

# Department of Biology

Major: **B.S. in Biology (non-teaching)**

Central Connecticut State University

New Britain, Connecticut 06050-4010

Name: \_\_\_\_\_

I.D. #: \_\_\_\_\_

Specialization: **Ecology, Biodiversity, and Evolutionary Biology**

Advisor: \_\_\_\_\_

Effective: Fall 2019

## General Education

### Study Area I –

**Arts and Humanities** (9 cr.)<sup>a</sup>

\_\_\_ LIT [L] \_\_\_\_\_ (3)

\_\_\_ \_\_\_\_\_ ( )

\_\_\_ \_\_\_\_\_ ( )

### Study Area II -

**Social Sciences** (9 cr.)<sup>a</sup>

\_\_\_ HIST \_\_\_\_\_ (3)

\_\_\_ \_\_\_\_\_ ( )

\_\_\_ \_\_\_\_\_ ( )

### Study Area III -

**Behavioral Sciences** (6 cr.)

\_\_\_ \_\_\_\_\_ ( )

\_\_\_ \_\_\_\_\_ ( )

### Study Area IV -

**Natural Sciences** (6-7 cr.)

\_\_\_ Related science<sup>f</sup> \_\_\_\_\_ (4)

\_\_\_ Related science<sup>f</sup> \_\_\_\_\_ (4)

**Skill Area I - Comm. Skills** (6 cr.)

\_\_\_ WRT 110 or 105<sup>b</sup> \_\_\_\_\_ (3)

\_\_\_ \_\_\_\_\_ ( )

**Skill Area II - Mathematics** (6 cr.)

\_\_\_ MATH 124<sup>d</sup>; or 115 (or 119)

and 125<sup>d</sup>; or 152<sup>e</sup> \_\_\_\_\_ (4-6)

\_\_\_ \_\_\_\_\_ ( )

**Skill Area III - Foreign Language Proficiency** (0-6 cr.)

\_\_\_ 3 sequential years of one foreign language at the high school level, or passing the foreign language exam, or

\_\_\_ completion of a 112 or 114 foreign language course, or

\_\_\_ completion of a foreign language course at a level higher than 112 or 114, or

\_\_\_ demonstration of native proficiency in a language other than English.

**Skill Area IV -**

**University Req.** (2-3 cr.)

\_\_\_ \_\_\_\_\_ ( )

## Major (32 credits)

\_\_\_ BIO 121 \_\_\_\_\_ (4)

\_\_\_ BIO 122 \_\_\_\_\_ (4)

\_\_\_ BIO 200 \_\_\_\_\_ (4)

\_\_\_ BIO 290 \_\_\_\_\_ (2)

\_\_\_ BIO 390 or 391 \_\_\_\_\_ (1-6)

\_\_\_ Biodiversity Elective \_\_\_\_\_ ( )

Biodiversity Electives: BIO 315, 322, 326, 327, 420, 421, 425, 444, 468

\_\_\_ Ecology/Evolution Elect. \_\_\_\_\_ ( )

Ecology/Evolution Electives: BIO 402, 405, 434, 440, 480

\_\_\_ E/B/E Specialization

electives to complete 32 cr. in the major

\_\_\_ \_\_\_\_\_ ( )

\_\_\_ \_\_\_\_\_ ( )

\_\_\_ \_\_\_\_\_ ( )

\_\_\_ \_\_\_\_\_ ( )

E/B/E Specialization electives: BIO 230, 402, 315, 322, 326, 327, 405, 410, 420, 421, 425, 434, 436, 444, 438, 440, 470, 480, 489, 490, 491, and 499. Note that to be considered in the E/B/E group, BIO 470, 490, 491, and 499 must have a topic approved by the E/B/E faculty advisor.

## Related Science

### Courses (23-25 credits)

\_\_\_ CHEM 161 and 162 \_\_\_\_\_ (4)

\_\_\_ CHEM 200 or 260<sup>g</sup> \_\_\_\_\_ (3)

\_\_\_ CHEM 210 and 211 \_\_\_\_\_ (4)

\_\_\_ MATH 124<sup>d</sup>; or 115 (or 119)

and 125<sup>d</sup>; or 152<sup>e</sup> \_\_\_\_\_ (4-6)

\_\_\_ PHYS 121 or 125 \_\_\_\_\_ (4)

\_\_\_ PHYS 122 or 126 \_\_\_\_\_ (4)

## Graduation Requirements

\_\_\_ Six credits designated "International" [I]

\_\_\_ First Year Experience requirement

## Minor<sup>c</sup> (optional)

\_\_\_ \_\_\_\_\_ ( )

\_\_\_ \_\_\_\_\_ ( )

\_\_\_ \_\_\_\_\_ ( )

\_\_\_ \_\_\_\_\_ ( )

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\_\_\_ \_\_\_\_\_ ( )

\_\_\_ \_\_\_\_\_ ( )

\_\_\_ Free electives to complete the required 120 cr. of study

\_\_\_ \_\_\_\_\_ ( )

\_\_\_ \_\_\_\_\_ ( )

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\_\_\_ \_\_\_\_\_ ( )

**Residency requirements:** A minimum of 30 cr. at CCSU with 15 cr. in the major and 9 cr. in the minor or concentration. Eligibility for high honors requires the student to earn 62 cr. in residence at CCSU.

<sup>a</sup> No more than 6 cr. from any one discipline.

<sup>b</sup> Students not completing WRT 110 prior to earning 61 cr. are required to take both WRT 110 and WRT 202.

