



PHYSICS, GRADES 9-12

EDUCATOR PREPARATION PROGRAM NAME CENTRAL METHODIST UNIVERSITY	EDUCATOR PREPARATION PROGRAM CODE 630984
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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	ED370SC ED453	Teaching Methods in the Content Area Education as a Profession	0 2
b. Instructional Strategies and Techniques in Content Area Specialty	ED370SC	Teaching Methods in the Content Area	3
c. Assessment, Student Data, and Data-Based Decision-Making	ED370SC ED453	Teaching Methods in the Content Area Education as a Profession	0 0
d. Strategies for Content Literacy	ED471	Reading & Writing in the Content Area	0
e. Critical Thinking and Problem Solving	ED453	Education as a Profession	0
f. English Language Learning	ED101 ED471	Foundations of Education, Diversity, and ELL Reading & Writing in the Content Area	2 0

2. Individual Student Needs

	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	PY223	Developmental Psychology	3
b. Psychology/Education of the Exceptional Child	PY342	Psychology of the Exceptional Child	2
c. Differentiated Learning	ED370SC PY342	Teaching Methods in the Content Area Psychology of the Exceptional Child	0 0
d. Classroom Management	ED313 ED370SC	Classroom & Behavior Management Teaching Methods in the Content Area	3 0
e. Cultural Diversity	ED101 ED453	Foundations of Education, Diversity, and ELL Education as a Profession	0 0
f. Educational Psychology	PY210	Educational Psychology	3

3. Schools and the Teaching Profession

	Course Number	Course Title	Semester Hours
a. Consultation and Collaboration	ED453	Education as a Profession	0
b. Legal/Ethical Aspects of Teaching	ED101 ED453 ED454	Foundations of Education, Diversity, and ELL Education as a Profession Student Teaching Seminar	0 0 2

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4. Secondary Literacy (Minimum of six semester hours)			
	Course Number	Course Title	Semester Hours
a. Reading and Writing in the Content Area	ED471	Reading & Writing in the Content Area	3
b. Instructional Interventions for Students with Reading Deficits	ED470	Instructional Interventions for Students with Reading Deficits	3
Professional Requirements - Total Semester Hours			26
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)	ED102 (18 hours)	Field Experience I	1
	ED105 (12 hours)	Field Experience II	0
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	PY343 (18 hours)	Psychology of the Exceptional Child (Prac)	1
	ED370SC (15 hrs)	Teaching Methods in the Content Area	0
	ED471 (12 hours)	Reading & Writing in the Content Area	0
3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement)	ED462 (16 week placement)	Supervised Student Teaching	10
Field and Clinical Experiences - Total Semester Hours			12
C. Physics Content Knowledge Area (Minimum of 35 semester hours)			
	Course Number	Course Title	Semester Hours
1. History/Philosophy of Science and Technology (three semester hours)	SC382	History and Philosophy of Science	3
2. Physics Coursework – Minimum of 20 semester hours which must include:			
a. Mechanics	PH205 PH206	Calculus Physics I (w/ a lab) Calculus Physics II (w/ a lab)	5 5
b. Electricity and Magnetism	PH205 PH206	Calculus Physics I (w/ a lab) Calculus Physics II (w/ a lab)	0 0
c. Heat, Sound, and Light	PH205 PH206	Calculus Physics I (w/ a lab) Calculus Physics II (w/ a lab)	0 0
d. Atomic or Modern Physics	PH307	Modern Physics	3
e. Physics Electives	PH322	Scientific Instrumentation	4
	PH354 OR PH355	Thermodynamics and Physical Chemistry (w/ a lab) OR Quantum Mechanics and Solid State Physics (w/ a lab)	4
3. Additional Science Coursework – Minimum of 12 semester hours which must include:			
a. Chemistry	CH111 OR CH114	General Chemistry (w/ a lab) General Chemistry with Qualitative Analysis (w/ a lab)	4
b. Biology	One of the following: BI101 BI106 BI107 BI108	General Biology (w/ a lab) Human Biology (w/ a lab) Human Anatomy (w/ a lab) Biodiversity (w/ a lab)	4
c. Earth Science	SC103 OR GL105	Meteorology (3 hours) Exploring Geology (4 hours)	3-4
d. Environmental Science	One of the following: BI105 BI301 BI311	Intro to Environmental Sci (w/ lab) (4 hours) Ecology (w/ a lab) (4 hours) Conservation Biology and Natural Resource Management (3 hours)	3-4
Content Knowledge Area - Total Semester Hours			38-40