

**University of Missouri – St. Louis, College of Education**  
**B.S. Ed. in Secondary Education – Emphasis in Physics**  
**General Education and Professional Education Requirements**

NAME: \_\_\_\_\_ STUDENT NUMBER: \_\_\_\_\_

**General Education Requirements (42 credits)**

<b>First Year Writing (3)</b>  _____ ENG 1100 (3) <b>OR</b> HIST 1111 (4)	<b>Communication Proficiency (3)</b>  _____ EDUC 2222 <b>OR</b> COMM 1040	<b>Mathematics Proficiency (3)</b>  _____ MATH 1030 <b>OR</b> MATH 1045	<b>Information Literacy (3)</b>  _____ ED TECH 2230	<b>U.S. History and Government (3)</b>  _____ HIST 1001 <b>OR</b> HIST 1002
<b>Humanities (9)</b>  _____ _____ _____ Humanities Elective Humanities Elective Humanities Elective		<b>Social Sciences (9)</b>  _____ _____ _____ ED PSY 2212 Social Science Social Science		<b>Math and Sciences (9)</b>  9 credit hours covered in Content Area Requirements

**University Requirement – Junior Level Writing (3 credits)**

_____ <b>ENGL 3100</b> Junior-Level Writing (*ENG 1100) <b>OR ENGL 3160</b> Writing in the Sciences (*ENG 1100) ( <i>recommended</i> )
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**Professional Education Requirements (39 credits)**

<b>Introduction to Education:</b>	<b>Credits:</b>
EDUC 1000 Building Community, Culture & Learning in Education <i>OR</i> alternative freshman experience course	1 _____
EDUC 1001 Early Clinical Experience: Community Agency <i>OR</i> SEC ED/BIOL/CHEM/PHYSCS/MATH 2010 Intro to STEM Ed (Step 1)	1 _____
<b>Level I – Exploring Education as a Profession:</b>	
TCH ED 2000 Becoming a Professional Educator	1 _____
TCH ED 2001 Early Clinical Experience: Schools <i>OR</i> SEC ED/BIOL/CHEM/PHYSCS/MATH 2011 Intro to STEM Ed (Step 2)	1 _____
TCH ED 2209 Foundations of Teaching in American Schools	2 _____
<b>Apply to Teacher Education Program (TEP)</b> at <a href="http://coe.umsl.edu/portal/">http://coe.umsl.edu/portal/</a> and complete the following:	
_____ 2.75 Cumulative GPA	_____ Missouri Educator Profile (MEP)
_____ 3.0 Content Area GPA	_____ TB Test and Background Check
_____ 3.0 Professional Education GPA	_____ Pass MoGEA (MO General Education Assessment)
	_____ Intro Ed Courses
	_____ Level 1 Courses
	_____ COE Gen Eds.
<b>Level II – Analyzing the Nature and Process of Education:</b>	
ED PSY 3312 Psychology of Learning, Instruction, and Assessment	3 _____
SPEC ED 3318 Inclusive Classrooms	3 _____
TCH ED 3001 Mid-Level Clinical Experience: Diverse Learners	1 _____
TCH ED 3310 Introduction to Methods of Teaching	2 _____
TCH ED 4391 Literacy for Adolescent Learners in the Content Areas	3 _____
SEC ED 4880 Writing for Teachers <i>OR</i> ENGL 3160 ( <i>above</i> )	3 _____
<b>Level III – Synthesizing Theory and Practice in Education:</b>	
SEC ED 4985 Curriculum and Methods of Teaching Life Sciences	3 _____
SEC ED 4989 Practicum I: Site-Based Experience	3 _____
SEC ED 4990 Practicum II: Site-Based Experience	12 _____
<b>TOTAL Professional Education Credit Hours</b>	<b>39</b>

