

PROPOSED PATHWAY
CSCU Pathway Transfer A.A. Degree: Biology Studies

1	FRAMEWORK30		
2	<i>Section A: Common Designated Competencies</i>		
3	Written Communication I	ENG 101 Composition	3 credits
4	Written Communication II	General Education Elective	3 credits
5	Scientific Reasoning	BIO 121 General Biology I (C- or above)	4 credits
6	Scientific Knowledge & Understanding	CHE 121 General Chemistry I	4 credits
7	Quantitative Reasoning	MAT 185 Trigonometry (NVCC) MAT 186 Precalculus	4 credits
8	Historical Knowledge & Understanding	General Education Elective	3 credits
9	Social Phenomena	General Education Elective	3 credits
10	Aesthetic Dimensions	General Education Elective	3 credits
11	<i>Section B: Campus Designated Competencies</i>		
12	Competency 1	General Education Elective	3 credits
13	Competency 2	General Education Elective	3 credits
14	Framework30 Total		33 credits

15	PATHWAY30		
16	BIO 122	General Biology II (C- or above)	4 credits
17	BIO 235 OR 200-level BIO Lab Science	Ecology	4 credits
18	BIO 270 OR 200-level BIO Lab Science	Microbiology	4 credits
19	CHE 122	General Chemistry II	4 credits
20	PHY 121 OR CHE 211	General Physics I Organic Chemistry I	4 credits
21	PHY 122 OR CHE 212	General Physics II Organic Chemistry II	4 credits
22	MAT 254 OR General Education Elective	Calculus I	3-4 credits
23	<i>Unrestricted Electives</i>		0 credits
34	Pathway30 Total		27-28 credits

25	Biology Studies Pathway Total		60-61 credits*
----	--------------------------------------	--	-----------------------

*Students who are required to complete developmental coursework or who place below the required entry level of math for their program may not be able to complete their pathway degree in 60-61 credits/contact hours.

AY 2016-2017

Transfer Pathway and Degree Program

Template 1

Central Connecticut State University

General Biology B.S.

All biology courses must be completed with a C- or above.

1	Community Colleges*:			CCSU	
2		Credits			Credits
3	Framework30**				
4	General Education Requirements				
5	Competency:				
6	Section A				
7	Written I	ENG*101 English Composition	3	ENG 110	3
8	Written II	Gen Ed Elective	3	Skill Area I Communication Skills	3
9	Scientific Reasoning	BIO*121 General Biology I	4	Study Area IV Natural Sciences: BIO 121 General Biology I	4
10	Scientific Knowledge	CHE*121 General Chemistry I	4	Study Area IV Natural Sciences: CHEM 161 General Chemistry and CHEM 162 General Chemistry Lab 1	4
11	Quantitative	MAT* 185 Trigonometry (NVCC) MAT*186 Precalculus	4	Skill Area II Mathematics: MATH 119 Pre-Calculus with Trigonometry	4
12	Historical Knowledge	Gen Ed Elective	3	Study Area II History Requirement	3
13	Social Phenomena	Gen Ed Elective	3	Study Area II Social Sciences	3
14	Aesthetic Dimensions	Gen Ed Elective	3	Study Area I Arts & Humanities	3
15	Section B				
16	Competency:	Gen Ed Elective	3	Skill Area IV University Requirement	3
17	Competency:	Gen Ed Elective	3	Study Area III Behavioral Sciences	3
18	Framework30 Credits (30-31):				33
19	Pathway30				
20	Additional General Education Courses				
21				Study Area I – Literature	3
22	Additional Gen Ed Elective or MAT 254 Calculus I – if an additional general education elective is chosen. See line 25 if MAT 254 is chosen		(3)	Study Area I – Arts and Humanities – if an additional general education elective is chosen.	3
23				Study Area II – Social Sciences	3
24				Study Area III – Behavioral Sciences	3

25	Additional Gen Ed Elective or MAT 254 Calculus I – if MAT 254 is chosen. See line 22 if an additional general education elective is chosen.	(4)	Skill Area II – Math/Stat/ Comp Sci – MATH 152 Calculus I if MAT 254 is taken for this choice	4
26	Lines 22 and 25 will result in 3 or 4 credits, depending upon which option is chosen.	3-4		
27			<p>Skill Area III – Foreign Language Proficiency. Can be met through the following:</p> <ol style="list-style-type: none"> 1. Three sequential years of one foreign language at the high-school level. 2. Elementary proficiency as demonstrated by successfully completing a second-semester level CCSU foreign-language course (112 or 118). Students with no previous background in a language must take the first and second semesters (111 and 112, or 118); students who place out of 111 due to previous background in the language may satisfy the requirement by taking 112 only. 3. Passing the CLEP, a standardized examination which demonstrates knowledge of a foreign language equivalent to completion of a second-semester course or higher. 4. Successful completion of a foreign-language course at a level higher than the second- semester level. 5. Demonstration of native proficiency in a language other than English (requires evaluation of skill level by an appropriate faculty 	6

			member and/or official documentation, and approval by the Chair of the Department of Modern Languages (Credits will adjust accordingly.)	
28	General Education Credits:	36-37		51-52
29	Major Program Courses			
30	BIO*122 General Biology II	4	BIO 122 General Biology II	4
31	CHE* 122 General Chemistry II	4	CHEM200/201 Fdns of Analytical Chem/ Lab or CHEM 260/201 Fdns of Inorganic Chem/ Lab	4
32	PHY* 121 General Physics I or CHE*211 Organic Chemistry I	4	PHY 121 General Physics I or CHEM 210/211 Fdns of Organic Chem/Lab	4
33	BIO*235 Microbiology or 200's level BIO* lab science	4	BMS 316 Microbiology or BIO 200-level or higher lab science elective	4
34	BIO*270 Ecology or 200's level BIO* lab science	4	BIO 200-level or higher lab science elective	4
35	PHY* 122 General Physics II or CHE*212 Organic Chemistry II If CHE 212 is taken, it will be received at CCSU as an unrestricted elective – see line 50.	4	PHY 122 General Physics II or CHEM 212/213 Organic Synthesis/Lab	4
36			PHY 121 General Physics I or Fdns of Organic Chemistry/Lab (CHEM 210/211); whichever was not taken at CC	4
37			PHY 122 General Physics II (if not taken at CC)	(4)
38			BIO 200 Integrative Biology	4
39			BIO 290 Biology Research Experience I	2
40			If Calculus was not taken at the community college, take one of the following: MATH 124 Applied Calculus with Trigonometry (4) OR MATH 115 Trigonometry (3) AND MATH 125 Applied Calculus (3) OR MATH 152 Calculus I (4)	0-6
41			BIO elective	4

42			BIO 390 Biology Research Experience II or 391 Internship in Biology	1
43			BIO elective	3
44			BIO elective	3
45				
46				
47	Program Course Credits:	24		49-59
48	Minor Course Credits:		A minor is not required for this major.	
49	Open Electives			
50	If CHE 212 Organic Chemistry II was taken at the community college	(4)	CHEM 212/213 Organic Synthesis/Lab	(4)
	Students who have fulfilled foreign language requirements in high school or who use open elective credits at the community college to fulfill foreign language and/or minor requirements will end up with more open elective credits at the CCSU.			
51	Open Elective credits:	0		6-20
52	Total Credits at the Community College	60-61	Total Credits for the 4-Year Degree	120

Transfer Pathway and Degree Program

Template 1

Central Connecticut State University

Biology – Ecology, Biodiversity, and Evolutionary Biology B.S.

All biology courses must be completed with a C- or above.

1	Community Colleges*:		CCSU	
2		Credits		Credits
3	Framework30**			
4	General Education Requirements			
5	Competency:			
6	Section A			
7	Written I	ENG*101 English Composition	3	ENG 110 3
8	Written II	Gen Ed Elective	3	Skill Area I Communication Skills 3
9	Scientific Reasoning	BIO*121 General Biology I	4	Study Area IV Natural Sciences: BIO 121 General Biology I 4
10	Scientific Knowledge	CHE*121 General Chemistry I	4	Study Area IV Natural Sciences: CHEM 161 General Chemistry and CHEM 162 General Chemistry Lab 1 4
11	Quantitative	MAT* 185 Trigonometry (NVCC) MAT*186 Precalculus	4	Skill Area II Mathematics: MATH 119 Pre-Calculus with Trigonometry 4
12	Historical Knowledge	Gen Ed Elective	3	Study Area II History Requirement 3
13	Social Phenomena	Gen Ed Elective	3	Study Area II Social Sciences 3
14	Aesthetic Dimensions	Gen Ed Elective	3	Study Area I Arts & Humanities 3
15	Section B			
16	Competency:	Gen Ed Elective	3	Skill Area IV University Requirement 3
17	Competency:	Gen Ed Elective	3	Study Area III Behavioral Sciences 3
18	Framework30 Credits (30-31):			
19	Pathway30			
20	Additional General Education Courses			
21				Study Area I – Literature 3
22	Additional Gen Ed Elective or MAT 254 Calculus I – if an additional general education elective is chosen. See line 25 if MAT 254 is chosen	(3)		Study Area I – Arts and Humanities 3
23				Study Area II – Social Sciences 3
24				Study Area III – Behavioral Sciences 3
25	Additional Gen Ed Elective or MAT 254 Calculus I – if MAT 254 is chosen. See	(4)		Skill Area II – Math/Stat/ Comp Sci 3

	line 22 if an additional general education elective is chosen.			
26	Lines 22 and 25 will result in 3 or 4 credits, depending upon which option is chosen.	3-4		
27			<p>Skill Area III – Foreign Language Proficiency. Can be met through the following:</p> <ol style="list-style-type: none"> 1. Three sequential years of one foreign language at the high-school level. 2. Elementary proficiency as demonstrated by successfully completing a second-semester level CCSU foreign-language course (112 or 118). Students with no previous background in a language must take the first and second semesters (111 and 112, or 118); students who place out of 111 due to previous background in the language may satisfy the requirement by taking 112 only. 3. Passing the CLEP, a standardized examination which demonstrates knowledge of a foreign language equivalent to completion of a second-semester course or higher. 4. Successful completion of a foreign-language course at a level higher than the second- semester level. 5. Demonstration of native proficiency in a language other than English (requires evaluation of skill level by an appropriate faculty member and/or official documentation, and 	6

