

# 4+1 BIOLOGY BA/ ADOLESCENCE 7-12, TEACHING STUDENTS WITH DISABILITIES(ALL GRADES) MSEd

## Curriculum

The 4+1 (<http://catalog.canisius.edu/graduate/school-education-human-services/educator-preparation/dual-degree-content-and-msed-swd/#curriculumtext>) Program (<http://catalog.canisius.edu/graduate/school-education-human-services/educator-preparation/dual-degree-content-and-msed-swd/#curriculumtext>) offers a BA in Biology as well as a MSEd in Teaching Students with Disabilities All Grades. This program leads to Initial Adolescence Certification in Biology as well as Initial Certification in SWD (All Grades: PreK-Grade 12). Since it leads to two teaching certificates, candidates must meet the content requirements for both over the course of their curriculum. In most cases, the content area major covers those requirements. In some instances New York State has additional requirements. Please note, this 4+1 program can be completed in as little as 5 years if one summer is included.

## An Ignatian Foundation

All undergraduate students must complete either the Canisius Core Curriculum (<http://catalog.canisius.edu/undergraduate/academics/curricular-information/core-curriculum/>) or the All-College Honors Curriculum (<http://catalog.canisius.edu/undergraduate/academics/curricular-information/all-college-honors-program/>). Many schools refer to their college-wide undergraduate requirements as "general education" requirements. We believe that the core curriculum and the honors curriculum are more than a series of required classes; they provide the basis for a Jesuit education both with content and with required knowledge and skills attributes that are central to our mission.

## Free Electives

Students may graduate with a bachelor's degree with more but not less than 120 credit hours. Free electives are courses in addition to the Canisius Core Curriculum or All-College Honors Curriculum and major requirements sufficient to reach the minimum number of credits required for graduation. The number of credits required to complete a bachelor's degree may vary depending on the student's major(s) and minor(s).

## Major Requirements

Code	Title	Credits
BIO 111 & 111L	Introductory Biology I and Introductory Biology Laboratory I	4
BIO 112 & 112L or BIO 113 & BIO 112L	Introductory Biology II and Introductory Biology Laboratory II Introductory Biology II: Organismal Biology and Introductory Biology Laboratory II	4
BIO 211 & 211L	Biochemistry and Cell Biology I and Biochemistry and Cell Biology Lab I	4
BIO 212 & 212L	Biochemistry and Cell Biology II and Biochemistry and Cell Biology Lab II	4

CHM 111 & 111L	General Chemistry I and General Chemistry I Laboratory	4
CHM 112 & 112L	General Chemistry II and General Chemistry II Laboratory	4
CHM 227 & 227L or PHY 201 & 201L	Organic Chemistry I and Organic Chemistry I Laboratory College Physics I and College Physics I Laboratory	4
Select three Biology 300- or 400-level Electives with associated Lab One course must be at the 400 level with its associated lab.		12
One Biology Elective at 300 or 400 Level		3
MAT 111 or MAT 141	Calculus I Inferential Statistics and Computers for Science	4
BIO 351	Biology Seminar I	1
BIO 353	Biology Seminar II	1
<b>Total Credits</b>		<b>49</b>

**Please note, 6 credits of math, 6 credits of science, 6 credits of English, and 6 credits of social studies (including history) are needed for SWD certification.**

## Education Course List:

The education curriculum is provided below for the MSEd portion of the 4+1 programs. Notice that several foundation courses are taken at the undergraduate level intermingled with other undergraduate requirements. The graduate courses begin at the 500 level and continue until completion.

Code	Title	Credits
<b>Undergraduate Requirements</b>		
EDS 101	Human Growth and Social Development: Adolescence	3
EDS 223	Foundations of Adolescent Literacy (20 hours of field experience required)	3
EDS 360	Evaluation and Teaching Strategies (30 hours of field experience required)	3
EDU 250	Foundations of Education	3
EDU 356	Assessment for Diverse Learners	3
SPE 341	Inclusive Strategies	3
Please select one of the following:		3
EDS 402	Methods of Teaching English: Adolescence (30 hours of field experience required)	
or EDS 403	Methods of Teaching Mathematics: Adolescence	
or EDS 405	Methods of Teaching Science: Adolescence	
or EDS 406	Methods of Teaching Social Studies: Adolescence	
<b>Graduate Requirements</b>		
EDU 595	Child Abuse Workshop	0
EDU 596	Prevention of School Violence Workshop	0
EDU 597	Dignity for All Students Workshop	0
EDU 615	Research Methods	3
SPE 580	Classroom Management	3
SPE 631	Reading and Writing Process for Students with Learning and Behavioral Disorders (25 hours of field experience required)	3
SPE 640	Learning and Behavioral Disabilities (LBD); Etiology and Research Based Interventions	3
SPE 644	Collaborative Practices on a Transdisciplinary Team	3

SPE 649	Transition for Adolescents with Disabilities	3
SPE 650	Intellectual Disabilities and Autism Spectrum Disorders: Etiology & Educational Needs	3
SPE 652	Functional Curriculum for Students with Severe Disabilities and ASD (25 hours of field experience required)	3
SPE 698	Seminar in Teaching and Assessment (50 hours of field experience required)	3
SPE 693	Student Teaching	9
SPE 697	Student Teaching Seminar	0
<b>Total Credits</b>		<b>57</b>

## Roadmap

### Freshman

Fall	Spring
BIO 111 & 111L	BIO 112 & 112L
CHM 111 & 111L <sup>1</sup>	CHM 112 & 112L <sup>1</sup>
MAT (Calculus or Statistics)	MAT (Calculus or Statistics)
	HIS Course

### Sophomore

Fall	Spring
BIO 211 & 211L	BIO 212 & 212L
select one of the following: CHM 227 & 227L	BIO 351 BIO Elective
PHY 201 & 201L	SPE 341
EDS 101	
EDU 250	

### Junior

Fall	Spring
BIO Elective with Lab	BIO Elective
EDS 223	BIO Elective with lab
EDS 360	EDS 405
	HIS Course

### Senior

Fall	Spring
BIO Elective with lab	EDU 615
BIO 353	SPE 649
EDU 356	Core Capstone
SPE 644	

### Fifth Year

Fall	Spring
SPE 580	EDU 595
SPE 631	EDU 596
SPE 640	EDU 597
SPE 698	SPE 693
	SPE 697