



PHYSICS, GRADES 9-12

EDUCATOR PREPARATION PROGRAM NAME WILLIAM JEWELL COLLEGE	EDUCATOR PREPARATION PROGRAM CODE 062273
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***Courses marked with an asterisk address part of the competency, but the primary focus of the course is in another competency. Therefore we list the course in multiple competencies but credit is only denoted in one to three focus areas.**

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	EDU 220 or EDU 216 <i>(transition)</i> EDU 275 EDU 501	- High Leverage Teaching Strategies (4 credit course) OR - Psychology of Development, Teaching & Learning (4 credit course) <i>last offered 14-15</i> AND - Instructional Design & Assessment (4 credit course) - Differentiated Instruction (4 credit course)	1.00 2.00 *
b. Instructional Strategies and Techniques in Content Area Specialty	EDU 220 or EDU 216 <i>(transition)</i> EDU 280	- High Leverage Teaching Strategies (4 credit course) OR - Psychology of Development, Teaching & Learning (4 credit course) <i>last offered 14-15</i> AND - Disciplinary Literacy & Methods of Instruction (5 credit course)	1.00 1.00
c. Assessment, Student Data, and Data-Based Decision-Making	EDU 275 EDU 501	- Instructional Design & Assessment (4 credit course) - Differentiated Instruction (4 credit course)	2.00 *
d. Strategies for Content Literacy	EDU 280 EDU 308	- Disciplinary Literacy & Methods of Instruction (5 credit course) - Literacy Interventions in the Secondary Classroom (4 credit course)	1.00 1.00

3. Schools and the Teaching Profession			
	Course Number	Course Title	Semester Hours
a. Consultation and Collaboration	EDU 401	- Reflective Student Teaching Seminar (4 credit course)	2.00
b. Legal/Ethical Aspects of Teaching	EDU 401	- Reflective Student Teaching Seminar (4 credit course)	2.00
4. Secondary Literacy (Minimum of six semester hours)			
	Course Number	Course Title	Semester Hours
a. Reading and Writing in the Content Area	EDU 280	- Disciplinary Literacy & Methods of Instruction (5 credit course)	3.00
b. Instructional Interventions for Students with Reading Deficits	EDU 308	- Literacy Interventions in the Secondary Classroom (4 credit course)	3.00
Professional Requirements - Total Semester Hours			31.00-33.00
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)	EDU 212	- Clinical Fieldwork I	1.00
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	EDU 213	- Clinical Fieldwork II	1.00
	EDU 214	- Clinical Fieldwork III	1.00
	EDU 311	- Clinical Fieldwork IV	1.00
	EDU 315	- Clinical Fieldwork V	1.00
3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement)	EDU 420	- Student Teaching in Secondary School I &	6.00
	EDU 421	- Student Teaching in Secondary School II	6.00
Field and Clinical Experiences -Total Semester Hours			17.00
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)	CTI 203 or PHI 357	- History & Philosophy of Science or - Contemporary Philosophy of Science	4.00
2. Physics Coursework – Minimum of 20 semester hours which must include:			
a. Mechanics	PHY 111 or PHY 213	- College Physics I & Lab - General Physics I & Lab	2.50
b. Electricity and Magnetism	PHY 112 or PHY 214	- College Physics II & Lab - General Physics II & Lab	2.50
c. Heat, Sound, and Light	PHY 111 or PHY 213	- College Physics I & Lab - General Physics I & Lab	2.50
	AND PHY 112 or PHY 214	- College Physics II & Lab - General Physics II & Lab	2.50
d. Atomic or Modern Physics	PHY 316	- Modern Physics	4.00
e. Physics Electives		Select from courses below to total 6+ credits	6.00
	PHY 215 PHY 306 PHY 321 PHY 322 PHY 351 PHY 352 PHY 415 PHY 443 PHY 444 PHY 490	- Introduction to the Physics Major (1 cr) - Optics & Lab (4 cr) - Intermediate Lab (1 cr) - Electronics & Lab (4 cr) - Research Experience (1 cr) - Research Experience (1 cr) - Electricity & Magnetism (4 cr) - Classical Mechanics (4 cr) - Quantum Mechanics (4 cr) - Physics of Sustainability (4cr)	
3. Additional Science Coursework – Minimum of 12 semester hours which must include:			
a. Chemistry	CHE 113 or CHE 121	- Fundamentals of General Organic & Biological Chemistry or - General Chemistry I	5.00
b. Biology	BIO 133	- Evolution and Ecology & Lab	2.00

c. Earth Science	CTI 258	- Astronomy & Cosmology (4 credit course)	2.50
d. Environmental Science	BIO 133	- Evolution and Ecology & Lab	3.00
Content Knowledge Area - Total Semester Hours			37.50

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