



New Combined Degree Program Request

UUPC Approval _____
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Catalog _____

New Combined Degree Program

Proposed Program **Request** B.A. - M.Ed. CIP: _____ Effective Date (Term/Year): Fall / 2026 (e.g. Fall/2020)

Proposed Combined Program Information	Undergraduate	Graduate
Degree Level (e.g. B.A., B.S., M.A., M.S., etc.)	B.A.	M.Ed.
Program Name (e.g. Physics, Engineering, etc.)	B.A. Biology	M.Ed. in Secondary Education
College	Science	Education
Department	Biological Sciences	Curriculum and Instruction
Program Description (provide a brief description of the program, including thesis or non-thesis option)	See attached. Proposal will have no budgetary impact.	

Curriculum Requirements

GPA Requirements: Departments must establish a minimum undergraduate GPA for students to be admitted to a combined program. *Note: Please attach explanation.*

3.0

List courses to be shared: Up to twelve (12) credit hours of graduate courses (5000 level or above course work) may be shared between the graduate and undergraduate degree for a combined program. *Note: Please attach explanation:*

- Academic justification for shared credits and catalog language
- List the undergraduate course that will be replaced by graduate courses.

Faculty Submitting Request	Name	Signature	Email	Date
	Dr. Charles Dukes		cdukes@fau.edu	

Approved by

Department Chair: Charles Dukes
College Dean: Charles Dukes
College Curriculum Chair: Charles Dukes
UUPC Chair: _____
Undergraduate Studies Dean: _____
(Note: Forward approved form to UGPC@fau.edu)
UGPC Chair: _____
UGC Chair: _____
Graduate College Dean: _____
UFS President: _____
Provost: _____

Date

4/29/2025
7/09/2025
7/09/2025

Email this form and syllabus to mjenning@fau.edu seven business days before the UUPC meeting.

Proposal for the Creation of a Biology B.A. to M.Ed. Degree Program

The demand for qualified science educators continues to grow. To address the teacher shortage, the Departments of Biological Sciences and (College of Science-CoS) and Curriculum and Instruction (College of Education-COE) propose a Biology B.A. to M.Ed. program, allowing students to earn both a bachelor's degree in biology and a master's degree in education (secondary education) within one year after earning the bachelor's degree. This streamlined program will prepare students for immediate entry into the teaching profession, equipping them with both deep content knowledge and the pedagogical expertise required for licensure.

Key Benefits of the Program:

1. Efficient Pathway to Employment

By integrating undergraduate and graduate coursework, students can complete their master's degree in education within one calendar year after earning their bachelor's degree. This structure enables them to obtain licensure and enter the workforce as qualified educators with minimal delay.

2. Addressing the Teacher Shortage

Many school districts face persistent shortages of STEM educators. This program helps fill critical vacancies by producing highly qualified biology teachers who are ready to step into the classroom immediately upon graduation.

3. Cost-Effective and Accessible

The combined program reduces the financial burden on students by shortening the time needed to complete a master's degree. This affordability makes teacher preparation more accessible, particularly for students who may otherwise hesitate to pursue additional years of education.

4. Stronger Career Prospects

Graduates of the program will enter the job market with both an advanced degree and teaching credentials, making them more competitive candidates for employment. Many school districts offer higher starting salaries and leadership opportunities for teachers with a master's degree, further enhancing career prospects.

By creating this B.A. to M.Ed. pathway, we provide a strategic solution to the growing need for skilled science educators while offering students a faster, more affordable, and highly effective route to a fulfilling career in teaching. This program represents a forward-thinking investment in both our students and the future of STEM education.

The B.A. in Biological Sciences program requires 40-43 credits with an additional 12 credits of electives. With 12 credits of electives, undergraduate students majoring in Biological Sciences will take a minimum of 9 graduate credits and no more than 12 graduate credits in education courses, leaving 27 or 24 credits of graduate credits to take after earning the bachelor's degree.

Catalog Description

Program Details and Coursework

Students should apply for the program in the spring semester of their junior year and must complete 150 credits in specified courses, satisfy all University and College major degree requirements for each academic program, and maintain a cumulative and major GPA of at least 3.0 on a 4.0 scale. Students will be awarded each degree separately upon completion of the individual degree requirements. Students in the Biology B.A. to M.Ed. Program are required to complete a minimum of 9 graduate credits and no more than 12 graduate credits in education courses, leaving 27 or 24 credits of graduate credits to take after earning the bachelor's degree.

