



College of Education
Bachelor of Science in Education: Physics

Program Code: UCOESEUPY Version Number: 2168-Fall 2016 Program Effective: August 29, 2016 Credit Total: 123
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GENERAL EDUCATION		
I. University Core: 12 S.H.	GR.	S.H.
a. Oral Communication: COM 010 or above		3
b. Written Communication: ENG 023, 024 or 025		3
c. Mathematics: MAT 181 (suggested)		#
d. Wellness: Any 3 credit HEA course		3

II. University Distribution: 15 S.H.	GR.	S.H.
a. Natural Sciences: Any lab or non-lab course with prefix AST, BIO, CHM, ENV, GEL, MAR, NSE or PHY; or certain GEG courses with advisement BIO 104 (suggested)		#
b. Social Sciences: Any course with prefix ANT, CRJ, ECO, HIS, MCS, POL, PSY, SOC, SSE or SWK; or certain GEG courses with advisement		3
c. Humanities: Any course with prefix ENG, HUM, PAG, PHI, WGS, WRI, or Modern Language ENG 010 or higher (English Literature) (suggested)		3
d. Arts: Any course prefix ARC, ARH, ART, CDE, CDH, CFT, DAN, FAR, FAS, MUP, MUS, or THE		3
e. Free Elective: PHY 100 (suggested)		#

IV. College Distribution: 21 S.H.	GR.	S.H.
a. Math: MAT 182 (suggested)		#
b. Special Education: SPU 201 Cognitive Development		3
c. Technology: ITC 321 Instructional Technology in Education		3
d. 12 credits required by major but fulfilling General Education requirements		
COURSE: CHM 100 (suggested)		#
COURSE: CHM 102 (suggested)		#
COURSE: MAT 283 (suggested)		#

III. Competencies Across the Curriculum	S.H.
A. Writing Intensive (WI) (9 credits/3 three credit courses) COURSE: SEU 312	
COURSE: SEU 342	#
COURSE: SEU 321-325, 410	
B. Quantitative Literacy (QL) (3 credits) OR Computer Intensive (CP) (3 credits)	
COURSE: ITC 321	#
C. Visual Literacy (VL) (3 credits) OR Communication Intensive (CM) (3 credits)	
COURSE: SEU 342	#
D. Cultural Diversity (CD) (3 credits)	
COURSE: SEU 312	#
E. Critical Thinking (CT) (3 credits)	
COURSE: EDU 100	#

A Competency Across the Curriculum (CAC) course is not a separate course, but rather an overlay that is “double counted” as fulfilling both the CAC requirement and another requirement in either General Education (except for the University Core), the major, or the minor.

- RC = Minimum required number of credits
- CR = Credits earned (fill in number of credits)
- GR = Grade earned (fill in letter grade)
- CAC = Competency Across the Curriculum (fill in designation)

TEACHER CANDIDACY REQUIREMENTS

Requirements must be met upon reaching 48 credit hours

- Required Basic Skills Assessment
- Required Grade Point Average
- C or better in ENG 023 or 025
- C or better in ENG literature course
- C or better in two mathematics courses
- Completion of Education Exploration hours

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V. SPECIALIZATION: 66-68 S.H.		
1. Required Courses: 63-64 S.H.	GR.	S.H.
BIO 104 Principles of Biology	#	4
CHM 100 General Chemistry I	#	4
CHM 102 General Chemistry II	#	4
MAT 181 Calculus I	#	4
MAT 182 Calculus II	#	4
MAT 283 Calculus III	#	4
MAT 340 Differential Equations		3
PHY 100 Physics I	#	4
PHY 102 Physics II		4
PHY 212 Modern Physics I		3
PHY 214 Modern Physics II		3
PHY 327 Thermodynamics and Statistical Mechanics		3 / 4
OR		
CHM 314 Physical Chemistry I		
PHY 220 Electronics		3
PHY 230 Optics		3
PHY 245 Mathematical Physics I		3
PHY 312 Classical Mechanics I		4
PHY 315 Advanced Physics Lab		3
PHY 316 Electricity and Magnetism		3
Total		
2. Electives: 3-4 S.H. to be selected from the following:		
AST 140 Planetary Science		3
AST 142 Stellar and Galactic Astronomy		3
CHM 316 Physical Chemistry II		4
EGR 121 Eng. Draw. & Lettering		3
GEL 358 Gen. Geophysics		3
MAT 260 Linear Algebra		3
MAT 301 Probability and Statistics I		3
PHY 290 Introduction to Nanotechnology		3
PHY 314 Classical Mechanics II		2
PHY 315 Advanced Physics Lab		3
PHY 345 Mathematical Physics II		3
PHY 362/472 Solid State Physics		3
PHY 364/474 Nuclear Physics		3
PHY 370 Research in Physics		1-4
PHY 372-375 Selected Topics in Physics		1-5
PHY 360/470 Quantum Mechanics		3
PHY 380 Senior Seminar		3
Total		