			approval by the Chair of the Department of Modern Languages (Credits will adjust accordingly.)	
28	General Education Credits:	36-37		51-52
29	Major Program Courses			
30	BIO*122 General Biology II	4	BIO 122 General Biology II	4
31	CHE* 122 General Chemistry II	4	CHEM200/201 Fdns of Analytical Chem/ Lab or CHEM 260/201 Fdns of Inorganic Chem/ Lab	4
32	PHY* 121 General Physics I or CHE*211 Organic Chemistry I	4	PHY 121 General Physics I or CHEM 210/211 Fdns of Organic Chem/Lab	4
33	BIO*235 Microbiology or 200's level BIO* lab science	4	BMS 316 Microbiology or BIO 200-level or higher lab science elective	4
34	BIO*270 Ecology or 200's level BIO* lab science	4	BIO 200-level or higher lab science elective	4
35	PHY* 122 General Physics II or CHE*212 Organic Chemistry II If CHE 212 is taken, it will be received at CCSU as an unrestricted elective – see line 50.	4	PHY 122 General Physics II or upper level Chem (200, 260, or 354)	4
36			PHY 121 General Physics I or CHEM 210/211 Fdns of Organic Chemistry/Lab; whichever was not taken at CC	4
37			PHY 122 General Physics II (if not taken at CCC)	(4)
38			BIO 200 Integrative Biology	4
39			BIO 290 Biology Research Experience I	2
			Biodiversity Elective – Choose from: BIO 315 Microbial Ecology BIO 322 Vertebrate Zoology BIO 326 Mushrooms, Mosses, & More BIO 327 Vascular Plants BIO 420 Ornithology BIO 421 Marine Invertebrate Biology BIO 425 Biology of Marine and Freshwater Algae BIO 444 Plant Taxonomy BIO 468	3-4

40			Ecology/Evolution Elective – Choose from: BIO 402 Population Genetics BIO 405 Ecology BIO 434 Ecology of Inland Waters BIO 440 Evolution BIO 480 Animal Behavior	3-4
41			EBE Specialization Elective – Choose from: BIO 230 Natural History BIO 402 Population Genetics BIO 315 Microbial Ecology BIO 322 Vertebrate Zoology BIO 326 Mushrooms, Mosses & More BIO 327 Vascular Plants BIO 405 Ecology BIO 410 Ecological Physiology BIO 420 Ornithology BIO 421 Marine Invertebrate Biology BIO 425 Biology of Marine & Freshwater Algae BIO 434 Ecology of Inland Waters BIO 438 Aquatic Pollution BIO 440 Evolution BIO 444 Plant Taxonomy BIO 470 Field Studies in Biology BIO 480 Animal Behavior BIO 489 Vertebrate Dissection *BIO 490 Topics in Biology *BIO 491 Advanced Problems in Biology *BIO 499 Undergraduate Thesis in Biology *To be considered in the E/B/E group, these courses must have a topic approved by the E/B/E faculty advisor.	2-4
42			BIO 390 Biology Research Experience II or 391 Internship in Biology	1
44				
45	Program Course Credits:	24		43-51
46	Minor Course Credits:		A minor is not required for this major.	
47	Open Electives			

48	CHEM 212 Organic Chemistry II – if taken at the community college	(4)	CHEM 200/201 Fundamentals of Analytical Chemistry w/Lab Or CHEM 260/201 Fundamentals of Inorganic Chemistry w/Lab Or CHEM 354 Foundations in Biochemistry	(4)
49	Students who have fulfilled foreign language requirements in high school or who use open elective credits at the community college to fulfill foreign language and/or minor requirements will end up with more open elective credits at the CCSU.			
50	Open Elective credits:	0		13-26
51	Total Credits at the Community College	60-61	Total Credits for the 4-Year Degree	120

AY 2016-2017

Transfer Pathway and Degree Program

Template 1

Central Connecticut State University

Biology – Environmental Science B.S.

All biology courses must be completed with a C- or above.

1	Community Colleges*:		CCSU		
2		Credits			Credits
3	Framework30**				
4	General Education Requirements				
5	Competency:				
6	Section A				
7	Written I	ENG*101 English Composition	3	ENG 110	3
8	Written II	Gen Ed Elective	3	Skill Area I Communication Skills	3
9	Scientific Reasoning	BIO*121 General Biology I	4	Study Area IV Natural Sciences: BIO 121 General Biology I	4
10	Scientific Knowledge	CHE*121 General Chemistry I	4	Study Area IV Natural Sciences: CHEM 161 General Chemistry and CHEM 162 General Chemistry Lab 1	4
11	Quantitative	MAT* 185 Trigonometry (NVCC) MAT*186 Precalculus	4	Skill Area II Mathematics: MATH 119 Pre-Calculus with Trigonometry	4
12	Historical Knowledge	Gen Ed Elective	3	Study Area II History Requirement	3
13	Social Phenomena	Gen Ed Elective	3	Study Area II Social Sciences	3
14	Aesthetic Dimensions	Gen Ed Elective	3	Study Area I Arts & Humanities	3
15	Section B				
16	Competency:	Gen Ed Elective	3	Skill Area IV University Requirement	3
17	Competency:	Gen Ed Elective	3	Study Area III Behavioral Sciences	3
18	Framework30 Credits (30-31):				
19	Pathway30				
20	Additional General Education Courses				
21				Study Area I – Literature	3
22	Additional Gen Ed Elective or MAT 254 Calculus I – if an additional general education elective is chosen. See line 25 if MAT 254 is chosen		(3)	Study Area I – Arts and Humanities	3
23				Study Area II – Social Sciences	3
24				Study Area III – Behavioral Sciences	3
25	Additional Gen Ed Elective or MAT 254 Calculus I – if MAT 254 is chosen. See		(4)	Skill Area II – Math/Stat/ Comp Sci	3

	line 22 if an additional general education elective is chosen.			
26	Lines 22 and 25 will result in 3 or 4 credits, depending upon which option is chosen.	3-4		
27			<p>Skill Area III – Foreign Language Proficiency. Can be met through the following:</p> <ol style="list-style-type: none"> 1. Three sequential years of one foreign language at the high-school level. 2. Elementary proficiency as demonstrated by successfully completing a second-semester level CCSU foreign-language course (112 or 118). Students with no previous background in a language must take the first and second semesters (111 and 112, or 118); students who place out of 111 due to previous background in the language may satisfy the requirement by taking 112 only. 3. Passing the CLEP, a standardized examination which demonstrates knowledge of a foreign language equivalent to completion of a second-semester course or higher. 4. Successful completion of a foreign-language course at a level higher than the second- semester level. 5. Demonstration of native proficiency in a language other than English (requires evaluation of skill level by an appropriate faculty member and/or official documentation, and 	6

			approval by the Chair of the Department of Modern Languages (Credits will adjust accordingly.)	
28	General Education Credits:	36-37		51-52
29	Major Program Courses			
30	BIO*122 General Biology II	4	BIO 122 General Biology II	4
31	CHE* 122 General Chemistry II	4	CHEM200/201 Fdns of Analytical Chem/ Lab or CHEM 260/201 Fdns of Inorganic Chem/ Lab	4
32	PHY* 121 General Physics I or CHE*211 Organic Chemistry I	4	PHY 121 General Physics I or CHEM 210/211 Fdns of Organic Chem/Lab	4
33	BIO*235 Microbiology or 200's level BIO* lab science	4	BMS 316 Microbiology or BIO 200-level or higher lab science elective	4
34	BIO*270 Ecology or 200's level BIO* lab science	4	BIO 200-level or higher lab science elective	4
35	PHY* 122 General Physics II or CHE*212 Organic Chemistry II	4	PHY 122 General Physics II or CHEM 212 Organic Synthesis and CHEM 213 Organic Synthesis Laboratory	4
36			PHY 121 General Physics I if PHY 121 General Physics I was not taken at the community college	(4)
37			CHEM 210 Foundations of Organic Chemistry and CHEM 211 Foundations of Organic Chemistry Laboratory if CHE 211 Organic Chemistry I was not taken at the community college	(4)
38			PHY 122 General Physics II if PHY 122 General Physics II was not taken at the community college	(4)
39			IF CHE 212 Organic Chemistry is not taken at the community college: CHEM 212 Organic Synthesis and CHEM 213 Organic Synthesis Laboratory OR CHEM 354 Foundations of Biochemistry	(3-4)
40			Lines 36-40 will add up to 7-8 credits	7-8
41			BIO 200 Integrative Biology	4

42			BIO 290 Biology Research Experience I	2
43			BIO 436 Environmental Resources and Management (3) OR BIO 438 Aquatic Pollution (4)	3-4
44			Choose one: BIO 315 Microbial Ecology BIO 322 Vertebrate Zoology BIO 326 Mushrooms, Mosses, & More BIO 327 Vascular Plants BIO 420 Ornithology BIO 421 Marine Invertebrate Biology BIO 425 Biology of Marine and Freshwater Algae BIO 444 Plant Taxonomy	3-4
45			Choose one: BIO 405 Ecology BIO 434 Ecology of Inland Waters	4
46			BIO 390 Biology Research Experience II or 391 Internship in Biology	1
47			CHEM 456 Toxicology	4
48			Choose one: ESCI 121 Physical Geology (GSCI 121 The Dynamic Earth?) ESCI 450 Environmental Geology (GSCI?)	3
49	Program Course Credits:	24		55-58
50	Minor Course Credits:		A minor is not required for this major.	
51	Open Electives			
52	Students who have fulfilled foreign language requirements in high school or who use open elective credits at the community college to fulfill foreign language and/or minor requirements will end up with more open elective credits at the CCSU.			
53	Open Elective credits:	0		10-14
54	Total Credits at the Community College	60-61	Total Credits for the 4-Year Degree	120

Transfer Pathway and Degree Program

Template 1

Eastern Connecticut State University

Complete four-year degree with articulation of community college degree to four-year degree

Biology B.A.

