## MATHEMATICS, BSED, GRADES 9-12

## EDUCATOR PREPARATION PROGRAM NAME <br> MISSOURI STATE UNIVERSITY <br> EDUCATOR PREPARATION PROGRAM CODE <br> 119119

## INSTRUCTIONS

Please complete Educator Preparation Program (EPP) Name \& EPP Code above. The EPP Code may be located at https://dese.mo.gov/sites/default/files/EPP-Code-Name.pdf

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 Gale Hairston, 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 | SEC302 | General Methods of Instruction in the Middle and Secondary Schools | 1(3) |
| b. Instructional Strategies and Techniques in Content Area Specialty | MTH409 MTH411 | Teaching and Learning of Mathematics I Teaching and Learning of Mathematics III | $\begin{gathered} 2(3) \\ 3 \end{gathered}$ |
| c. $\begin{aligned} & \text { Assessment, Student Data, and Data-Based } \\ & \text { Decision-Making }\end{aligned}$ | $\begin{aligned} & \hline \text { MTH409 } \\ & \text { MTH410 } \\ & \hline \end{aligned}$ | Teaching and Learning of Mathematics I Teaching and Learning of Mathematics II | $\begin{aligned} & \hline 1(3) \\ & 1(3) \\ & \hline \end{aligned}$ |
| d. Strategies for Content Literacy | $\begin{aligned} & \text { RDG474 or } \\ & \text { RDG710 } \end{aligned}$ | Reading and Writing in the Content Fields, Content Area Literacy | 0(3) |
| e. Critical Thinking and Problem Solving | $\begin{aligned} & \hline \text { SEC302 } \\ & \text { EDC350 } \\ & \hline \end{aligned}$ | General Methods of Instruction in the Middle and Secondary Schools School and Society | $\begin{array}{r} \hline .5(3) \\ 1.5(3) \\ \hline \end{array}$ |
| f. English Language Learning | RDG474 or <br> RDG710 <br> RDG574 or <br> RDG640 | Reading and Writing in the Content Fields, Content Area Literacy Analysis and Correction of Difficulties in Literacy | $\begin{aligned} & 0(3) \\ & 0(3) \end{aligned}$ |
| 2. Individual Student Needs |  |  |  |
|  | Course Number | Course Title | Semester Hours |
| a. Psychological Development of the Child and Adolescent | PSY360 or PSY710 | Educational Psychology, Psychology of Education | 1.5(3) |
| b. Psychology/Education of the Exceptional | SPE340 or SPE715 | Educational Alternative for Exceptional Students, Foundations in Special Education | 2-3 |
| c. Differentiated Learning | SEC302 RDG474 or RDG710 RDG574 or RDG640 | General Methods of Instruction in the Middle and Secondary Schools Reading and Writing in the Content Fields, Content Area Literacy <br> Analysis and Correction of Difficulties in Literacy | $\begin{aligned} & .5(3) \\ & 0(3) \\ & 0(3) \end{aligned}$ |
| d. Classroom Management | MTH410 | Teaching and Learning of Mathematics I | 1(3) |
| e. Cultural Diversity | EDC345 | Introduction to Multicultural Education and Diversity | 3 |
| f. Educational Psychology | PSY360 or PSY710 | Educational Psychology, Psychology of Education | 1.5(3) |
| 3. Schools and the Teaching Profession |  |  |  |
|  | Course Number | Course Title | Semester Hours |
| a. Consultation and Collaboration | $\begin{aligned} & \text { RDG474 or } \\ & \text { RDG710 } \end{aligned}$ | Reading and Writing in the Content Fields, Content Area Literacy | 0(3) |
| b. Legal/Ethical Aspects of Teaching | $\begin{aligned} & \text { EDC350 } \\ & \text { MTH493 } \\ & \text { MTH494 } \end{aligned}$ | School and Society <br> Supervised Teaching (Secondary <br> Mathematics) <br> Supervised Teaching (Secondary <br> Mathematics) | $\begin{gathered} 1.5(3) \\ 0(6) \\ 0(6) \end{gathered}$ |



