



Secondary Science Education - Biology

Bachelor of Science | Code: S9210 | 120 credits

CIP (1101313221)

Effective Term: Fall 2024 (2247)

The four-year baccalaureate degrees in Education are designed to prepare students to become teachers and pass state professional certification exams. An internship in a school setting is required to provide practical experience. Additionally, individuals with Bachelor's degrees in other fields are able to earn teacher certification. Please refer to the College Catalog for specific program prerequisites (www.mdc.edu).

GENERAL REQUIREMENTS (36.00 Credits)

COMMUNICATIONS (6.00 credits) **

ENC 1101	English Composition 1	(3 credits)	Prerequisite: Student must meet the Developmental Education reading and Writing Requirements in State Rule 6A-10.0315 (by course, placement score, or eligible exemption). Prerequisite: ENC 1101
ENC 1102	English Composition 2	(3 credits)	

ORAL COMMUNICATIONS (3.00 credits) **

SPC 1017	Introduction to Communication	(3 credits)
SPC 2608	Introduction to Public Speaking	(3 credits)

HUMANITIES (6.00 credits) **

Select 1 course from State Core and 1 course from MDC Core.

State Core: Group A Courses: 3 credits

ARH 1000	Art Appreciation	(3 credits)	Prerequisite: ENC 1101
HUM 1020	Humanities	(3 credits)	
LIT 2000	Introduction to Literature	(3 credits)	
MUL 1010	Music Appreciation	(3 credits)	
PHI 2010	Introduction to Philosophy	(3 credits)	
THE 2000	Theatre Appreciation	(3 credits)	

---AND---

MDC Core: Group B Courses: 3 credits

ARC 2701	History of Architecture 1	(3 credits)	Prerequisite: ARH 2050 Prerequisite: HUM 1020
ARC 2702	History of Architecture 2	(3 credits)	
ARH 1000	Art Appreciation	(3 credits)	
ARH 2050	Art History 1	(3 credits)	
ARH 2051	Art History 2	(3 credits)	
ARH 2740	Cinema Appreciation	(3 credits)	
DAN 2100	Dance Appreciation	(3 credits)	
DAN 2130	Dance History 1	(3 credits)	
HUM 1020	Humanities	(3 credits)	
IND 1100	History of Interiors 1	(3 credits)	
IND 1130	History of Interiors 2	(3 credits)	
LIT 2000	Introduction to Literature	(3 credits)	Prerequisite: ENC 1101
LIT 2120	A Survey of World Literature 2	(3 credits)	Prerequisites: ENC 1101, ENC 1102 or equivalent
MUH 2111	Survey of Music History 1	(3 credits)	Prerequisite: MUH 2111
MUH 2112	Survey of Music History 2	(3 credits)	
MUL 1010	Music Appreciation	(3 credits)	
MUL 2380	Jazz and Popular Music in America	(3 credits)	
PHI 2010	Introduction to Philosophy	(3 credits)	
PHI 2600	Introduction to Ethics	(3 credits)	Prerequisite: ENC 1101
THE 2000	Theater Appreciation	(3 credits)	

MATHEMATICS (6.00 credits) **

Select one State Core course and one MDC Core course. Lab units are not allowed in this area.

State Core: Group A Courses: 3 credits

MAC 1105	College Algebra	(3 credits)	Prerequisite: MAT 1033
MAC 2311	Calculus and Analytical Geometry 1	(5 credits)	Prerequisites: MAC 1106 and MAC 1114, or MAC 1140 and MAC 1114, or MAC 1147
MGF 1130	Mathematical Thinking	(3 credits)	Prerequisite: Student must meet the Developmental Education mathematics requirements in State Rule 6A-10.0315 (by course, placement score, or eligible exemption)
MGF 1131	Mathematics in Context	(3 credits)	Prerequisite: Student must meet the Developmental

STA 2023 Statistical Methods (3 credits)

--AND--

MDC Core: Group B Courses: 3 credits

MAC* MAD* MAP*
MAS* MGF* STA 2023
MTG 2204

Education mathematics requirements in State Rule 6A-10.0315
(by course, placement score, or eligible exemption)
Prerequisite: MAT 1033 or MGF 1131

Note: Check with advisor for requisite information.

NATURAL SCIENCE (6.00 credits) **

Select 1 course from State Core and 1 course from MDC Core.