Both BIO 120 and BIO 130 must be successfully completed with a grade of C- or better prior to starting BIO 220 or BIO 230. Both BIO 220 and BIO 230 must be successfully completed with a grade of C- or better before starting on the required upper-level courses.

1	Community Colleges*:			ECSU	
2		Credits			Credits
3	Framework30**				
4	General Education Requirements				
5	Competency:				
6	Section A				
7	Written I	ENG*101 English Composition	3	T1: College Writing	3
8	Written II	Gen Education Elective	3	T1: Lit & Thought	3
9	Scientific Reasoning	BIO*121 General Biology I	4	T1: Natural Sciences – BIO 120 Organismal Biology w/Lab	4
10	Scientific Knowledge	CHE*121 General Chemistry I	4	T2: Natural Sciences – CHE 210/212 General Chemistry I w/Lab	4
11	Quantitative	MAT* 185 Trigonometry (NVCC) MAT*186 Precalculus	4	T1: Math – MAT 130 Precalculus	4
12	Historical Knowledge	Gen Ed Elective	3	T1: Historical Perspectives	3
13	Social Phenomena	Gen Ed Elective	3	T1SS: Social Sciences	3
14	Aesthetic Dimensions	Gen Ed Elective	3	T1A: Arts in Context	3
15	Section B				
16	Competency:	Gen Ed Elective	3	FYI 100	3
17	Competency:	Gen Ed Elective	3	Health and Wellness	3
18	Framework30 Credits (30-31):				33
19	Pathway30				
20	Additional General Education Courses				
21				T2 Cultural Perspectives	3
22				T2 Individuals and Societies	3
23				T2 Creative Expressions	3
24				T2 Applied Information Technologies – Must be MAT 216 Statistical Data Analysis (if Calculus is not taken at the community college)	3

25			Tier 3 Capstone – BIO 466 Senior Seminar	3
26			Foreign Language Proficiency (Can be met by completing at least two years of a single foreign language in high school or two semesters of a single foreign language at the college level. Credits will adjust accordingly.)	6
27	General Education Credits:			54
28	Major Program Courses			
29	BIO*122 General Biology II	4	BIO 130 Ecology with Lab	4
30	CHE* 122 General Chemistry II	4	CHEM 211 General Chemistry II (3) and CHEM 213 General Chemistry II Lab(1)	4
31	PHY* 121 General Physics I or CHE*211 Organic Chemistry I	4	PHY 204 General Physics I with Lab; If CHE 211 is taken at the community college, see line 46 for how CHE 216 will be counted at ECSU; see also line 35	4
32	BIO*235 Microbiology or 200's level BIO* lab science	4	BIO 334 General Microbiology w/Lab or 200's level BIO* lab science elective	4
33	Additional Gen Ed Elective or Calculus I	3-4	Gen Ed Elective or Calculus (course # depends on Cal course taken); Calculus will count at ECSU as the MAT 216 Statistical Data Analysis – see lines 24 and 39	3-4
34	BIO*270 or 200's level BIO* lab science	4	200's level BIO lab science elective – Some courses chosen will fulfill a specific major requirement; some will fulfill an unrestricted elective. THIS LIST SHOULD BE PROVIDED?	4
35			PHY 204 General Physics I with Lab (if PHY I was not taken at CC)	(4)
36			BIO 220 Cell Biology	4
37			BIO 230 Genetics	4
38			EES 104 Dynamic Earth	4
39			MAT 216 Statistical Data Analysis – if Calculus was not taken at the community college	(3)
40			300's or 400's level Cell and Molecular Biology elective from	4

		<p>the following (if BIO*235 was not taken at CC) or any 300's or 400's level Biology Elective:</p> <p>BIO 330 Cell Biology w/Lab</p> <p>BIO 420 Electron Microscopy w/Lab</p> <p>BIO 422 Research Methods Molecular Bio w/Lab</p> <p>BIO 424 Cell Physiology</p> <p>BIO 426 Biology of Cancer</p> <p>BIO 428 Virology w/Lab</p> <p>BIO 430 Endocrinology w/Lab</p> <p>BIO 432 Histology w/Lab</p> <p>BIO 434 Developmental Biology w/Lab</p> <p>BIO 436 Molecular Genetics w/Lab</p> <p>BIO 438 Plant Physiology w/Lab</p> <p>BIO 450 Biotechnology w/Lab</p> <p>BIO 458 Stem Cells and Regenerative Medicine</p>	
41		<p>300's or 400's level Population Biology and Ecology elective from the following:</p> <p>BIO 320/360 Tropical Biology and Tropical Ecosystems</p> <p>BIO 319/320 Oceanic Island Ecology and Tropical Biology</p> <p>BIO 440 Aquatic Biology w/Lab</p> <p>BIO 442 Plant Ecology w/Lab</p> <p>BIO 444 Population/Community Ecology w/Lab</p> <p>BIO 446 Terrestrial Ecology w/Lab</p> <p>BIO 452 Conservation Biology w/Lab</p> <p>BIO 454 Biological Invasions w/Lab</p> <p>BIO 456 Marine Ecology w/Lab</p>	4
42		<p>300's or 400's level Organismal Biology elective from the following:</p> <p>BIO 324 Entomology w/Lab</p> <p>BIO 332 Biology of Plants w/Lab</p> <p>BIO 334 General Microbiology w/Lab</p> <p>BIO 336 Invertebrate Biology w/Lab</p>	4

			BIO 338 Vertebrate Biology w/Lab BIO 340 Parasitology w/Lab 4 BIO 346 Animal Behavior w/Lab BIO 348 Functional Human Anatomy w/Lab BIO 350 Human Physiology w/Lab BIO 448 Physiological Ecology w/Lab	
43			300's or 400's level Biology Elective	8
44	Program Course Credits:			63-64
45	Open Electives			
46	CHE 211 Organic Chemistry I – if taken at the community college	(4)	CHE 216 Organic Chemistry I with Lab – if taken at the community college	(4)
47	PHY* 122 General Physics II or CHE*212 Organic Chemistry II	4	PHY 205 General Physics II With Lab Or CHE 217 Organic Chemistry II with Lab Neither is required in the program	4
48	Students who have fulfilled foreign language requirements in high school or who use open elective credits at the community college to fulfill foreign language requirements will end up with more open elective credits at the ECSU			
49	Open Elective credits:			2-3
50	Total Credits at the Community College	60-61	Total Credits for the 4-Year Degree	120

Transfer Pathway and Degree Program

Template 1

Eastern Connecticut State University

Complete four-year degree with articulation of community college degree to four-year degree

Biology B.S.

Both BIO 120 and BIO 130 must be successfully completed with a grade of C- or better prior to starting BIO 220 or BIO 230. Both BIO 220 and BIO 230 must be successfully completed with a grade of C- or better before starting on the required upper-level courses.

1	Community Colleges*:		ECSU	
2		Credits		Credits
3	Framework30**			
4	General Education Requirements			
5	Competency:			
6	Section A			
7	Written I	ENG*101 English Composition	3	T1: College Writing 3
8	Written II	Gen Education Elective	3	T1: Lit &Thought 3
9	Scientific Reasoning	BIO*121 General Biology I	4	T1: Natural Sciences – BIO 120 Organismal Biology w/Lab 4
10	Scientific Knowledge	CHE*121 General Chemistry I	4	T2: Natural Sciences – CHE 210/212 General Chemistry I w/Lab 4
11	Quantitative	MAT* 185 Trigonometry (NVCC) MAT*186 Precalculus	4	T1: Math – MAT 130 Precalculus 4
12	Historical Knowledge	Gen Ed Elective	3	T1: Historical Perspectives 3
13	Social Phenomena	Gen Ed Elective	3	T1SS: Social Sciences 3
14	Aesthetic Dimensions	Gen Ed Elective	3	T1A: Arts in Context 3
15	Section B			
16	Competency:	Gen Ed Elective	3	FYI 100 3
17	Competency:	Gen Ed Elective	3	Health and Wellness 3
18	Framework30 Credits (30-31):			33
19	Pathway30			
20	Additional General Education Courses			
21				T2 Cultural Perspectives 3
22				T2 Individuals and Societies 3
23				T2 Creative Expressions 3
24				T2 Applied Information Technologies – If taken for line 40, MAT 216 Statistical Data Analysis 3

25			Tier 3 Capstone – BIO 466 Senior Seminar	3
26			Foreign Language Proficiency (Can be met by completing at least two years of a single foreign language in high school or two semesters of a single foreign language at the college level. Credits will adjust accordingly.)	6
27	General Education Credits:			54
28	Major Program Courses			
29	BIO*122 General Biology II	4	BIO 130 Ecology with Lab	4
30	CHE* 122 General Chemistry II	4	CHEM 211 General Chemistry II (3) and CHEM 213 General Chemistry II Lab(1)	4
31	PHY* 121 General Physics I or CHE*211 Organic Chemistry I	4	PHY 204 General Physics I with Lab Or CHE 216 Organic Chemistry I with Lab	4
32	BIO*235 Microbiology or 200's level BIO* lab science	4	BIO 334 General Microbiology w/Lab or 200's level BIO* lab science elective	4
33	Additional Gen Ed Elective or Calculus I	3-4	Gen Ed Elective or Calculus (course # depends on Cal course taken)	3-4
34	BIO*270 or 200's level BIO* lab science	4	200's level BIO lab science elective – Some courses chosen will fulfill a specific major requirement; some will fulfill an unrestricted elective. THIS LIST SHOULD BE PROVIDED?	4
35			CHE 216 Organic Chemistry I w/Lab (if not taken at the CC)	(4)
36			PHY 204 General Physics I with Lab (if PHY was not taken at CC)	(4)
37			Lines 36-38 will add up to 4 credits.	4
38			BIO 220 Cell Biology	4
39			BIO 230 Genetics	4
40			MAT 243 Calculus I w/Technology (if not taken at the CC)	0-4
41			One of the following: MAT 244 Calculus II w/Technology MAT 216 Statistical Data	0, 3 or 4