Prerequisite Coursework for Transfer Students: Students transferring to Florida Atlantic University must complete both lower-division requirements and requirements for the college and major. Lower-division requirements may be completed through the A.A. degree from any Florida public college, university or community college or through equivalent coursework at another regionally accredited institution. Before transferring and to ensure timely progress toward the baccalaureate degree, students must also complete the prerequisite courses for their major as outlined in the Transfer Student Manual (see www.fau.edu/registrar/tsm.php).

All courses not approved by the Florida Statewide Course Numbering System that will be used to satisfy requirements will be evaluated individually on the basis of content and will require a catalog course description and a copy of the syllabus for assessment.

The proposed combined program is best suited for undergraduate students entering their junior year. The courses and a semester sequence is detailed below.

B.A. Biology Core Requirements

Core Requirements (40-41 credits)		
Biological Principles and Lab	BSC 1010, 1010L	4
Biodiversity and Lab	BSC 1011, 1011L	4
General Chemistry 1	CHM 2045	3
General Chemistry 1 Lab	CHM 2045L	1
General Chemistry 2	CHM 2046	3
General Chemistry 2 Lab	CHM 2046L	1
Organic Chemistry 1	CHM 2210	3
Organic Chemistry 2	CHM 2211	3
Methods of Calculus	MAC 2233	3
Experimental Design and Statistical Inference	PSY 3234	3
Physical Science	PSC 2121	3
Select four of the courses below: (Additional courses selected from this category beyond the four courses may be applied toward the elective requirement.)		
One course in Physiology***		4-5
Genetics	PCB 3063	4

Cell Biology	PCB 3023	3
Principles of Ecology	PCB 4043	3
Evolution	PCB 3674	3
***Students who select the "One course in Physiology" option above may fulfill this option by choosing one of the below course/lab combinations		
Principles of Plant Physiology and Lab	BOT 4503, 4503L	4
Comparative Animal Physiology and Lab	PCB 4723, 4723L	4
Vertebrate Structure Development and Evolution and Lab	ZOO 4690, 4690L	5
Human Morphology and Function 1 and Lab	PCB 3703, 3703L	4
Human Morphology and Function 2 and Lab	PCB 3704, 3704L	4

College of Science Cooperative

Masters in Secondary Ed cert program 4+1 program with Biology Majors

Courses Undergraduates in Biology would take for the 4 + 1 degree

RED 6546	Reading Diagnosis
RED 6548	Remedial Reading
SCE 6151	Science: Elementary and Middle School
TSL 5142	Curriculum Development in TESOL and BE

Semester Breakdown:

Fall – Undergrad:

RED 6546	Reading Diagnosis
SCE 6151	Science: Elementary and Middle School

Spring – Undergrad:

RED 6548	Remedial Reading
TSL 5142	Curriculum Development in TESOL and BE

Courses Graduates in Biology would take for the 4 + 1 degree

EDF 6138	Adolescent Development & Young Adulthood
EDF 6887	Foundations of Multicultural Education
EDG 6345	Instructional Strategies and Assessment Practices
EDG 6408	Managing Inclusive Classrooms and Effective Discipline
EDG 6940	Internship in Secondary Education (with internship)
RED 6361	Teaching Reading in Secondary and Middle School
RED 6836	Reading Practicum
TSL 5345	Methods of Teaching ESOL and BE

Semester Breakdown:

Summer – Grad*:

TSL 5345	Methods of Teaching ESOL and BE
EDF 6138	Adolescent Development & Young Adulthood

EDF 6887 Foundations of Multicultural Education

Fall – Grad:

EDG 6345 Instructional Strategies and Assessment Practices
EDG 6408 Managing Inclusive Classrooms and Effective Discipline
RED 6361 Teaching Reading in Secondary and Middle School

Spring – Grad:

RED 6836 Reading Practicum
EDG 6940 Internship in Secondary Education (with internship)

*Summer semester can either take place before the Fall semester right after Spring graduation or it can take place after their Spring semester in the program.