State Core: Group A Courses: 3 credits

BSC 2010 Principles of Biology (3 credits)

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MDC Core: Group B Courses: 3 credits

CHM 1045 General Chemistry & Qualitative Analysis (3 credits)

Pre/Corequisites: BSC 2010L, CHM 1045

Prerequisites: CHM 1025 or a passing score on the CART exam,
MAC 1105;
Corequisite: CHM 1045L

SOCIAL SCIENCE (6.00 credits) **

Select 1 course from State Core and 1 course from MDC Core.

State Core: Group A Courses: 3 credits

AMH 2010 History of the US to 1877 (3 credits)

AMH 2020 History of the US Since 1877 (3 credits)

POS 2041 American Federal Government (3 credits)

--AND--

MDC Core: Group B Courses: 3 credits

DEP 2000 Human Growth and Development (3 credits)

PSY 2012 Introduction to Psychology (3 credits)

GENERAL EDUCATION ELECTIVES (3.00 Credits) **

EEX 2000 Introduction to Special Education (3 credits)

COMPUTER COMPETENCY

Test type(s) needed:

Computer Skills Placement (CSP)

---OR---

CGS 1060C Introduction to Computer Technology & Application

Note: Students are strongly recommended to take the CSP exam.

COMMON PREREQUISITES REQUIREMENTS (3.00 Credits)

EDF 1005 Introduction to the Teaching Profession (3 credits)

LOWER DIVISION REQUIREMENTS (6.00 Credits)

EDF 2144 Maximizing Student Potential in the School Context (3 credits)

EME 2040 Introduction to Technology for Educators (3 credits)

SCIENCE REQUIREMENTS (14.00 Credits)

Group A: Biological Sciences

BSC 2010L Principles of Biology 1 Laboratory (2 credits)

BSC 2011 Principles of Biology 2 (3 credits)

BSC 2011L Principles of Biology Lab 2 (2 credits)

Corequisite: BSC2010

Prerequisites: BSC 2010, BSC 2010L;

Corequisite: BSC 2011L

Prerequisites: BSC 2010, BSC 2010L;

Corequisite: BSC 2011

---AND---

Group B: Physical Sciences

CHM 1045L General Chemistry and Qualitative Analysis Lab (2 credits)

CHM 1046 General Chemistry and Qualitative Analysis (3 credits)

CHM 1046L General Chemistry & Qualitative Analysis Lab (2 credits)

Prerequisites: CHM 1025 or a passing score on the CART exam,
MAC 1105;

Corequisite: CHM 1045

Prerequisites: CHM 1045, CHM 1045L;

Corequisite: CHM 1046L

Prerequisites: CHM 1045, CHM 1045L;

Corequisite: CHM 1046

SCIENCE ELECTIVES (3.00 Credits)

Students must select 3 credits from the following group.

BSC 1084 Functional Human Anatomy (3 credits)

BSC 2020 Human Biology: Fundamentals of Anatomy/Physiology (3 credits)

PROFESSIONAL EDUCATION CORE (18.00 Credits)

EDF 4430	Measurement and Assessment in Education	(3 credits)
EDG 3321	General Teaching Skills	(3 credits)
EDG 3443	Classroom and Behavior Management	(3 credits)
EEX 3071	Teaching Exceptional and Diverse Populations in Inclusive Settings	(3 credits)
RED 3393	Differentiated Instruction in Content Reading	(3 credits)
TSL 4324C	ESOL Strategies for Content Area Teachers	(3 credits)

DISCIPLINE CONTENT (17.00 Credits)**Group A Courses: 12 credits**

PCB 3043	Fundamentals of Ecology	(3 credits)	Prerequisites: BSC 2011, BSC 2011L
PCB 3060	Principles of Genetics	(3 credits)	Prerequisites: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L
SCE 4362	Methods of Teaching Science	(3 credits)	Pre/Corequisite: EDF 4430
SCE 4363	Advanced Topics in Science Education Practicum	(3 credits)	Prerequisites: EDF 4430, EDG 3321, RED 3393, SCE 4362, TSL 4324C; Pre/Corequisites: EEX 3071, SCE 3893