			Analysis – counts as T2 Applied Information Technologies – see line 24 BIO 378 Biology Research and Data Analysis	
42				
43				
44			300's or 400's level Cell and Molecular Biology elective from the following (if BIO*235 was not taken at CC) or any 300's or 400's level Biology Elective: BIO 330 Cell Biology w/Lab BIO 420 Electron Microscopy w/Lab BIO 422 Research Methods Molecular Bio w/Lab BIO 424 Cell Physiology BIO 426 Biology of Cancer BIO 428 Virology w/Lab BIO 430 Endocrinology w/Lab BIO 432 Histology w/Lab BIO 434 Developmental Biology w/Lab BIO 436 Molecular Genetics w/Lab BIO 438 Plant Physiology w/Lab BIO 450 Biotechnology w/Lab BIO 458 Stem Cells and Regenerative Medicine	4
45			300's or 400's level Population Biology and Ecology elective from the following: BIO 320/360 Tropical Biology and Tropical Ecosystems BIO 319/320 Oceanic Island Ecology and Tropical Biology BIO 440 Aquatic Biology w/Lab BIO 442 Plant Ecology w/Lab BIO 444 Population/Community Ecology w/Lab BIO 446 Terrestrial Ecology w/Lab BIO 452 Conservation Biology w/Lab BIO 454 Biological Invasions w/Lab	4

46			BIO 456 Marine Ecology w/Lab 300's or 400's level Organismal Biology elective from the following: BIO 324 Entomology w/Lab BIO 332 Biology of Plants w/Lab BIO 334 General Microbiology w/Lab BIO 336 Invertebrate Biology w/Lab BIO 338 Vertebrate Biology w/Lab BIO 340 Parasitology w/Lab 4 BIO 346 Animal Behavior w/Lab BIO 348 Functional Human Anatomy w/Lab BIO 350 Human Physiology w/Lab BIO 448 Physiological Ecology w/Lab	4
47			300's or 400's level Biology Elective	8
48	Program Course Credits:			55-64
49	Open Electives			
50	PHY* 122 General Physics II or CHE*212 Organic Chemistry II	4	PHY 205 General Physics II with Lab Or CHE 217 Organic Chemistry II with Lab	4
51	Students who have fulfilled foreign language requirements in high school or who use open elective credits at the community college to fulfill foreign language requirements will end up with more open elective credits at the ECSU.			
52	Open Elective credits:			0-7
53	Total Credits at the Community College	60-61	Total Credits for the 4-Year Degree	120-122

Transfer Pathway and Degree Program
Template 1
Southern Connecticut State University
Biology B.A.

1	Community Colleges*:			SCSU	
2		Credits			Credits
3	Framework30**				
4	General Education Requirements				
5	Competency:				
6	Section A				
7	Written I	English 101	3	FYE	3
8	Written II	Gen Ed	3	Written Communication	3
9	Scientific Reasoning	BIO*121 General Biology I	4	Natural World 1 – Physical Realm – BIO 100 General Zoology (3) and BIO 0100 BIO Transfer Elective (1)	4
10	Scientific Knowledge	CHE*121 General Chemistry I	4	Natural World II – Life and Environment – CHE 120 General Chemistry I	4
11	Quantitative	MAT* 185 Trigonometry (NVCC) MAT*186 Precalculus	4	Quantitative Reasoning – MAT 122 Precalculus	4
12	Historical Knowledge	Gen Ed*	3	Time and Place	3
13	Social Phenomena	Gen Ed	3	Social structure, Conflict, Consensus	3
14	Aesthetic Dimensions	Gen Ed	3	Cultural Expressions	3
15	Section B				
16	Competency:	Gen Ed	3	Critical Thinking	3
17	Competency:	Gen Ed	3	Tech Fluency	3
18	Framework30 Credits (30-31):				33
19	Pathway30				
20	Additional General Education Courses				
21	<i>One additional general education requirement may be fulfilled at the community college in place of Calculus I. See line 47 in Unrestricted Electives.</i>				
22				American Experience	3
23				Creative Drive	3
24				Global Awareness	3
25				Mind and Body	3
26				Multilingual Communication – level 3 (Can be met by completing the third level of a	9

			foreign language or demonstrating knowledge via a STAMP test (Standards-based Measurement of Proficiency) or an equivalent. Credits will adjust accordingly.)	
27			Must be taken at SCSU:	
28			Tier 3 Connections Capstone	0
29	General Education Credits:			54
30	Major Program Courses			
31	BIO*122 General Biology II	4	BIO 102 - Zoology	4
32			BIO 103 – Botany	4
33			BIO 220 Genetics An equivalent course can be taken at the CC's. See lines 36, 38)	4
34			Select one Entry Level Anatomy/Physiology BIO 230 – Plant Anatomy and Morphology or BIO 231 – Comparative Vertebrate Anatomy or BIO 235 - Histology	4
35			Select one Upper Level Anatomy/Physiology BIO 301 – Physiology or BIO 401 – Animal Physiology or BIO 420 – Plant Physiology or BIO 454 – Brain Anatomy and Transmission	4
36	BIO*235 Microbiology or 200's level BIO* lab science The 200-level BIO lab science may meet an entry-level requirement or will transfer as an unrestricted elective. See line BIO ### Genetics will transfer as BIO 220 Genetics. See line 33 These courses should be specified	4	Select one Entry Level Cell/Molecular Biology (if not completed at the CC) BIO 205 – Forensic Biology or BIO 233 – General Microbiology or BIO 240 – Human Heredity (3 cr)	(3-4)
37			Select one Upper Level Cell/Molecular Biology BIO 335 – Pathogenic Microbiology or BIO 360- Plant Growth and Development or BIO 435 – Developmental Biology or BIO 436 – Molecular Biology or BIO 451 – Tissue Culture or	4

			BIO 466 – Advanced Molecular and Cell Biology or BIO 467 – Laboratory Course in Biotechnology	
38	BIO*270 Ecology or 200's level BIO* lab science The 200-level BIO lab science may meet an entry-level requirement or will transfer as an unrestricted elective. See line BIO ### Genetics will transfer as BIO 220 Genetics. See line 38 These courses should be specified	4	Select one <u>Entry Level Biodiversity/ Ecology/ Organismal</u> (if not completed at the CC) BIO 202 – Ecology or BIO 210 – Environmental Biology and Conservation (3 cr) or BIO 228- Vertebrate Zoology or BIO229 – Invertebrate Zoology or BIO 250 – Plant Taxonomy and Systematics	3-4
39			Select one <u>Upper Level Biodiversity/ Ecology/ Organismal</u> BIO 334 – Microbial Ecology or BIO 337 – Medically Important Arthropods (3 cr) or BIO 427 – Entomology or BIO 429 – Limnology or BIO 430 – Marine Ecology or BIO 432 – Mycology or BIO 438 – Aquatic Entomology or BIO 440 – Parasitic Infections (3 cr) or BIO 460 – Paleontology	3-4
40			One other upper level BIO course from upper level lists above	4
41	CHE* 122 General Chemistry II	4	CHE 122 General Chemistry II	4
42				
43	Program Course Credits:			38-44
44	Unrestricted Electives			
45	PHY* 121 General Physics I or CHE*211 Organic Chemistry I	4	PHY 201 General Physics I Or CHE 260 Organic Chemistry I	4
46	PHY* 122 General Physics II or CHE*212 Organic Chemistry II	4	PHY 201 General Physics II Or CHE 261 Organic Chemistry II	4
47	Additional Gen Ed Elective or Calculus I MAT 254 will transfer as an unrestricted elective	3-4	Gen Ed elective or MAT 150 Calculus I.	(3-4)

48	BIO*235 Microbiology or 200's level BIO* lab science The 200-level BIO lab science may meet an entry-level requirement or will transfer as an unrestricted elective. See line 36	4	BIO 200 transfer elective if not transferred as a specific entry-level requirement	(4)
49	BIO*270 Ecology or 200's level BIO* lab science The 200-level BIO lab science may meet an entry-level requirement or will transfer as an unrestricted elective. See line 38	4	BIO 200 transfer elective if not transferred as a specific entry-level requirement	(4)
50				
51	Students who have fulfilled foreign language requirements through assessment (STAMP or equivalent), who place beyond first semester, or who use open elective credits at the community college to fulfill foreign language requirements will end up with more open elective credits at SCSU.			
52	Open Elective credits:			2-20
53	Total Credits at the Community College	60-61	Total Credits for the 4-Year Degree	120

Transfer Pathway and Degree Program
Template 1
Southern Connecticut State University
Biology B.S.