 800-735-2966 email civilrights@dese.mo.gov.

| 4. Secondary Literacy (Minimum of six semester hours) |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Course Number | Course Title | Semester Hours |
| a. Reading and Writing in the Content Area | RDG474 or RDG710 | Reading and Writing in the Content Fields, Content Area Literacy | 3 |
| b. Instructional Interventions for Students with Reading Deficits | RDG574 or RDG640 | Analysis and Correction of Difficulties in Literacy | 3 |
| Professional Requirements - Total Semester Hours |  |  | 27-28 |
| B. Field and Clinical Experiences (Minimum of ten semester hours) |  |  |  |
|  | Course Number | Course Title | Semester Hours |
| 1. Early Field Experiences (Minimum of one semester hour with a minimum of 30 clock hours) | SEC302 | General Methods of Instruction in the Middle and Secondary Schools | 1(3) |
| 2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours) | MTH410 | Teaching and Learning of Mathematics II | 1(3) |
| 3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement) | MTH493 <br> MTH494 | Supervised Teaching (Secondary Mathematics) <br> Supervised Teaching (Secondary Mathematics) | 6 6 |
|  | Field and Clinical Experiences - Total Semester Hours |  | 14 |
| C. Mathematics Content Knowledge Area (Minimum of 36 semester hours) |  |  |  |
|  | Course Number | Course Title | Semester Hours |
| 1. Calculus and Analytical Geometry (nine semester hours) | $\begin{aligned} & \hline \text { MTH261 } \\ & \text { MTH280 } \end{aligned}$ | Analytic Geometry and Calculus I Analytic Geometry and Calculus II | $\begin{aligned} & 5 \\ & 5 \\ & \hline \end{aligned}$ |
| 2. Algebraic Structures (three semester hours) | MTH315 | Algebraic Structures | 3 |
| 3. Geometry (three semester hours) | MTH460 | College Geometry | 3 |
| 4. Computer Science (three semester hours) | Choose one CSC121 CSC125 CSC130 | Choose one (1) Introduction to Basic Programming Introduction to C++ Programming The World of Computer Science | $\begin{aligned} & 3 \\ & 4 \\ & 3 \\ & \hline \end{aligned}$ |
| 5. Electives from the above coursework (six semester hours) | Choose two MTH503 <br> MTH567 <br> MTH510 <br> *MTH532 | Choose two (2) <br> Advanced Calculus I <br> Introduction to Non-Euclidean Geometry <br> High School Mathematics from an Advanced <br> Perspective <br> Introduction to Abstract Algebra | $\begin{aligned} & 3 \\ & 3 \\ & 3 \\ & 3 \\ & \hline \end{aligned}$ |
| 6. Additional Mathematics coursework - Minimum of 12 semester hours to include at least three of the following areas of Mathematics: This is the section where the following areas are "suggested." |  |  |  |
| a. History of Mathematics (three semester hours) | MTH575 | History of Mathematics | 3 |
| b. Structure of the Real Number System (three semester hours) | *MTH532 | Introduction to Abstract Algebra | 3 |
| c. Number Theory (three semester hours) | MTH536 | Theory of Numbers | 3 |
| d. Completion of Calculus Sequence (three semester hours) | MTH302 | Multivariate Calculus | 3 |
| e. Probability and Statistics (three semester hours) | Choose one <br> MTH345 <br> MTH540 <br> MTH340 <br> MTH343 | Choose one (1) <br> Statistics for Science and Engineers <br> Statistical Theory I <br> Statistical Methods <br> Foundations of Probability and Statistics for Teachers | $\begin{aligned} & 3 \\ & 3 \\ & 3 \\ & 3 \end{aligned}$ |
| f. Computer Science (three semester hours) | n/a |  |  |
| g. Linear Algebra (three semester hours) | MTH333 | Linear Algebra I | 3 |
| *MTH 532 cannot be counted in both C.5. and C.6.b. | Content Knowledge Area-Total Semester Hours |  | BSED=40-41 |

