

LIFE SCIENCE AS: 412A

Total Credits: 60

Catalog Edition: 2015-16

Program Description

The life science area of concentration is a transfer program that provides the first two years of courses necessary for a four-year baccalaureate degree in one of the life sciences. Working closely with a counselor or adviser, students will be able to tailor their program of study to fit the needs of most, if not all, colleges and universities offering a degree in biology or the biological sciences. Also, students planning to transfer to a four-year institution prior to attending medical, dental, veterinary, physical therapy, podiatry, or chiropractic school will find all or most of the prerequisite courses needed for admission to these professional schools. Finally, students planning to transfer to pharmacy, medical technology, or optometry school programs that accept students after two years of undergraduate education will find all the courses needed for admission into these programs.

Students are strongly advised to work closely with a biology or chemistry faculty member or an academic transfer counselor in order to select courses that will prevent or minimize the loss of credits upon transfer.

Program Outcomes

Upon completion of this program a student will be able to:

- Identify, describe, and explain basic biological concepts
- Use an interdisciplinary approach to explain and solve life science concepts (from knowledge learned in biological, chemical, and physical sciences and mathematics).
- Utilize the scientific method to analyze problems in the life sciences.

Program Advising

Rockville

- **Dr. Gina Wesley, 240-567-5122**
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Germantown

- **Dr. Lori Kelman, 240-567-6912**
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Takoma Park/Silver Spring

- **Dr. Valerie Lantz, 240-567-3989**
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For more information please visit:

www.montgomerycollege.edu/advising

or

GT STEP Advising

(<http://cms.montgomerycollege.edu/EDU/Department4.aspx?id=67267>)

2015-2016

Program Advising Guide

An Academic Reference Tool for Students

LIFE SCIENCE AS: 412A

Suggested Course Sequence

A suggested course sequence for full-time students follows. All students should review this advising guide and consult an advisor.

First Semester

ENGL 101 - Introduction to College Writing

3 semester hours

OR

ENGL 101A - Introduction to College Writing

3 semester hours

OR

English foundation

3 semester hours (ENGF)

CHEM 131 - Principles of Chemistry I

4 semester hours (NSLD)

MATH 165 - Precalculus

4 semester hours (MATF)

OR

MATH 170 - Calculus for Life Sciences I

4 semester hours

OR

MATH 181 - Calculus I

4 semester hours (MATF)

Behavioral and social sciences distribution

3 semester hours (BSSD) **

Health foundation

1 semester hour (HLTF)

Second Semester

BIOL 150 - Principles of Biology I

4 semester hours (NSLD)

CHEM 132 - Principles of Chemistry II

4 semester hours

MATH 171 - Calculus for Life Sciences II

4 semester hours

OR

MATH 181 - Calculus I

4 semester hours

OR

Program elective

4 semester hours †, ††

English foundation

3 semester hours (ENGF)

Arts distribution

3 semester hours (ARTD)

Humanities distribution

3 semester hours (HUMD)

Third Semester

BIOL 151 - Principles of Biology II

4 semester hours (NSLD)

Speech foundation

3 semester hours (SPCF)

Arts distribution

3 semester hours (ARTD)

OR

Program elective

3 semester hours †

Program elective

4 semester hours †

Fourth Semester

BIOL 220 - General Genetics

4 semester hours

OR

BIOL 222 - Principles of Genetics

4 semester hours †††

Behavioral and social sciences distribution

3 semester hours (BSSD)**

Program elective

4 semester hours †

Program elective

2 semester hours †

Total Credit Hours: 60

Advising Notes

**Behavioral and Social Science Distribution (BSSD) courses must come from different disciplines.

† Program electives: (Program elective range from 2-5 credits Any combination of 3 program electives is required for the degree Students are encouraged to speak with their transfer institution when selecting electives. It is recommended that in a 2 semester chemistry sequence, both courses be taken at the same institution, e.g. CHEM 203 & CHEM 204.) BIOL 210, BIOL 212, BIOL 213, BIOL 217, BIOL 226, BIOL 228, BIOL 230, BIOL 252, CHEM 203, CHEM 204, ENGL 101, MATH 182, PHYS 161, PHYS 203, PHYS 204, PHYS 233, PHYS 234, PHYS 262, PHYS 263, SCIR 297

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Total Credits: 60
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Name: Date: ID #:

GENERAL EDUCATION: FOUNDATION COURSES	Course	Hours	Grade
English Foundation (EN 102/ENGL 102 or EN 109/ENGL 103)		3	
Math Foundation (MATF)††		4	
GENERAL EDUCATION: DISTRIBUTION COURSES	Course	Hours	Grade
Arts Distribution (ARTD)			
Humanities Distribution (HUMD)			
Behavioral & Social Sciences Distribution (BSSD) *		3	
Behavioral & Social Sciences Distribution (BSSD) *		3	
Natural Sciences Distribution with Lab (NSLD)	BI 107/ BIOL 150	4	
Natural Sciences Distribution with Lab (NSLD)	CH 101/ CHEM 131	4	
General Education Elective (GEEL)		3	
PROGRAM REQUIREMENTS	Course	Hours	Grade
EN 101/ENGL 101 (if needed for ENGL102/103 or Program Elective if not)			
	BI 108/ BIOL 151	4	
	BI 222/ BIOL 222	4	
	CH 102/ CHEM 132	4	
MATH 170 or MA 181/MATH 181 <small>(SUBSTITUTE MATH 171 OR MATH 182 IF MATH 170 or MATH 181 IS USED FOR MATH FOUNDATION)</small>		4	
PROGRAM ELECTIVES†: SELECT AT LEAST 11 CREDITS			
HOURS FROM THE FOLLOWING COURSES:			
BI 203/ BIOL 210 , BI 204/ BIOL 212 , BI 205/ BIOL 213 , BI 207/ BIOL 217 ,			
BI 213/ BIOL 226 , BI 218/ BIOL 228 , BI 230/ BIOL 230 , BIOL 252 ,			
CH 203/ CHEM 203 , CH 204/ CHEM 204 , CS 140/ CMSC 140 ,			
CS 103/ CMSC 203 , CS 204/CMSC 204 , MATH 171 , MA 182/MATH 182 ,			
MA 182/ MATH 182 , MA 182/ MATH 182 , MA 280/ MATH 280 , MA 282/ MATH 282 ,			
PH 161/ PHYS 161 , PH 203/ PHYS 203 , PH 204/ PHYS 204 , PHYS 233 , PHYS 234 ,			
PH 262/ PHYS 262 , PH 263/ PHYS 263 , or SC 297/ SCIR 297			

Has student completed the Global Perspectives requirement? Yes No

Overall GPA of 2.0 is required to graduate

Global Perspectives Course:

Total Credits:

* The two behavioral and social sciences courses MUST be in different disciplines

† Program electives: (Program elective range from 2-5 credits Any combination of 3 program electives is required for the degree Students are encouraged to speak with their transfer institution when selecting electives. It is recommended that in a 2 semester chemistry sequence, both courses be taken at the same institution, e.g. CHEM 203 & CHEM 204.)

†† Students planning to transfer to UMCP should take MATH 170, and should choose as electives: BIOL 252, CHEM 203, CHEM 204 and MATH 171. Students that enter calculus ready should consider taking PHYS 233 and PHYS 234.

Last Modified: May 2016

Advising Worksheet Contact:
[Anthony Solano](#)

See an [advisor](#) to submit an [Application for Graduation](#) the semester BEFORE you intend to graduate.

Transfer Opportunities

Montgomery College has partnerships with multiple four-year institutions and the tools to help you transfer. To learn more please visit: <http://cms.montgomerycollege.edu/EDU/Plain.aspx?id=62341> or artsys.usmd.edu

Get Involved at MC!

Employers and Transfer Institutions are looking for experience outside the classroom.

MC Student Clubs and Organizations

<http://cms.montgomerycollege.edu/edu/plain.aspx?id=2439>

Related Careers

Some require a Bachelor's degree.

Natural Sciences Manager, Microbiologist, Biologist, Zoologist and Wildlife Biologist, Biological Technician, Pharmacist, Biostatistician, Bioinformatics Scientist, Occupational Therapist, Molecular and Cellular Biologist, Epidemiologist, Soil and Water Conservationist, Orthodontist Food Science Technician, Athletic Trainer, Pediatrician, General, Physician Assistant & Medical and Clinical Laboratory Technologist

Career Services

<http://www.montgomerycollege.edu/career>

Career Coach

A valuable online search tool that will give you the opportunity to explore hundreds of potential careers or job possibilities in Maryland and the Washington D.C. metropolitan area.

Get started today on your road to a new future and give it a try. Visit the website listed below:

<https://montgomerycollege.emsicareercoach.com>

Advising Notes *(continued)*

†† Students planning to transfer to UMCP should take MATH 170, and should choose as electives: BIOL 252, CHEM 203, CHEM 204 and MATH 171

††† Students planning to transfer to UMCP, UMBC or USG should take BIOL 222.

Notes:



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