

# PHYSICS ADOLESCENCE EDUCATION, BS

Department Chair: James Pientka, Ph.D.

This program is designed to prepare graduates to teach in secondary education institutions having mastered content area and having met the academic requirements for teacher certification.

This program enables students to obtain initial certification in Adolescence Education in Physics. Student complete a physics major especially tailored to the New York State Adolescence Education requirements for physics while also completing all of the courses required for initial teaching certification.

Formal admission to the School of Education's adolescence education (ADED) certification program (for junior year field block approval) is granted provided a student meets the following qualifications:

- GPA of 3.0 in the academic major
- GPA of at least 2.5 in all courses in biology
- Cumulative GPA of 3.0 or better
- Grades of C (2.0) or better in two writing courses.

Requirements for graduation include

- Cumulative GPA of 3.0
- GPA of 3.0 in all education courses (including SPED courses)
- Minimum GPA of 2.5 in the disciplinary concentration.

Students complete 140 hours of field block experience, during which they apply classroom knowledge with supervised experience in classrooms, as well as student teaching requirements.

Code	Title	Credits
<b>Physics</b>		<b>32</b>
PHYS-103 & PHYL-103	GENERAL PHYSICS I and GENERAL PHYSICS I LAB	
PHYS-104 & PHYL-104	GENERAL PHYSICS II and GENERAL PHYSICS LAB II	
PHYS-201	THEORETICAL MECHANICS	
PHYS-203	MODERN PHYSICS	
PHYS-301	ELECTRICITY & MAGNETISM I	
PHYS-302	ELECTRICITY & MAGNETISM II	
PHYS-304	THERMODYNAMICS	
PHYS-406	INTRODUCTORY QUANTUM MECHANICS	
PHYS-490	SENIOR COMPREHENSIVES	
<b>Mathematics</b>		<b>15</b>
MATH-151	CALCULUS I	
MATH-152	CALCULUS II	
MATH-251	CALCULUS III	
MATH-252	ORDINARY DIFFERENTIAL EQUATIONS	
<b>Chemistry</b>		<b>8</b>
CHEM-101 & CHML-101	GENERAL CHEMISTRY I and GEN CHEM I LAB	
CHEM-102 & CHML-102	GENERAL CHEMISTRY II and GEN CHEM II LAB	

## Engineering Physics 3

ENGR-220	INTRODUCTION TO MATLAB	
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## Education 38

EDUC-101	SOCIAL FOUNDATIONS OF AMERICAN EDUCATION: A CURRENT ISSUES APPROACH	
SPED-445	INSTRUCTIONAL STRATEGIES FOR MATH & SCIENCE IN INCLUSIVE SECONDARY EDUCATION	
EDUC-208L	INSTRUCTIONAL DESIGN FOR ALL LEARNERS	
EDUC-250	ADOLESCENT DEVELOPMENT & LEARNING	
EDUC-306	MANAGING INSTRUCTION/BEHAVIOR IN SEC ED	
EDUC-330	METHODS, MODELS, MANAGEMENT OF INSTRUCTION	
EDUC-354	PROBLEMS OF LITERACY IN SEC SCHOOLS	
EDUC-360	LITERACY IN THE CONTENT AREA	
EDUC-406	EVALUATING LEARNERS & LEARNING	
EDUC-495	SEC.STUD.TEACHING:GRADES 7-9	
EDUC-495A	SR SEM: PROF ASSESSMENT & REFLECTION	
EDUC-496	SEC STUD TEACH:GRADES 10-12	
EDUC-341	SECONDARY SCIENCE METHODS	

## Workshops

EDUC-099A	SAFE SCHOOLS WORKSHOP	
EDUC-099B	CHILD ABUSE PREVENTION	
EDUC-099D	CULTURAL DIVERSITY WORKSHOP	
EDUC-099F	Harassment, Bullying, Cyberbullying & Di	
EDUC-099K	EXPERIENCE IN DIVERSE ENVIRONMENTS	

## Foreign Language <sup>1</sup> 3

General Education Requirements (<https://catalog.sbu.edu/undergraduate/degree-requirements/>) 37

Total Credits 132

<sup>1</sup> The foreign language must be at the level of 202 or higher. Students not prepared to begin at this level will need to take additional courses in language.

## First Year

Fall	Credits	Spring	Credits
PHYS-103 & PHYL-103	4	PHYS-104 & PHYL-104	4
MATH-151	4	MATH-152	4
SBU-101	2	ENGR-220	3
EDUC-101	3	SBU-102	1
ENG-101	3	ENG-102	3
		THFS-101	3
	<b>16</b>		<b>18</b>

## Second Year

Fall	Credits	Spring	Credits
PHYS-201	3	PHYS-203	3
MATH-251	4	CHEM-102 & CHML-102	4
CHEM-101 & CHML-101	4	Foreign Language 202 <sup>1</sup>	3
Foreign Language 201 <sup>1</sup>	3	EDUC-250	3
SPED-445	4	MATH-252	3
EDUC-099A	0		
EDUC-099B	0		
EDUC-099F	0		
	<b>18</b>		<b>16</b>

2 Physics Adolescence Education, BS

<b>Third Year</b>			
<b>Fall</b>	<b>Credits</b>	<b>Spring</b>	<b>Credits</b>
PHYS-301	3	PHYS-302	3
PHYS-304	3	General Education	3
PHIL-104	3	EDUC-406	3
EDUC-354	3	EDUC-306	3
Elective	3	EDUC-330	2
		EDUC-341	1
		EDUC-360	3
		<b>15</b>	<b>18</b>

<b>Fourth Year</b>			
<b>Fall</b>	<b>Credits</b>	<b>Spring</b>	<b>Credits</b>
PHYS-406	3	EDUC-495	5
PHYS-309	3	EDUC-496	5
ENGR-262	3	EDUC-495A	3
General Education	3	EDUC-099D	0
General Education	3		
General Education	3		
		<b>18</b>	<b>13</b>

**Total Credits 132**