1	Community Colleges*:			SCSU	
2		Credits			Credits
3	Framework30**				
4	General Education Requirements				
5	Competency:				
6	Section A				
7	Written I	English 101	3	FYE	3
8	Written II	Gen Ed	3	Written Communication	3
9	Scientific Reasoning	BIO*121 General Biology I	4	Natural World 1 – Physical Realm – BIO 100 General Zoology (3) and BIO 0100 BIO Transfer Elective (1)	4
10	Scientific Knowledge	CHE*121 General Chemistry I	4	Natural World II – Life and Environment – CHE 120 General Chemistry I	4
11	Quantitative	MAT* 185 Trigonometry (NVCC) MAT*186 Precalculus	4	Quantitative Reasoning – MAT 122 Precalculus	4
12	Historical Knowledge	Gen Ed*	3	Time and Place	3
13	Social Phenomena	Gen Ed	3	Social structure, Conflict, Consensus	3
14	Aesthetic Dimensions	Gen Ed	3	Cultural Expressions	3
15	Section B				
16	Competency:	Gen Ed	3	Critical Thinking	3
17	Competency:	Gen Ed	3	Tech Fluency	3
18	Framework30 Credits (30-31):				33
19	Pathway30				
20	Additional General Education Courses				
21	<i>One additional general education requirement may be fulfilled at the community college in place of Calculus I. See line 53 in Unrestricted Electives.</i>				
22				American Experience	3
23				Creative Drive	3
24				Global Awareness	3
25				Mind and Body	3
26				Multilingual Communication – level 3 (Can be met by completing the third level of a	9

			foreign language or demonstrating knowledge via a STAMP test (Standards-based Measurement of Proficiency) or an equivalent. Credits will adjust accordingly.)	
27			Must be taken at SCSU:	
28			Tier 3 Connections Capstone	0
29	General Education Credits:			54
30	Major Program Courses			
31	BIO*122 General Biology II	4	BIO 102 - Zoology	4
32	CHE* 122 General Chemistry II	4	CHE 122 General Chemistry II	4
33	PHY* 121 General Physics I or CHE*211 Organic Chemistry I	4	PHY 200 General Physics I Or CHE 260 Organic Chemistry I	4
34	PHY* 122 General Physics II or CHE*212 Organic Chemistry II CHE 212 will transfer as an unrestricted elective. See line 54	4	PHY 201 General Physics II Or CHE 261 Organic Chemistry II	4
35			PHY 200 General Physics I if not taken at the community college	(4)
36			PHY 201 General Physics II if not taken at the community college	(4)
37			CHEM 260 Organic Chemistry I if not was not taken at the community college	(4)
38			Lines 35-37 will add up to 4-8 credits	4-8
39			BIO 103 – Botany	4
40			BIO 220 Genetics An equivalent course can be taken at the community college. See lines 41 and 43	4
41			<u>Select one Entry Level Anatomy/Physiology</u> BIO 230 – Plant Anatomy and Morphology or BIO 231 – Comparative Vertebrate Anatomy or BIO 235 - Histology	4
42			<u>Select one Upper Level Anatomy/Physiology</u> BIO 301 – Physiology or BIO 401 – Animal Physiology or BIO 420 – Plant Physiology or BIO 454 – Brain Anatomy and Transmission	4

43	<p>BIO*235 Microbiology or 200's level BIO* lab science The 200-level BIO lab science may meet an entry-level requirement or will transfer as an unrestricted elective. See line BIO ### Genetics will transfer as BIO 220 Genetics. See line 33 These courses should be specified</p>	4	<p>Select one Entry Level Cell/Molecular Biology BIO 205 – Forensic Biology or BIO 233 – General Microbiology or BIO 240 – Human Heredity (3 cr)</p>	3-4
44			<p>Select one Upper Level Cell/Molecular Biology BIO 335 – Pathogenic Microbiology or BIO 360- Plant Growth and Development or BIO 435 – Developmental Biology or BIO 436 – Molecular Biology or BIO 451 – Tissue Culture or BIO 466 – Advanced Molecular and Cell Biology or BIO 467 – Laboratory Course in Biotechnology</p>	4
45	<p>BIO*270 Ecology or 200's level BIO* lab science The 200-level BIO lab science may meet an entry-level requirement or will transfer as an unrestricted elective. See line BIO ### Genetics will transfer as BIO 220 Genetics. See line 38 These courses should be specified</p>	4	<p>Select one Entry Level Biodiversity/ Ecology/ Organismal BIO 202 – Ecology or BIO 210 – Environmental Biology and Conservation (3 cr) or BIO 228- Vertebrate Zoology or BIO229 – Invertebrate Zoology or BIO 250 – Plant Taxonomy and Systematics</p>	3-4
46			<p>Select one Upper Level Biodiversity/ Ecology/ Organismal BIO 334 – Microbial Ecology or BIO 337 – Medically Important Arthropods (3 cr) or BIO 427 – Entomology or BIO 429 – Limnology or BIO 430 – Marine Ecology or BIO 432 – Mycology or BIO 438 – Aquatic Entomology or BIO 440 – Parasitic Infections (3 cr) or BIO 460 – Paleontology</p>	3-4

47			One other upper level BIO course from upper level lists above	4
48			MAT 221 – Intermediate Applied Statistics	4
49				
50	Program Course Credits:	(16)- 24		57-64
51	Open Electives			
52				
53	Additional Gen Ed Elective or Calculus I MAT 254 will transfer as an unrestricted elective	3-4	Gen Ed elective or MAT 150 Calculus I.	(4)
54	PHY* 122 General Physics II or CHE*212 Organic Chemistry II CHE 212 will transfer as an unrestricted elective. See line 34	4	CHE 261 Organic Chemistry II	(4)
56	Up to two 200-level BIO lab courses. See lines 43 and 45.	(8)	BIO 200-level elective(s)	(8)
55	Students who have fulfilled foreign language requirements through assessment (STAMP or equivalent), who place beyond first semester, or who use open elective credits at the community college to fulfill foreign language requirements will end up with more open elective credits at SCSU.			
56	Open Elective credits:	0		2-9
57	Total Credits at the Community College	60-61	Total Credits for the 4-Year Degree	120

Transfer Pathway and Degree Program
Template 1
Western Connecticut State University
Biology – Professional Option B.A.

1	Community Colleges*:		WCSU		
2		Credits			Credits
3	Framework30**				
4	General Education Requirements				
5	Competency:				
6	Section A				
7	Written I	ENG*101 English Composition	3	Written Communication	3
8	Written II	Gen Ed Elective	3	Written Communication	3
9	Scientific Reasoning	BIO*121 General Biology I	4	BIO 103 General Biology I	4
10	Scientific Knowledge	CHE*121 General Chemistry I	4	CHE 110 General Chemistry I	4
11	Quantitative	MAT* 185 Trigonometry (NVCC) MAT*186 Precalculus	4	MAT 133 Precalculus	4
12	Historical Knowledge	Gen Ed Elective	3	Gen Ed Elective/2 nd exposure	3
13	Social Phenomena	Gen Ed Elective	3	Critical Thinking	3
14	Aesthetic Dimensions	Gen Ed Elective	3	Creative Process	
15	Section B				
16	Competency:	Gen Ed Elective	3	Oral Communication	3
17	Competency:	Gen Ed Elective		Information Literacy	3
18	Framework30 Credits (30-31):				33
19	Pathway30				
20	Additional General Education Courses				
21	An additional general education requirement will be met at the community college, either with MAT 254 Calculus or with a general education elective.		3-4	General Education Elective	3-4
22	CHE* 122 General Chemistry II		4	General Education Elective – CHE 111 General Chemistry II	4
23				Intercultural Competence	3
24				Health and Wellness	3
25				Students must complete a foreign language requirement. This may be done by completing a language at the elementary II	3

			level or above. Students who have completed three years of language in high school with at least a C average have satisfied this requirement. Three credits of foreign language may count as fulfilling the Intercultural Competency requirement.	
26			Must be taken at WCSU:	
27			First Year Navigation	0
28			Written Communication III— embedded in a major course	0
29			Culminating Gen Ed Experience— may be satisfied by a major capstone	0
30	General Education Credits:	40-41		49-50
31	Major Program Courses			
32	BIO*122 General Biology II	4	BIO 104 General Biology II	4
33			BIO 205 Animal Physiology	4
34	BIO*270 Ecology or 200's level BIO* lab science. If Ecology is not taken, these credits will count on line 35 and the student will have to complete Ecology at WCSU.	4	BIO 200 Ecology	4
35	BIO*235 Microbiology or 200's level BIO* lab science	4	Biology Electives Lines 34-35 must add up to 12 credits. BIO 200 Ecology is required among those 12 credits. Students will complete 8 of these 12 credits at the community college.	8
35			BIO 300 Cell Biology	4
37			BIO 312 Genetics	4
38			BIO 325 Evolutionary Biology	3
39			BIO 360 Scientific Communication	2
40			BIO 480 Group Senior Research or BIO 490 Senior Research	3
41	PHY* 121 General Physics I or CHE*211 Organic Chemistry I PHY 121 will transfer as a Science Elective. See line 43.	(4)	CHE 210 Organic I	4
42	PHY* 122 General Physics II or CHE*212 Organic Chemistry II PHY 122 will transfer as a Science Elective. See line 43.	(4)	CHE 211 Organic II	4

43	PHY* 121 General Physics I or CHE*211 Organic Chemistry I. If PHY 121 is taken at the community college, it will count as 4 Science Elective credits. PHY* 122 General Physics II or CHE*212 Organic Chemistry II. If PHY 122 is taken at the community college, it will count as 4 Science Elective credits.	(3-11)	Science/Math Approved Electives, chosen with department approval.	14
44	Students will complete 11 credits of the required 22 credits of lines 41-43 at the community college, 8 credits with either the ORG CHE or the PHY sequence and 3 with Precalculus which will also meet a general education requirement.	8	Lines 41-43 will add up to 22 credits.	
45	Program Course Credits:	20		62
46	Open Electives			
47	Students who have fulfilled foreign language requirements in high school or who use open elective credits at the community college to fulfill foreign language requirements will end up with more open elective credits at WCSU.			
48	Open Elective credits:			8-9
49	Total Credits at the Community College	60-61	Total Credits for the 4-Year Degree	120

Transfer Pathway and Degree Program
Template 1
Western Connecticut State University
Biology – Ecological Option, B.A.