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Group B Courses: 5 credits

MCB 2010	Microbiology	(3 credits)	Prerequisites: BSC2010, 2010L or BSC 2085,2085L; CHM1033, CHM 1033L or CHM 1045, 1045L
MCB 2010L	Microbiology Laboratory	(2 credits)	Prerequisites: BSC2010, 2010L or BSC 2085,2085L; CHM1033, CHM 1033L or CHM 1045, 1045L; Corequisite: MCB 2010
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MCB 3023	Principles of Microbiology	(3 credits)	Prerequisites: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L, CHM 2211, CHM 2211L; Corequisite: MCB3023L
MCB 3023L	Principles of Microbiology Lab	(2 credits)	Prerequisites: BSC 2010, BSC 2010L, BSC 2011, BSC2011L, CHM 2211, CHM 2211L; Corequisite: MCB 3023

ELECTIVES (11.00 Credits)

BCH 3023	Introductory Biochemistry	(3 credits)	Prerequisites: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L, CHM 2211, CHM 2211L; Corequisite: BCH 3023L
BCH 3023L	Introductory Biochemistry Laboratory	(2 credits)	Prerequisites: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L, CHM 2211, CHM 2211L; Corequisite: BCH 3023
BOT 3015♦	Survey of Plant Diversity	(3 credits)	Prerequisites: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L; Corequisite: BSC 3015L
BSC 3930	Biological Sciences Seminar	(1 credit)	Prerequisites: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L
CHM 2210	Organic Chemistry 1	(3 credits)	Prerequisites: CHM 1046, CHM 1046L; Corequisite: CHM 2210L
CHM 2210L	Organic Chemistry 1 Laboratory	(2 credits)	Prerequisites: CHM 1046, CHM 1046L; Corequisite: CHM 2210
CHM 2211	Organic Chemistry 2	(3 credits)	Prerequisites: CHM 2210, CHM 2210L; Corequisite: CHM 2211L
CHM 2211L	Organic Chemistry 2 Laboratory	(2 credits)	Prerequisites: CHM 2210, CHM 2210L; Corequisite: CHM 2211
CHM 2200	Survey of Organic Chemistry	(3 credits)	Prerequisites: CHM 1046, CHM 1046L; Corequisite: CHM 2200L
CHM 2200L	Survey of Organic Chemistry Laboratory	(2 credits)	Prerequisites: CHM 1046, CHM 1046L; Corequisite: CHM 2200
PCB 3060L	Principles of Genetics Laboratory	(2 credits)	Prerequisites: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L; Corequisite: PCB 3060
PCB 4674	Evolution	(3 credits)	Prerequisites: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L, PCB 3060, PCB 3060L
SCE 3893	Teaching and Learning the Nature of Science	(3 credits)	
SOP2772	Human Sexuality	(3 credits)	
ZOO 3021♦	Survey of Animal Diversity	(3 credits)	Prerequisites: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L

STUDENT TEACHING/INTERNSHIP (12.00 Credits)

SCE 4943	Seminar in Science Education	(3 credits)	Corequisites: SCE 4945
SCE 4945	Internship in Science Education	(9 credits)	Corequisites: SCE 4943

Important Information

Civic Literacy Competency: Prior to the award of an associate in arts or baccalaureate degree, first-time-in-college students entering a Florida College System institution in the 2021-2022 school year, and thereafter must demonstrate competency in civic literacy. This requires both a passing grade (A, B, C, D, or S) in AMH 2010, AMH 2020 **or** POS 2041 **AND** a passing score on the Florida Civic Literacy Examination (FCLE) (**or** an equivalent AP or CLEP exam). General education courses require grade of C or higher to satisfy requirement. For more information regarding the Florida Civic Literacy Requirement, go to <https://www.mdc.edu/main/testing/criteria/civic-literacy-competence.aspx>.

Computer Competency: By the 16th earned college-level unit, students must attempt the computer competency requirement **OR** by the 31st earned college-level unit, students must satisfy the requirement (CGS 1060C, CTS 0050, an equivalent college unit course or the Computer Skills Placement examination). For more information, see <http://bitly.com/UQJDHM>.

Foreign Language Competency: May be satisfied by Foreign Language Competency (FLC) standardized examinations. For more information, refer to [Foreign Language Competence](#).

Grade Point Average (GPA) Requirement: Students must complete all coursework with a “C” or better to complete the degree.

Graduation Requirements: Students should check their individualized Degree Audit Report to determine the specific graduation policies in effect for their program of study for the year and term they entered Miami Dade College. This outline includes current graduation requirements.

Additional Information

♦Strongly Recommended by School of Education

*Includes any and all courses within associated prefix

**General education courses require grade of “C” or higher to satisfy requirement