Courses cross-list with General Education

VI. Clinical Component: 37 S.H.	GR	S.H
EDU 100 Perspectives on American Education		3
SPU 314 Effective Instructional Strategies for Students with Disabilities in Inclusive Settings		3
SEU 312 Principles of Learning ¹		3
SEU 313 Principles of Learning Clinical Lab (must be taken with accompanying lecture-SEU 312) ¹		3
SEU 342 Principles of Teaching ¹		3
SEU 343 Principles of Teaching Clinical Lab (must be taken with accompanying lecture-SEU 342) ¹		3
EDU 326 Introduction to Middle Level Education		3
SEU 410 Science Instructional Methods for Middle and High School ¹		3
SEU 390/391 Clinical Experience and Practicum I and II		12
EDU 392 Managing an Inclusive Classroom		1
Total		

¹Teacher Candidacy must be achieved for these courses and a minimum grade of B is required.

Program:	BSED SEU/PHYSICS				
FIRST YEAR					
<i>Fall Semester</i>			<i>Spring Semester</i>		
Course	Title	C.H.	Course	Title	C.H.
EDU 100CT	Perspectives on American Education	3	SPU 201	Cognitive Development of Diverse Learners in a Standards Aligned System	3
COM 010	Fundamentals of Oral Communication	3	MAT 017 or above	Mathematics General Education Requirement	3 or 4
ENG 23, 24 or 25	College Composition	3		ENG Literature Course (Humanities General Education Requirement)	3
MAT 017 or above	Mathematics General Education Requirement	3 or 4		PHY Required Course	3 or 4
	PHY Required Course	3 or 4		PHY Required Course	3 or 4
Total		15 or 17	Total		15 or 18
SECOND YEAR					
<i>Fall Semester</i>			<i>Spring Semester</i>		
Course	Title	C.H.	Course	Title	C.H.
ITC 321CPVL	Instructional Technology in Education	3	SPU 314	Effective Instructional Strategies for Students with Disabilities in Inclusive Settings	3
	General Education Requirement (Wellness, Social Sciences, Natural Sciences, or Arts)	3 or 4		General Education Requirement (Wellness, Social Sciences, Natural Sciences, or Arts)	3 or 4
	General Education Requirement (Wellness, Social Sciences, Natural Sciences, or Arts)	3 or 4		PHY Required Course	3 or 4
	PHY Required Course	3 or 4		PHY Required Course	3 or 4
	PHY Required Course	3 or 4		PHY Required Course	3 or 4
Total		15 or 19	Total		15 or 19
THIRD YEAR					
<i>Fall Semester</i>			<i>Spring Semester</i>		
Course	Title	C.H.	Course	Title	C.H.
SEU 312WICD	Principles of Learning	3	SEU 342WIVL	Principles of Teaching	3
SEU 313	Principles of Learning Clinical Component	3	SEU 343	Principles of Teaching Clinical Component	3
	PHY Required Course	3 or 4		PHY Required Course	3 or 4
	PHY Required Course	3 or 4		PHY Required Course	3 or 4
	PHY Required Course	3 or 4		PHY Required Course	3 or 4
	General Education Requirement (Wellness, Social Sciences, Natural Sciences, or Arts)	3 or 4			
Total		18 or 22	Total		15 or 18
FOURTH YEAR					
<i>Fall Semester</i>			<i>Spring Semester</i>		
Course	Title	C.H.	Course	Title	C.H.
SEU 410WI	Science Instructional Methods for Middle & High School	3	SEU 390	Clinical Experience & Practicum I	6
	PHY Required Course	3 or 4	SEU 391	Clinical Experience & Practicum II	6
	PHY Required Course	3 or 4			
	PHY Required Course	3 or 4			

	General Education Requirement (Free Elective)	3 or 4			
<i>Total</i>		15 or 19	<i>Total</i>		12