**Content Coursework: Emphasis in Physics 9-12 or Unified Science-Physics Option, (\*) = prereq**

<b>1) Physics Core Courses:</b>	<b>Credits (20):</b>
<b>PHYSCS 2111</b> Physics: Mechanics and Heat (*MATH 1900, may be taken concurrently)	5 _____
<b>PHYSCS 2112</b> Physics: Electricity, Magnetism & Optics (*PHYSCS 2111 and MATH 2000)	5 _____
<b>PHYSCS 3200</b> Mathematical Methods of Theoretical Physics (*PHYSCS 2112 and MATH 2000)	3 _____
<b>PHYSCS 3231</b> Introduction to Modern Physics	3 _____
<b>PHYSCS 4347</b> Introduction to Biophysics (*PHYSCS 3231, BIOL 1821, and BIOL 1831, or consent)	4 _____
<b>2) Associated Science and Math Area:</b>	<b>Credits (39-42)</b>
<b>CHEM 1111</b> Introductory Chemistry I (*MATH 1030 & 1035)	5 _____
<b>BIOL 1821</b> Introductory Biology I: Organisms and the Environment ( <i>Required for Unified Option</i> ) <b>OR BIOL 1202</b> Environmental Biology <b>OR CHEM1011</b> Environmental Chemistry	3-5 _____
<b>BIOL 1831</b> Introductory Biology II: From Molecules to Organisms (*MATH 1030)	5 _____
<b>GEOL 1001 OR 1001A</b> General Geology (Lab Optional) ( <i>Required for Unified Option</i> ) <b>OR ASTRON 1011</b> Planets and Life in the Universe	3-4 _____
<b>PHIL 3380</b> Philosophy of Science	3 _____
<b>MATH 1035</b> Trigonometry (*MATH 1030 or MATH 1040)	2 _____
<b>MATH 1800</b> Analytic Geometry and Calculus I (*MATH 1030 or MATH 1040, and MATH 1035)	5 _____
<b>MATH 1900</b> Analytic Geometry and Calculus II (*MATH 1800)	5 _____
<b>MATH 2000</b> Analytic Geometry and Calculus III (*MATH 1900)	5 _____
<b>MATH 2020</b> Introduction to Differential Equations (*MATH 2000)	3 _____
<b>Total Content Area Coursework for Physics (9-12) Certification</b>	<b>59-62</b>
<b>*Unified Option must take BIOL 1821 with 5 credit hours</b>	<b>*61-62</b>

**Optional: Unified Science-Physics- Certification in Physics (9-12) + intro Biology & Chemistry.**

<b>3) Additional Unified Coursework</b>	<b>Credits (12-18)</b>
<b>ATM SCI 1001 OR 1001A</b> Elementary Meteorology (Lab Optional)	3-4 _____
<b>CHEM 1011</b> Environmental Chemistry <b>OR CHEM 1121</b> Introductory Chemistry II <b>AND</b> Alternative Environmental Science Course	3-8 _____
<b>PHYSCS 4331</b> Introduction to Quantum Mechanics (*PHYSCS 3200 and PHYSCS 3231)	3 _____
<b>PHYSCS 4341</b> Thermal and Statistical Physics (*MATH 2000 and PHYSCS 3231)	3 _____
<b>Total Content Area Coursework for Unified Science – Physics Certification</b>	<b>73 – 80</b>

**Total Credit Hours Required for Degree Completion (BSED Sec Ed Physics)                    134-137**  
**Total Credit Hours Required for Degree Completion (Unified Science & Physics)            146-155**

**Students must pass the relevant Content Assessment to receive the B.S.Ed. degree**

MO Content Assessment \*\* (mo.nesinc.com) Date taken \_\_\_\_\_

1) Test # \_\_\_\_\_ Passing Score \_\_\_\_\_                    2) Test # \_\_\_\_\_ Passing Score \_\_\_\_\_

I acknowledge that my advisor and I completely and thoroughly reviewed the information contained herein and I understand all of the degree requirements specified for this degree program. I understand that any course approved by my advisor for transfer credit to be applied toward the teacher certification program is subject to approval by the Department of Elementary and Secondary Education. I also understand that if DESE does not approve any transfer course associated with teacher certification, an appropriate course substitution will be necessary in order to satisfy the competency requirement.

Student signature \_\_\_\_\_ Date \_\_\_\_\_

Advisor signature \_\_\_\_\_ Date \_\_\_\_\_

Comments \_\_\_\_\_

Phone: \_\_\_\_\_ Best time to call: \_\_\_\_\_

Email: \_\_\_\_\_