content Area Literacy Internship in Teaching II | .25(9) 0(3) 1(10) 1(10) |
| b. Legal/Ethical Aspects of Teaching | SFR797 | Advanced Studies in Teaching and Learning | .25(9) |
| 4. Secondary Literacy (Minimum of six semester hours) | | | |
| | Course Number | Course Title | Semester Hours |
| a. Reading and Writing in the Content Area | RDG710 RDG560 or RDG660 or RDG665 | Content Area Literacy Diversity Issues in Literacy and Content Area Instruction Cultural Diversity in Literacy and Instruction: Classrooms and Community | 2.5(3) .5(3) .5(3) |
| b. Instructional Interventions for Students with Reading Deficits | RDG640 or RDG574/624 RDG560 or RDG660 or RDG665 | Analysis and Correction of Difficulties in Literacy Analysis and Correction of Difficulties in Adolescent Literacy Diversity Issues in Literacy and Content Area Instruction Cultural Diversity in Literacy and Instruction: Classrooms and Community | 2.5(3) 2.5(3) .5(3) .5(3) |
| Professional Requirements - Total Semester Hours | | | 26 |
| B. Field and Clinical Experiences (Minimum of ten semester hours) | | | |
| | Course Number | Course Title | Semester Hours |
| a. Early Field Experiences (Minimum of one semester hour with a minimum of 30 clock hours) | SEC783 | Internship in Teaching I | 1(3) 1(3) |
| b. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours) | SEC783 | Internship in Teaching I | 1(3) 1(3) |
| c. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement) | SEC784 | Internship in Teaching II | 9(10) 9(10) |
| Field and Clinical Experiences - Total Semester Hours | | | 11 |

| C. Chemistry Content Knowledge Area (Minimum of 35 semester hours) | | | |
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| | Course Number | Course Title | Semester Hours |
| 1. History/Philosophy of Science and Technology (Minimum of three semester hours) | SCI505 | Intellectual Foundations of Science and Technology | 3 |
| 2. Chemistry Coursework – Minimum of 20 semester hours which must include: | | | |
| a. Inorganic Chemistry | CHM375 | Inorganic Chemistry | 3 |
| b. Analytical Chemistry | CHM302 | Introduction to Analytical Chemistry | 5 |
| c. Organic Chemistry | CHM201/202 or CHM342 and CHM343 or CHM342 and CHM344 | Essentials of Organic Chemistry/Lab Organic Chemistry I and Organic Chemistry II Organic Chemistry I and Organic Chemistry II | 5 5 5 3 |
| d. Physical Chemistry | CHM505 | Fundamentals of Physical Chemistry | 4 |
| e. Biochemistry | CHM352 | Introduction to Biochemistry | 3 |
| f. Chemistry Electives | CHM160/161 CHM170/171 CHM435 | General Chemistry I/Lab General Chemistry II/Lab Investigations in Chemistry for Teachers | 5 4 1 |
| 3. Additional Science Coursework – Minimum of 12 semester hours which must include: | | | |
| a. Biology | BIO121 | General Biology I | 4 |
| b. Physics | PHY123 and PHY124 | Introduction to Physics I Introduction to Physics II | 4 4 |
| c. Earth Science | GLG110 GLG171 | Choose one (1) Principles of Geology Environmental Geology | 4 3 |
| d. Environmental Science | CHM460 | Environmental Chemistry : Water and Land | 3 |
| The Candidate must hold a degree in the content OR pass the designated MoCA OR complete Content Knowledge Area- Total Semester Hours | | | MAT=51-57 |

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