

Course Requirements for B.S. in Ecology 2013-2014 (Updated 20 February 2013)

This paradigm applies to ecology majors seeking to enter environmentally related professions or graduate programs

FRESHMAN YEAR

BIOL 111 Prin. Of Biol. I & Lab	4	BIOL 112 Prin. Of Biol. II & Lab	4
CHEM 113 Prin. Of Chem. I & Lab	4	CHEM 114 Prin. Of Chem. II & Lab	4
ENG 111 English Composition I	3	ENG 112 English Composition II	3
Elective ^{1,2} (MATH 117)	3	MATH 131 Calculus I	3
Orientation	0	Social Sciences GER	3
<i>Semester Total</i>	<i>14</i>	<i>Semester Total</i>	<i>17</i>

Pre-Summer Term: BIOL 250 Ecological Census Techniques* 3

SOPHOMORE YEAR

Biology Elective & Lab ³	4	CHEM 212 Organic Chem. II & Lab	4
CHEM 211 Organic Chem. I & Lab	4	PHYS 202 Intro. Physics & Lab	4
PHYS 201 Intro. Physics & Lab	4	Biology elective & Lab	4
Literature elective	3	Religious Studies GER (200 level)	3
<i>Semester Total</i>	<i>15</i>	<i>Semester Total</i>	<i>15</i>

JUNIOR YEAR

BIOL 311 Genetics & Lab	4	BIOL 340 Exp. Design & Analysis	3
BIOL 412 General Ecology & Lab	4	Biology elective & Lab	4
Social Sciences GER	3	PHIL 325 Environmental Ethics ⁴	3
Chemistry ⁵	4	Liberal Arts elective	3
<i>Semester Total</i>	<i>15</i>	Elective	3
		<i>Semester Total</i>	<i>16</i>

SENIOR YEAR

BIOL 441 Research I	2	BIOL 442 Research II	2
Biology elective & Lab	4	Biology elective & Lab	4
Biology elective & Lab	4	Biology elective	3
BIOL 499 Comprehensive Exam	0	Religious studies GER (300 level)	3
Elective	3	Elective	3
<i>Semester Total</i>	<i>13</i>	<i>Semester Total</i>	<i>15</i>

BIOLOGY ELECTIVES (Minimum of 27 hours of biology electives 200 level or higher including 19 hours at or above the 300 level; including at least one course from each of the four groups listed below.)

ECOGGroup I: BIOL 312 Human Physiology; BIOL 321 Microbiology; BIOL 370 Toxicology; BIOL 421 Cell/Molecular Biology

ECOGGroup II: BIOL 211 Embryology; BIOL 212 Comparative Anatomy; BIOL 346 Evolution

ECOGGroup III: BIOL 216 Botany; BIOL 250 Ecological Census Techniques; BIOL 303 Algae, Fungi & Lichens; BIOL 331 Dendrology; BIOL 304 Limnology; select preapproved special topic courses

ECOGGroup IV: BIOL 335 Invertebrate Zoology; BIOL 369 Herpetology; BIOL 381 Animal Behavior; BIOL 413 Parasitology; BIOL 497 Entomology; select preapproved special topic courses

¹ students may need to take MATH 117 and/or CHEM 101 if they do not place into MATH 131 and/or CHEM 113.

² minimum of 12 hours of free electives; no more than 6 hours of these in biology unless total credits exceed 122 hours.

³ minimum of 27 hours of biology electives at or above 200 level; must include at least one course from each of the four groups listed above; minimum of 19 hours of biology electives must be at or above the 300 level.

⁴ this course is highly recommended but could be replaced with another course that fulfills the moral values requirement.

⁵ recommended: Any chemistry course at the 200 level or above.

* This course can be taken during the pre-term summer session before Sophomore or Junior Year.

**CHRISTIAN BROTHERS UNIVERSITY
MEMPHIS, TENNESSEE**

BACHELOR OF SCIENCE IN ECOLOGY

This checklist applies to **biology majors** seeking to enter graduate or an environmentally related professional school or profession.