1	Community Colleges*:		WCSU		
2		Credits			Credits
3	Framework30**				
4	General Education Requirements				
5	Competency:				
6	Section A				
7	Written I	ENG*101 English Composition	3	Written Communication	3
8	Written II	Gen Ed Elective	3	Written Communication	3
9	Scientific Reasoning	BIO*121 General Biology I	4	BIO 103 General Biology I	4
10	Scientific Knowledge	CHE*121 General Chemistry I	4	CHE 110 General Chemistry I	4
11	Quantitative	MAT* 185 Trigonometry (NVCC) MAT*186 Precalculus	4	MAT 133 Precalculus	4
12	Historical Knowledge	Gen Ed Elective	3	Gen Ed Elective/2 nd exposure	3
13	Social Phenomena	Gen Ed Elective	3	Critical Thinking	3
14	Aesthetic Dimensions	Gen Ed Elective	3	Creative Process	
15	Section B				
16	Competency:	Gen Ed Elective	3	Oral Communication	3
17	Competency:	Gen Ed Elective	3	Information Literacy	3
18	Framework30 Credits (30-31):				33
19	Pathway30				
20	Additional General Education Courses				
21	An additional general education requirement will be met at the community college, either with MAT 254 Calculus or with a general education elective.	(3-4)		General Education Elective	3-4
22	CHE* 122 General Chemistry II	4		General Education Elective – CHE 111 General Chemistry II	4
23				Intercultural Competence	3
24				Health and Wellness	3
25				Students must complete a foreign language requirement. This may be done by completing a language at the elementary II	3

			level or above. Students who have completed three years of language in high school with at least a C average have satisfied this requirement. Three credits of foreign language may count as fulfilling the Intercultural Competency requirement.	
26			Must be taken at WCSU:	
27			First Year Navigation	0
28			Written Communication III— embedded in a major course	0
29			Culminating Gen Ed Experience— may be satisfied by a major capstone	0
30	General Education Credits:	40-41		49
31	Major Program Courses			
32	BIO*122 General Biology II	4	BIO 104 General Biology II	4
33			BIO 205 Animal Physiology	4
34	BIO*235 Microbiology or 200's level BIO* lab science. If a 200-level BIO lab science, then counted on line 36.	4	BIO 216 Microbiology	4
35	BIO*270 Ecology or 200's level BIO* lab science. If a 200-level BIO lab science, then counted on line 36.	4	BIO 200 Ecology	4
36	Lines 34 and 35 will fulfill 8 credits of the 19-20 credits of WCSU major requirements in lines 34-36.		11-12 credits of Biology Major Electives, 200-level or above.	11-12
37			Lines 34-36 will add up to 19-20 credits.	
38			BIO 312 Genetics	4
39			BIO 325 Evolutionary Biology	3
40			BIO 360 Scientific Communication	2
41			BIO 320 Conservation Ecology or BIO 450 Population Ecology or BIO 475 Climate Ecology	3-4
42			BIO 480 Group Senior Research or BIO 490 Senior Research	3
43	PHY* 121 General Physics I or CHE*211 Organic Chemistry I PHY* 122 General Physics II or CHE*212 Organic Chemistry II	8	Choose 12 credits of Physical Science/Math Electives. 8 credits will be fulfilled by either PHY 121 and 122 or CHE 211 and 212 from the community college as follows:	12

		<p>PHY 120 General Physics I and PHY 121 General Physics II Or CHE 210 Organic Chemistry I and CHE 211 Organic Chemistry II.</p> <p>The additional 4 credits (WCSU course is 3 credits) will be fulfilled at the community college as follows:</p> <p>MAT 185 Trigonometry (NVCC) MAT 186 Precalculus</p> <p>This course will also meet the Quantitative Reasoning requirement above. See line 11.</p> <p>Plus an additional course from the list.</p> <p>Following is a complete list of possible courses at WCSU that can be taken to meet this 12 credit requirement. This choice must be in addition to specific requirements in the option:</p> <p>All BIO courses 200 level or above All CHE courses 200 level or above MAT 133 Precalculus (3) MAT 170 Calculus of Polynomials (3) MAT 171 Calculus I with Review MAT 181 Calculus I MAT 182 Calculus II PHY 110 General Physics I w/Calculus PHY 111 General Physics II w/Calculus PHY 120 General Physics I PHY 121 General Physics II AST 150 General Astronomy MTR 150 Meteorology ES 110 Physical Geography</p>	
--	--	---	--

			CS 140 Introduction to Programming CS 143 Visual BASIC (3)	
44			MAT 115 Biostatistics OR MAT 120 Elementary Statistics	3
45	Program Course Credits:	20		57-59
46	Open Electives			
47	Students who have fulfilled foreign language requirements in high school or who use open elective credits at the community college to fulfill foreign language requirements will end up with more open elective credits at WCSU.			
48	Open Elective credits:	0		11-14
49	Total Credits at the Community College	60-61	Total Credits for the 4-Year Degree	120

Transfer Pathway and Degree Program

Template 1

Charter Oak State College

Complete four-year degree with articulation of community college degree to four-year degree

General Studies – Biology Concentration, B.S.

1	Community Colleges*:		CO	
2		Credits		Credits
3	Framework30**			
4	General Education Requirements			
5	Competency:			
6	Section A			
7	Written I	ENG*101 English Composition	3	Composition 101 3
8	Written II	Gen Ed Elective	3	Composition 102 3
9	Scientific Reasoning	BIO*121 General Biology I	4	Natural Sciences 4
10	Scientific Knowledge	CHE*121 General Chemistry I	4	Natural Sciences 4
11	Quantitative	MAT* 185 Trigonometry (NVCC) MAT*186 Precalculus	4	Quantitative Reasoning 4
12	Historical Knowledge	Gen Ed Elective	3	U.S History/Gov or Non-U.S Hist 3
13	Social Phenomena	Gen Ed Elective	3	Social/Behavioral Science 3
14	Aesthetic Dimensions	Gen Ed Elective	3	Literature and Fine Arts 3
15	Section B			
16	Competency:	Gen Ed Elective	3	Oral Communication 3
17	Competency:	Gen Ed Elective	3	Ethical Decision Making 3
18	Framework30 Credits (30-31):			
19	Pathway30			
20	Additional General Education Courses			
21				U.S. History/Gov or Non-U.S Hist (Must meet both requirements) 3
22				Global Understanding 3
23	An additional general education requirement will be met at the community college, either with MAT 254 Calculus or with a general education elective.	3-4		General Education elective 3-4
24	General Education Credits:	36-37		39-40
25	Major Program Courses			
26	BIO*122 General Biology II	4		Introductory Biology II 4

27	CHE* 122 General Chemistry II	4	General Chemistry – required as a prerequisite for Organic Chemistry I	4
28	PHY* 121 General Physics I or CHE*211 Organic Chemistry I – PHY 121, if chosen will count as an open elective. See line	(4)	Organic Chemistry I	4
29	BIO*235 Microbiology or 200's level BIO* lab science	4	Additional Biology electives beyond the introductory level, in any one or combination of subject areas, such as Botany, Embryology, Comparative Anatomy, Evolution, Ecology or Microbiology	15-21
30	BIO*270 Ecology or 200's level BIO* lab science	4		
31			One course in Genetics is required. This requirement may have been fulfilled by one of the courses in lines 32 and 33.	4
32			One course in Biochemistry, Physiology or Cell Biology is required. This requirement may have been fulfilled by one of the courses in lines 32 and 33.	4
33			Biology Capstone	3
34	If MAT 254 was taken at the community college, it will meet a general education requirement. See line 23.		Calculus I or Statistics if MAT 254 was not taken at the community college.	(3-4)
35				
36	Program Course Credits:	16-20		38-42
37	Open Electives			
38	PHY* 122 General Physics II or CHE*212 Organic Chemistry II	4	General Physics II or Organic Chemistry II—Organic Chemistry II is recommended, but not required.	4
39			Calculus II is recommended for students who plan to go to graduate school.	
40	Open Elective credits:	0-3		34-39
41	Total Credits at the Community College	60-61	Total Credits for the 4-Year Degree	120

Transfer Pathway and Degree Program

Template 2

Central Connecticut State University

General Biology B.S.

All biology courses must be completed with a C- or above.

1	Central Connecticut State University	
2	Remaining General Education Courses	
3	Course	Credits
4	<i>An additional 3 credits of general education may have been completed at the community college.</i>	
5	Study Area I – Literature	3
6	Study Area I – Arts and Humanities – If not met at the community college	(3)
7	Study Area II – Social Sciences	3
8	Study Area III – Behavioral Sciences	3
9	Skill Area II – Math/Stat/ Comp Sci – MATH 152 Calculus I, if MAT 254 Calculus I was not taken at the community college	(4)
10	Lines 6 and 8 will result in 3-4 credits remaining, since one of the two requirements will have been met at the community college.	3-4
11	Skill Area III – Skill Area III – Foreign Language Proficiency. Can be met through the following: <ol style="list-style-type: none"> 1. Three sequential years of one foreign language at the high-school level. 2. Elementary proficiency as demonstrated by successfully completing a second-semester level CCSU foreign-language course (112 or 118). Students with no previous background in a language must take the first and second semesters (111 and 112, or 118); students who place out of 111 due to previous background in the language may satisfy the requirement by taking 112 only. 3. Passing the CLEP, a standardized examination which demonstrates knowledge of a foreign language equivalent to completion of a second-semester course or higher. 4. Successful completion of a foreign-language course at a level higher than the second- semester level. 5. Demonstration of native proficiency in a language other than English (requires evaluation of skill level by an appropriate faculty member and/or official documentation, and approval by the Chair of the Department of Modern Languages (Credits will adjust accordingly.)	6
12	General Education Credits	18-19
13	Remaining Major Program Requirements	
14	Course	Credits
15	PHY 121 General Physics I or Fdns of Organic Chemistry/Lab (CHEM 210/211); whichever was not taken at CC	4
16	PHY 122 General Physics II (if not taken at CC)	(4)
17	BIO 200 Integrative Biology	4
18	BIO 290 Biology Research Experience I	2
19	BIO elective	4

20	BIO 390 Biology Research Experience II or 391 Internship in Biology	1
21	BIO elective	3
22	BIO elective	3
23		
24	Program Course Credits	21-25
25	Minor – A minor is not required for this major.	
26	Remaining Open Electives	
27	Courses	Credits
28	Open Elective credits	16-21
28	Students who have fulfilled the foreign language requirement in high school or who use open elective credits at the community college to fulfill foreign language and/or minor requirements will end up with more open elective credits at the CCSU.	
29	Total Credits Remaining for the 4-Year Degree	60

Transfer Pathway and Degree Program

Template 2

Central Connecticut State University

Biology – Ecology, Biodiversity, and Evolutionary Biology B.S.