B.A. Biology Electives

Biology Electives		
Select a minimum of 12 upper-division credits from the list below		
Vascular Plant Anatomy and Lab	BOT 3223, 3223L	4
Marine Botany and Lab	BOT 4404, 4404L	4
Plant Cell Biology	BOT 4542	3
Plant Biotechnology	BOT 4734C	3
Life of a Biologist*	BSC 2844	1
Conservation Biology	BSC 3052	3
Introduction to Biological Research	BSC 3453	1
Biological Research Writing	BSC 3481	2
Molecular Genetics of Aging	BSC 4022	3
Climate Change Biology: Ecosystems to Human Health	BSC 4307	3
Laboratory Methods in Biotechnology	BSC 4403L	3
Concepts in Bioinformatics	BSC 4434C	3
Biology of Cancer	BSC 4806	3
Directed Independent Study**	BSC 4905	1-3
Directed Independent Research in Biological Sciences**	BSC 4910	0-3
Honors Research	BSC 4917	3
Honors Thesis	BSC 4918	3
Special Topics	BSC 4930	1-3
Comparative Animal Behavior	CBH 4024	3
Critical Thinking in Environmental Science	EVS 4021	3
General Microbiology and Lab	MCB 3020, 3020L	4
Medical Bacteriology	MCB 4203	3
Virology	MCB 4503	3
Microbial Ecology	MCB 4603	3
Marine Biodiversity and Lab	OCB 4032, 4032L	4

Marine Biology and Lab	OCB 4043, 4043L	4
Marine Microbiology and Molecular Biology and Lab	OCB 4525, 4525L	4
Marine Ecology and Lab	OCB 4633, 4633L	4
Marine Science	OCE 4006	4
Issues in Human Ecology	PCB 3352	3
Genetics Lab	PCB 4067L	3
Immunology	PCB 4233	3
Freshwater Ecology and Lab	PCB 4301, 4301L	4
Molecular Genetics	PCB 4522	3
Genes and Development	PCB 4594	3
Reproductive Endocrinology	PCB 4803	3
Cellular Neuroscience and Disease	PCB 4842	3
Practical Cell Neuroscience	PCB 4843C	3
Invertebrate Zoology and Lab	ZOO 3205, 3205L	5
Introduction to Animal Locomotion	ZOO 4373	3
Functional Biology of Marine Animals and Lab	ZOO 4402, 4402L	4
Ornithology and Lab	ZOO 4472, 4472L	4
Principles of Human Neuroanatomy	ZOO 4742	3

From: Evonne Rezler <erezler@fau.edu>

Date: Thursday, April 10, 2025 at 2:45 PM

To: Charles Dukes <cdukes@fau.edu>

Cc: Sarah Milton <smilton@fau.edu>, Demarus Youngblood <djohnson@fau.edu>

Subject: FW: biology/secondary education 4 + 1

Dear Dr. Dukes,

The College of Science supports the attached proposal for a combined degree program of a BA in Biology and M.Ed. in Secondary Education. This joint program with the College of Education will offer a new and exciting academic pathway for our students that is aligned with strong career opportunities in teaching. This proposal is timely given the teaching shortages in South Florida schools (also a widespread problem throughout the state).

Regards,

Dr. Rezler

Evonne M. Rezler, Ph.D.

Senior Associate Dean for Undergraduate Studies

Science Lead, FAU STEM Research Group for Digital Laboratory Learning

<https://www.fau.edu/elearning/research/digital-laboratory-learning/>

Charles E. Schmidt College of Science Florida Atlantic University

777 Glades Rd, Boca Raton FL, 33431 email: erezler@fau.edu

phone: 561-297-3303

From: Stephen Silverman <silverman@fau.edu>
Date: Thursday, April 17, 2025 at 2:16 PM
To: Charles Dukes <cdukes@fau.edu>
Subject: 4+1 Biology/secondary education proposal

Hi Charles-

This proposal has no financial impact on the college and I support the proposal.

Steve

Stephen Silverman, Ed.D.
Dean and Professor
College of Education
Florida Atlantic University
777 Glades Road, ED 210
Boca Raton, FL 33431
(561) 297-3357
silverman@fau.edu
<https://www.fau.edu/education/faculty/silverman/>

From: Valery Forbes <veforbes@fau.edu>

Date: Friday, April 18, 2025 at 9:03 AM

To: Charles Dukes <cdukes@fau.edu>

Cc: Evonne Rezler <erezler@fau.edu>

Subject: CoS and DCI 4 + 1

Dear Charles,

This email is to confirm that the College of Science supports this proposed program. As far as we can determine, this program should not have any financial impact of concern.

Best regards,

Valery

Valery E. Forbes, Ph.D.

Dean, Charles E. Schmidt College of Science

Florida Atlantic University

777 Glades Road

SE 43, Room 256

Boca Raton, FL 33431

T: 561-297-3288

E: veforbes@fau.edu