



DEPARTMENT OF
HIGHER EDUCATION &
WORKFORCE DEVELOPMENT

New Program Report

Date Submitted:

05/07/2024

Institution

Columbia College

Site Information

Implementation Date:

8/26/2024 12:00:00 AM

Added Site(s):

Selected Site(s):

Columbia College, 1001 Rogers, Columbia, MO, 65216

CIP Information

CIP Code:

260204

CIP Description:

A program that focuses on the scientific study of the structure and function of biological macromolecules and the role of molecular constituents and mechanisms in supramolecular assemblies and cells. Includes instruction in such topics as molecular signaling and transduction, regulation of cell growth, enzyme substrates and mechanisms of enzyme action, DNA-protein interaction, and applications to fields such as biotechnology, genetics, cell biology, and physiology.

CIP Program Title:

Molecular Biology

Institution Program Title:

Molecular Biology

Degree Level/Type

Degree Level:

Bachelor's Degree

Degree Type:

Bachelor of Science

Options Added:

Collaborative Program:

N

Mode of Delivery

Current Mode of Delivery

Classroom

Hybrid

Online

Student Preparation



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Special Admissions Procedure or Student Qualifications required:

Admission procedures and student qualifications do not exceed regular College standards.

Specific Population Characteristics to be served:

Columbia College serves traditional students at the Residential Campus and specializes in adult and military education nationwide.

Faculty Characteristics

Special Requirements for Assignment of Teaching for this Degree/Certificate:

Columbia College adheres to the credential requirements set forth by HLC for all faculty members. Columbia College requires instructors to have at least a Master's degree from a regionally accredited institution in the subject to be taught, with relevant coursework and/ or professional experience directly related to the course. In exceptional circumstances, special certification or extraordinary work experience may compensate the absence of certain academic credentials.

Estimate Percentage of Credit Hours that will be assigned to full time faculty:

Full-time faculty teach 12 credit hours or less in a given session. Adjunct faculty can teach no more than 9 credit hours in a given session, and no more than 6 in-seat credit hours a session.

Expectations for professional activities, special student contact, teaching/learning innovation:

Full-time faculty members are required to have 3 hours a week of office hours designated for their students. Full-time faculty members are required to participate in professional development. Adjunct faculty members are required to provide contact information to students.

Student Enrollment Projections Year One-Five

Year 1	Full Time: 1	Part Time: 5	
Year 2	Full Time: 3	Part Time: 10	
Year 3	Full Time: 4	Part Time: 15	Number of Graduates: 0
Year 4	Full Time: 5	Part Time: 21	
Year 5	Full Time: 6	Part Time: 26	Number of Graduates: 3

Percentage Statement:

n/a

Program Accreditation

Institutional Plans for Accreditation:

The program falls within the College's Higher Learning Commission accreditation.

Program Structure

Total Credits:

120

Residency Requirements:

n/a

General Education Total Credits:

42



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Major Requirements Total Credits:

76

Course(s) Added

COURSE NUMBER	CREDITS	COURSE TITLE
CHEM 310	3	Organic Chemistry I
CHEM 111L	1	Introductory Chemistry Laboratory Experience
BIOL 345	3	Principles of Cell Biology
BIOL 345L	1	Principles of Cell Biology Laboratory
BIOL 395W	3	Research Design in the Sciences
BIOL 110L	1	Principles of Biology I Laboratory
BIOL 412	3	Advanced Laboratory Techniques
CHEM 312L	1	Organic Chemistry II Laboratory
BIOL 409	3	Molecular Biotechniques
BIOL 390	1	Principles of Molecular Biology
BCHM 490W	3	Senior Seminar
BIOL 399	3	Science Internship
BIOL 112	3	Principles of Biology II
BIOL 110	3	Principles of Biology I
BIOL 254L	1	Genetics Laboratory
BIOL 224	3	Statistics for the Behavioral and Natural Sciences
CHEM 112	3	Chemistry II
BIOL 254	3	Genetics
BIOL 420	3	Biochemistry I
CHEM 110	3	Chemistry I
CHEM 112L	1	Chemistry II Laboratory
CHEM 310L	1	Organic Chemistry I Laboratory
CHEM 312	3	Organic Chemistry II
BIOL 420L	1	Biochemistry Laboratory
BIOL 112L	1	Principles of Biology II Laboratory
BIOL 415	3	Immunology

Free Elective Credits:

12



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Internship or other Capstone Experience:

n/a

Assurances

I certify that the program will not unnecessarily duplicate an existing program of another Missouri institution in accordance with 6 CSR 10-4.010, subsection (9)(C) Submission of Academic Information, Data and New Programs.

I certify that the program will build upon existing programs and faculty expertise.

I certify that the institution has conducted research on the feasibility of the proposal and it is likely the program will be successful. Institutions' decision to implement a program shall be based upon demand and/or need for the program in terms of meeting present and future needs of the locale, state, and nation based upon societal needs, and/or student needs.

Contact Information

First and Last Name: DUSTI
SCHNEDLER

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Phone: 573-875-3960

Molecular Biology, B.S.

General Education Requirements (39-42 sem. hrs)

For a complete list of general education courses click [here](#). For additional information on general education requirements click [here](#).

Ethics Course Requirement (3 sem. hrs)

PHIL 330 Ethics
[Right] **or**
PHIL 332 Environmental Ethics
[Right] **or**
PHIL 460 Biomedical Ethics

Core Requirements (76 sem. hrs)

BIOL 110 Principles of Biology I
BIOL 110L Principles of Biology I Laboratory
CHEM 110 Chemistry I
CHEM 111L Introductory Chemistry Laboratory Experience
BIOL 112 Principles of Biology II
BIOL 112L Principles of Biology II Laboratory
CHEM 112 Chemistry II
CHEM 112L Chemistry II Laboratory
[After]
BIOL 224 Statistics for the Behavioral and Natural Sciences
[Right] **or**
PSYC 224 Statistics for the Behavioral and Natural Sciences
[Right] **or**
SOCI 224 Statistics for the Behavioral and Natural Sciences
[After]
BIOL 254 Genetics
BIOL 254L Genetics Laboratory
CHEM 310 Organic Chemistry I
CHEM 310L Organic Chemistry I Laboratory
BIOL 345 Principles of Cell Biology
BIOL 345L Principles of Cell Biology Laboratory
CHEM 312 Organic Chemistry II
CHEM 312L Organic Chemistry II Laboratory
BIOL 420 Biochemistry I
BIOL 420L Biochemistry Laboratory

BIOL 390 Principles of Molecular Biology
BIOL 409 Molecular Biotechniques
BIOL 412 Advanced Laboratory Techniques
BIOL 395W Research Design in the Sciences
[After]
BIOL 399 Science Internship
[Right] **or**
BIOL 255 Directed Study
[Right] **or**
BIOL 455 Directed Study
[After]
BIOL 415 Immunology
BCHM 490W Senior Seminar

Molecular Biology Electives (12 sem. hrs)

12 hours of courses with BIOL, FRSC, MATH, or PHYS prefixes with at least 6 hours being at the 300 or above level.

Total Semester Hours: 120