Name _____

BUC ID _____

UNIVERSITY and DEPARTMENTAL REQUIREMENTS (27 hours plus BIOL 111 with Lab)

Orientation (0) _____ Religious Studies 200-level (3) _____ Social Science GER (3) _____
English 111 (3) _____ Religious Studies 300-level (3) _____ Social Science GER (3) _____
English 112 (3) _____ Environmental Ethics (PHIL 325)¹ (3) _____
Literature (3) _____ Elective Liberal Arts¹(3) _____ (any School of Arts course)

BIOLOGY REQUIREMENTS² (23 hours)

BIOL 111 Prin. 1 (3) _____ LAB 111 (1) _____ BIOL 441 Independent Research I (2) _____
BIOL 112 Prin. 2 (3) _____ LAB 112 (1) _____ BIOL 442 Independent Research II (2) _____
BIOL 340 Experimental Design & Analysis (3) _____ BIOL 499 Comp. Exam _____ (P/F)
BIOL 311 Genetics (3) _____ LAB 311 (1) _____ BIOL 412 Ecology (3) _____ LAB (1) _____

BIOLOGY ELECTIVES³ (27 hours)

BIOL Group I (3) _____ LAB Group I (1) _____ BIOL elective _____ () LAB (1) _____
BIOL Group II (3) _____ LAB Group II (1) _____ BIOL elective _____ () LAB (1) _____
BIOL Group III (3) _____ LAB Group III (1) _____ BIOL elective _____ () LAB (1) _____
BIOL Group IV (3) _____ LAB Group IV (1) _____

SCIENCE AND MATHEMATICS REQUIREMENTS (31 hours)

CHEM 113 (3) _____ LAB 113 (1) _____ PHYS 201 (3) _____ LAB 201 (1) _____
CHEM 114 (3) _____ LAB 114 (1) _____ PHYS 202 (3) _____ LAB 202 (1) _____
CHEM 211 (3) _____ LAB 211 (1) _____ MATH 131⁵ (3) _____
CHEM 212 (3) _____ LAB 212 (1) _____ CHEM elective⁴ (3) _____ LAB (1) _____

FREE ELECTIVES^{6,7} (minimum 12 hours)

() _____ () _____ () _____ () _____

- **ECOGroup I:** BIOL 312 Human Physiology; BIOL 321 Microbiology; BIOL 370 Toxicology; BIOL 421 Cell/Molecular Biology
- **ECOGroup II:** BIOL 211 Embryology BIOL 212 Comparative Anatomy; BIOL 346 Evolution
- **ECOGroup III:** BIOL 216 Botany; BIOL 250 Ecological Census Techniques; BIOL 398 Wetland Ecology; BIOL 303 Algae, Fungi & Lichens; BIOL 394 Dendrology; BIOL 304 Limnology
- **ECOGroup IV:** BIOL 335 Invertebrate Zoology; BIOL 369 Herpetology; BIOL 381 Animal Behavior; NSCI 390 Natural History of the Vertebrates; BIOL 413 Parasitology; BIOL 497 Entomology

¹ Satisfies the 'Moral Values' general education requirement. Prerequisite – sophomore standing or higher.

² a grade of C or better in these courses is required for graduation.

³ minimum of 27 hours of biology electives 200 level or higher including at least 19 hours at or above the 300 level; including at least one course from each of the four groups listed above.

⁴ recommended: any chemistry course at the 200 level or higher.

⁵ MATH 117 is not required for those who place into MATH 131 Calculus I. MATH 131 is required to fulfill the departmental and university requirement.

⁶ minimum of 12 hours of free electives; no more than 6 hours in biology unless total credits exceed 122 hours. ALG 110, 115, 120; MATH 100, 103; and ENG 100 DO NOT fulfill the free elective requirements.

⁷ possible courses in Engineering include: CE 305 Environmental site assessment; CE 404 Solid and hazardous waste management; CE 405 Remediation of organically contaminated soil and water; CE 406 Air pollution.