<sup>c</sup> A minor is not required, but it is optional. Consult with your advisor.

<sup>d</sup> Prerequisites for PHY 121

<sup>e</sup> Prerequisite for PHYS 125

<sup>f</sup> Related science courses include CHEM 161/162 and PHYS 121, 122, 125, or 126.

<sup>g</sup> Chem 212 or Chem 354 will also satisfy this requirement. Chem 201 lab (1 credit) is optional for Chem 200 or Chem 260

CENTRAL CONNECTICUT STATE UNIVERSITY  
Department of Biology

PLAN OF STUDY

**B.S. Biology (non-teaching): Specialization in Ecology, Biodiversity, and Evolutionary Biology**

REQUIREMENTS: The B.S. Biology (non-teaching): Specialization in Ecology, Biodiversity, and Evolutionary Biology (E/B/E) requires a minimum of 32 credits in biology including BIO 121, 122, 200, 290, 390<sub>a</sub> or 391<sub>a</sub>, one course from the Biodiversity course group (i.e. BIO 315, 321, 326, 327, 420, 425, or 444), one course from the Ecology/Evolution course group (i.e. BIO 402, 405, 434, 440, or 480), and 8-12 cr. from any of the courses listed under the E/B/E Specialization<sub>b</sub>. In addition, the student must take MATH 124, or 115 & 125; or 152<sub>c,d</sub>; CHEM 161/162<sub>c</sub>, 200 or 260, and 210/211; and PHYS 121<sub>d</sub> or 125 and 122 or 126; and maintain a student portfolio<sub>e</sub>. While there are numerous ways to complete this B.S program within a four-year period, one possible plan is shown below as a model. As early as possible, each student electing this major should work with the Ecology/Biodiversity/Evolution Specialization faculty advisor to arrange an individual plan of study.

SAMPLE PLAN OF STUDY

FALL SEMESTER			SPRING SEMESTER		
Course #	Title	Credits	Course #	Title	Credits
<b>FIRST YEAR</b>					
BIO 121	<i>General Biology I</i>	4	BIO 122	<i>General Biology II</i>	4
CHEM 161/162	<i>General Chemistry<sub>c</sub></i>	4	CHEM 200	<i>Fdn of Analytical Chem</i>	3
MATH 124	<i>Applied Calculus with Trig<sub>c,d</sub></i>	4	or CHEM 260	<i>Fdn of Inorganic Chem</i>	
Gen Ed	General Education Electives	3	Gen Ed	General Education Elective	6
PE 144	<i>Fitness/Wellness Ventures<sub>f</sub></i>	2	WRT 110 or 105	Intro College Writing <sub>h</sub>	3
		17 <sub>g</sub>			16
<b>SECOND YEAR</b>					
BIO 200	<i>Integrative Biology</i>	4	BIO	Biodiversity Elective	3-4
BIO 290	<i>Biology Research Experience I</i>	2	Gen Ed	General Education Elective	9
CHEM 210	<i>Fdn of Organic Chemistry</i>	3	Free electives		3-4
CHEM 211	<i>Fdn of Organic Chemistry I Lab</i>	1			15-17
Gen Ed	General Education Elective	3			
		13			
<b>THIRD YEAR</b>					
PHYS 121	<i>General Physics I<sub>d</sub></i>	4	PHYS 122	<i>General Physics II</i>	4
BIO	Ecology/Evolution Elective	3-4	BIO	E/B/E Group Elective <sub>b</sub>	3-4
Gen Ed	General Education Electives	6	Gen Ed	General Education Electives	6
Free Elective		3	Free Elective		3
		16-17			16-17
<b>FOURTH YEAR</b>					
BIO	E/B/E Group Elective <sub>b</sub>	3-4	BIO	E/B/E Group Elective <sub>b</sub>	3-4
BIO 390	<i>Biology Research Experience II<sub>a</sub></i>	1-6	Free Electives		12
or Bio 391	<i>Internship in Biology</i>				15-16
Free Electives		10			
		14-17			

<sup>a</sup>BIO 390 (Biology Research Experience II) and BIO 391 (Internship in Biology) give each student the opportunity to work with an individual faculty member on a research, library, teaching, or internship project. Students are encouraged to discuss research opportunities with a selected faculty member at any point in their program. While the required (1 cr.) project may be completed as late as the senior year, more in-depth research experiences, which may culminate in an undergraduate thesis (BIO 499), may demand an earlier start.

<sup>b</sup>E/B/E Specialization courses: BIO 230, 315, 322, 326, 327, 402, 405, 410, 420, 421, 425, 434, 436, 438, 440, 444, 470, 480, 489, 491, 499. Note that to be considered in the E/B/E course group, BIO 490, 491, and 499 must have a topic approved by the E/B/E faculty advisor.

<sup>c</sup>MATH 103 (C- or better; or the Mathematics Placement Exam) is a prerequisite for CHEM 161/162.

<sup>d</sup>MATH 124 or Math 152 or combination of MATH 115 (or 119) and 125 are prerequisites for PHYS 121. MATH 152 is a prerequisite of PHYS 125.

<sup>e</sup>The portfolio requirement is described in the Biology section of the University Catalog, and will be discussed in Bio 200 lab.

<sup>f</sup>Or other Skill Area course (2-3 cr.) if entering CCSU with 15 or more transfer credit.

<sup>g</sup>First-year students must take an FYE introductory course in their first semester.

<sup>h</sup>Students not completing WRT 110 prior to earning 61 cr. are required to take both WRT 110 and WRT 202.