All biology courses must be completed with a C- or above.

1	Central Connecticut State University	
2	Remaining General Education Courses	
3	Course	Credits
4	<i>An additional 3 credits of general education may have been completed at the community college.</i>	
5	Study Area I – Literature	3
6	Study Area I – Arts and Humanities – If not met at the community college	(3)
7	Study Area II – Social Sciences	3
8	Study Area III – Behavioral Sciences	3
9	Skill Area II – Math/Stat/ Comp Sci – MATH 152 Calculus I, if MAT 254 Calculus I was not taken at the community college	(4)
10	Lines 6 and 8 will result in 3-4 credits remaining, since one of the two requirements will have been met at the community college.	3-4
11	<p>Skill Area III – Skill Area III – Foreign Language Proficiency. Can be met through the following:</p> <ol style="list-style-type: none"> 1. Three sequential years of one foreign language at the high-school level. 2. Elementary proficiency as demonstrated by successfully completing a second-semester level CCSU foreign-language course (112 or 118). Students with no previous background in a language must take the first and second semesters (111 and 112, or 118); students who place out of 111 due to previous background in the language may satisfy the requirement by taking 112 only. 3. Passing the CLEP, a standardized examination which demonstrates knowledge of a foreign language equivalent to completion of a second-semester course or higher. 4. Successful completion of a foreign-language course at a level higher than the second- semester level. 5. Demonstration of native proficiency in a language other than English (requires evaluation of skill level by an appropriate faculty member and/or official documentation, and approval by the Chair of the Department of Modern Languages <p>(Credits will adjust accordingly.)</p>	6
12	General Education Credits	18-19
13	Remaining Major Program Requirements	
14	Course	Credits
15	PHY 121 General Physics I or CHEM 210/211 Fdns of Organic Chemistry/Lab; whichever was not taken at CC	4
16	PHY 122 General Physics II (if not taken at CCC)	(4)
17	BIO 200 Integrative Biology	4
18	BIO 290 Biology Research Experience I	2
19	Biodiversity Elective – Choose from:	3-4

	BIO 315 Microbial Ecology BIO 322 Vertebrate Zoology BIO 326 Mushrooms, Mosses, & More BIO 327 Vascular Plants BIO 420 Ornithology BIO 421 Marine Invertebrate Biology BIO 425 Biology of Marine and Freshwater Algae BIO 444 Plant Taxonomy BIO 468	
20	Ecology/Evolution Elective – Choose from: BIO 402 Population Genetics BIO 405 Ecology BIO 434 Ecology of Inland Waters BIO 440 Evolution BIO 480 Animal Behavior	3-4
21	EBE Specialization Elective – Choose from: BIO 230 Natural History BIO 402 Population Genetics BIO 315 Microbial Ecology BIO 322 Vertebrate Zoology BIO 326 Mushrooms, Mosses & More BIO 327 Vascular Plants BIO 405 Ecology BIO 410 Ecological Physiology BIO 420 Ornithology BIO 421 Marine Invertebrate Biology BIO 425 Biology of Marine & Freshwater Algae BIO 434 Ecology of Inland Waters BIO 438 Aquatic Pollution BIO 440 Evolution BIO 444 Plant Taxonomy BIO 470 Field Studies in Biology BIO 480 Animal Behavior BIO 489 Vertebrate Dissection *BIO 490 Topics in Biology *BIO 491 Advanced Problems in Biology *BIO 499 Undergraduate Thesis in Biology *To be considered in the E/B/E group, these courses must have a topic approved by the E/B/E faculty advisor.	2-4
22	BIO 390 Biology Research Experience II	1

	or 391 Internship in Biology	
23		
24	Program Course Credits	19-27
25	Minor – A minor is not required for this major.	
26	Remaining Open Electives	
27	Courses	Credits
28	Open Elective credits	14-23
29	Students who have fulfilled the foreign language requirement in high school or who use open elective credits at the community college to fulfill foreign language and/or minor requirements will end up with more open elective credits at the CCSU.	
30	Total Credits Remaining for the 4-Year Degree	60

AY 2016-2017

Transfer Pathway and Degree Program

Template 2

Central Connecticut State University

Biology – Environmental Science B.S.

All biology courses must be completed with a C- or above.

1	Central Connecticut State University	
2	Remaining General Education Courses	
3	Course	Credits
4	<i>An additional 3 credits of general education may have been completed at the community college.</i>	
5	Study Area I – Literature	3
6	Study Area I – Arts and Humanities – If not met at the community college	(3)
7	Study Area II – Social Sciences	3
8	Study Area III – Behavioral Sciences	3
9	Skill Area II – Math/Stat/ Comp Sci – MATH 152 Calculus I, if MAT 254 Calculus I was not taken at the community college	(4)
10	Lines 6 and 8 will result in 3-4 credits remaining, since one of the two requirements will have been met at the community college.	3-4
11	<p>Skill Area III – Skill Area III – Foreign Language Proficiency. Can be met through the following:</p> <ol style="list-style-type: none"> 1. Three sequential years of one foreign language at the high-school level. 2. Elementary proficiency as demonstrated by successfully completing a second-semester level CCSU foreign-language course (112 or 118). Students with no previous background in a language must take the first and second semesters (111 and 112, or 118); students who place out of 111 due to previous background in the language may satisfy the requirement by taking 112 only. 3. Passing the CLEP, a standardized examination which demonstrates knowledge of a foreign language equivalent to completion of a second-semester course or higher. 4. Successful completion of a foreign-language course at a level higher than the second- semester level. 5. Demonstration of native proficiency in a language other than English (requires evaluation of skill level by an appropriate faculty member and/or official documentation, and approval by the Chair of the Department of Modern Languages <p>(Credits will adjust accordingly.)</p>	6
12	General Education Credits	18-19
13	Remaining Major Program Requirements	
14	Course	Credits
15	PHY 121 General Physics I if PHY 121 General Physics I was not taken at the community college	(4)
16	CHEM 210 Foundations of Organic Chemistry and CHEM 211 Foundations of Organic Chemistry Laboratory if CHE 211 Organic Chemistry I was not taken at the community college	(4)

16	PHY 122 General Physics II if PHY 122 General Physics II was not taken at the community college	(4)
17	IF CHE 212 Organic Chemistry is not taken at the community college: CHEM 212 Organic Synthesis and CHEM 213 Organic Synthesis Laboratory OR CHEM 354 Foundations of Biochemistry	(3-4)
18	Lines 14-16 will add up to 7-8 credits	7-8
19	BIO 200 Integrative Biology	4
20	BIO 290 Biology Research Experience I	2
21	BIO 436 Environmental Resources and Management (3) OR BIO 438 Aquatic Pollution (4)	3-4
22	Choose one: BIO 315 Microbial Ecology BIO 322 Vertebrate Zoology BIO 326 Mushrooms, Mosses, & More BIO 327 Vascular Plants BIO 420 Ornithology BIO 421 Marine Invertebrate Biology BIO 425 Biology of Marine and Freshwater Algae BIO 444 Plant Taxonomy	3-4
23	Choose one: BIO 405 Ecology BIO 434 Ecology of Inland Waters	4
24	BIO 390 Biology Research Experience II or 391 Internship in Biology	1
25	CHEM 456 Toxicology	4
26	Choose one: ESCI 121 Physical Geology (GSCI 121 The Dynamic Earth?) ESCI 450 Environmental Geology (GSCI?)	3
27		
28		
29	Program Course Credits	31-34
30	Minor – A minor is not required for this major.	
31	Remaining Open Electives	
32	Courses	Credits
33	Open Elective credits	7-11
34	Students who have fulfilled the foreign language requirement in high school or who use open elective credits at the community college to fulfill foreign language and/or minor requirements will end up with more open elective credits at the CCSU.	
35	Total Credits Remaining for the 4-Year Degree	60-61

Transfer Pathway and Degree Program

Template 2

Credits remaining in the four-year degree

Biology B.A.

Both BIO 220 and BIO 230 must be successfully completed with a grade of C- or better before starting on the required upper-level courses.

1	Eastern Connecticut State University	
2	Remaining General Education Courses	
3	Course	Credits
4	<i>Two of the first four below must be completed at ECSU. One of the T2 requirements may have been completed at the community college.</i>	
5	T2 Cultural Perspectives	3
6	T2 Individuals and Societies	3
7	T2 Creative Expressions	3
8	T2 Applied Information Technologies – must be MAT 216 Statistical Data Analysis if Calculus I was not taken at the community college	3
9	T3 Capstone – BIO 466 Senior Seminar	3
10	Foreign Language Proficiency (Can be met with three years of the same foreign language in high school or the completion of a second semester at the college level. Credits will adjust accordingly.)	6
11	General Education Credits	18-21
12	Remaining Major Program Requirements	
13	Course	Credits
14	PHY 204 General Physics I with Lab (if PHY was not taken at CC)	(4)
15	BIO 220 Cell Biology	4
16	BIO 230 Genetics	4
17	EES 104 Dynamic Earth	4
18	300's or 400's level Cell and Molecular Biology elective from the following (if BIO*235 was not taken at CC) or any 300's or 400's level Biology Elective: BIO 330 Cell Biology w/Lab BIO 420 Electron Microscopy w/Lab BIO 422 Research Methods Molecular Bio w/Lab BIO 424 Cell Physiology BIO 426 Biology of Cancer BIO 428 Virology w/Lab BIO 430 Endocrinology w/Lab BIO 432 Histology w/Lab BIO 434 Developmental Biology w/Lab BIO 436 Molecular Genetics w/Lab	4

	BIO 438 Plant Physiology w/Lab BIO 450 Biotechnology w/Lab BIO 458 Stem Cells and Regenerative Medicine	
19	300's or 400's level Population Biology and Ecology elective from the following: BIO 320/360 Tropical Biology and Tropical Ecosystems BIO 319/320 Oceanic Island Ecology and Tropical Biology BIO 440 Aquatic Biology w/Lab BIO 442 Plant Ecology w/Lab BIO 444 Population/Community Ecology w/Lab BIO 446 Terrestrial Ecology w/Lab BIO 452 Conservation Biology w/Lab BIO 454 Biological Invasions w/Lab BIO 456 Marine Ecology w/Lab	4
20	300's or 400's level Organismal Biology elective from the following: BIO 324 Entomology w/Lab BIO 332 Biology of Plants w/Lab BIO 334 General Microbiology w/Lab BIO 336 Invertebrate Biology w/Lab BIO 338 Vertebrate Biology w/Lab BIO 340 Parasitology w/Lab 4 BIO 346 Animal Behavior w/Lab BIO 348 Functional Human Anatomy w/Lab BIO 350 Human Physiology w/Lab BIO 448 Physiological Ecology w/Lab	4
21	300's or 400's level Biology Elective	8
22	Program Course Credits	32-36
23	Remaining Open Electives	
24	Courses	Credits
25	Open Elective credits	3-10
26	Students who have fulfilled foreign language requirements in high school or who use open elective credits at the community college to fulfill foreign language requirements will end up with more open elective credits at ECSU.	
27	Total Credits Remaining for the 4-Year Degree	60

Transfer Pathway and Degree Program

Template 2

Credits remaining in the four-year degree

Biology B.S.

Both BIO 220 and BIO 230 must be successfully completed with a grade of C- or better before starting on the required upper-level courses.

1	Eastern Connecticut State University	
2	Remaining General Education Courses	
3	Course	Credits
4	<i>Two of the first four below must be completed at ECSU. One of the T2 requirements may have been completed at the community college.</i>	
5	T2 Cultural Perspectives	3
6	T2 Individuals and Societies	3
7	T2 Creative Expressions	3
8	T2 Applied Information Technologies – MAT 216 Statistical Data Analysis if taken for line 20	3
9	T3 Capstone – BIO 466 Senior Seminar	3
10	Foreign Language Proficiency (Can be met with three years of the same foreign language in high school or the completion of a second semester at the college level. Credits will adjust accordingly.)	6
11	General Education Credits	18-21
12	Remaining Major Program Requirements	
13	Course	Credits
14	CHE 216 Organic Chemistry I w/Lab (if not taken at the CC)	(4)
15	PHY 204 General Physics I with Lab OR PHY 208 Physics I with Calculus w/Lab (if PHY was not taken at CC)	(4)
16	Lines 14 and 15 will add up to 4-8 credits.	4
17	BIO 220 Cell Biology	4
18	BIO 230 Genetics	4
19	MAT 243 Calculus I w/Technology (if not taken at the CC)	0-4
20	One of the following: MAT 244 Calculus II w/Technology MAT 216 Statistical Data Analysis – if chosen, counts as T2 Applied Information Technologies – see line 8 BIO 378 Biology Research and Data Analysis	0, 3 or 4
21		

22	<p>300's or 400's level Cell and Molecular Biology elective from the following (if BIO*235 was not taken at CC) or any 300's or 400's level Biology Elective:</p> <p>BIO 330 Cell Biology w/Lab BIO 420 Electron Microscopy w/Lab BIO 422 Research Methods Molecular Bio w/Lab BIO 424 Cell Physiology BIO 426 Biology of Cancer BIO 428 Virology w/Lab BIO 430 Endocrinology w/Lab BIO 432 Histology w/Lab BIO 434 Developmental Biology w/Lab BIO 436 Molecular Genetics w/Lab BIO 438 Plant Physiology w/Lab BIO 450 Biotechnology w/Lab BIO 458 Stem Cells and Regenerative Medicine</p>	4
23	<p>300's or 400's level Population Biology and Ecology elective from the following:</p> <p>BIO 320/360 Tropical Biology and Tropical Ecosystems BIO 319/320 Oceanic Island Ecology and Tropical Biology BIO 440 Aquatic Biology w/Lab BIO 442 Plant Ecology w/Lab BIO 444 Population/Community Ecology w/Lab BIO 446 Terrestrial Ecology w/Lab BIO 452 Conservation Biology w/Lab BIO 454 Biological Invasions w/Lab BIO 456 Marine Ecology w/Lab</p>	4
24	<p>300's or 400's level Organismal Biology elective from the following:</p> <p>BIO 324 Entomology w/Lab BIO 332 Biology of Plants w/Lab BIO 334 General Microbiology w/Lab BIO 336 Invertebrate Biology w/Lab BIO 338 Vertebrate Biology w/Lab BIO 340 Parasitology w/Lab 4 BIO 346 Animal Behavior w/Lab BIO 348 Functional Human</p>	4

	Anatomy w/Lab BIO 350 Human Physiology w/Lab BIO 448 Physiological Ecology w/Lab	
25	300's or 400's level Biology Elective	8
26	Program Course Credits	32-40
27	Remaining Open Electives	
28	Courses	Credits
29	Open Elective credits	0-10
30	Students who have fulfilled foreign language requirements in high school or who use open elective credits at the community college to fulfill foreign language requirements will end up with more open elective credits at ECSU.	
31	Total Credits Remaining for the 4-Year Degree	60-61

Transfer Pathway and Degree Program
Template 2
 Southern Connecticut State University
 Biology B.A.
 Students must complete 2 "W" courses at SCSU.

1	Southern Connecticut State University	
2	Remaining General Education Courses	
3	Course	Credits
4	<i>One additional general education requirement may be fulfilled at the community college.</i>	
5	American Experience	3
6	Creative Drive	3
7	Global Awareness	3
8	Mind and Body	3
9	Multilingual Communication – Level 3 (Can be met by completing the third level of a foreign language or demonstrating knowledge via a STAMP test (Standards-based Measurement of Proficiency) or an equivalent. Credits will adjust accordingly.)	9
10	Tier 3 Connections Capstone	0
11	General Education Credits	18-21
12	Remaining Major Program Requirements	
13	Course	Credits
14	BIO 103 – Botany	4
15	BIO 220 Genetics An equivalent course may have been taken at the community college.	(4)
16	<u>Select one Entry Level Anatomy/Physiology</u> BIO 230 – Plant Anatomy and Morphology or BIO 231 – Comparative Vertebrate Anatomy or BIO 235 - Histology	4
17	<u>Select one Upper Level Anatomy/Physiology</u> BIO 301 – Physiology or BIO 401 – Animal Physiology or BIO 420 – Plant Physiology or BIO 454 – Brain Anatomy and Transmission	4
18	<u>Select one Entry Level Cell/Molecular Biology</u> – if BIO 235 Microbiology was not taken at the community college. (if not completed at the CC) BIO 205 – Forensic Biology or BIO 233 – General Microbiology or BIO 240 – Human Heredity (3 cr)	(3-4)
19	<u>Select one Upper Level Cell/Molecular Biology</u> BIO 335 – Pathogenic Microbiology or BIO 360- Plant Growth and Development or BIO 435 – Developmental Biology or BIO 436 – Molecular Biology or BIO 451 – Tissue Culture or	4

	BIO 466 – Advanced Molecular and Cell Biology or BIO 467 – Laboratory Course in Biotechnology	
20	<u>Select one Upper Level Cell/Molecular Biology</u> BIO 335 – Pathogenic Microbiology or BIO 360- Plant Growth and Development or BIO 435 – Developmental Biology or BIO 436 – Molecular Biology or BIO 451 – Tissue Culture or BIO 466 – Advanced Molecular and Cell Biology or BIO 467 – Laboratory Course in Biotechnology	4
21	<u>Select one Entry Level Biodiversity/ Ecology/ Organismal</u> – If BIO 270 Ecology was not taken at the community college (if not completed at the CC) BIO 202 – Ecology or BIO 210 – Environmental Biology and Conservation (3 cr) or BIO 228- Vertebrate Zoology or BIO229 – Invertebrate Zoology or BIO 250 – Plant Taxonomy and Systematics	(3-4)
22	<u>Select one Upper Level Biodiversity/ Ecology/ Organismal</u> BIO 334 – Microbial Ecology or BIO 337 – Medically Important Arthropods (3 cr) or BIO 427 – Entomology or BIO 429 – Limnology or BIO 430 – Marine Ecology or BIO 432 – Mycology or BIO 438 – Aquatic Entomology or BIO 440 – Parasitic Infections (3 cr) or BIO 460 – Paleontology	3-4
23	One other upper level BIO course from upper level lists above	4
24		
25	Program Course Credits	27-39
26	Remaining Open Electives	
27	Courses	Credits
28	Open Elective credits	0-15
29	Students who have fulfilled foreign language requirements through assessment (STAMP or equivalent), who place beyond first semester, or who use open elective credits at the community college to fulfill foreign language requirements will end up with more open elective credits at SCSU.	
30	Total Credits Remaining for the 4-Year Degree	60

Transfer Pathway and Degree Program
Template 2
 Southern Connecticut State University
 Biology B.S.
 Students must complete 2 "W" courses at SCSU.

1	Southern Connecticut State University	
2	Remaining General Education Courses	
3	Course	Credits
4	<i>One additional general education requirement may be fulfilled at the community college.</i>	
5	American Experience	3
6	Creative Drive	3
7	Global Awareness	3
8	Mind and Body	3
9	Multilingual Communication – Level 3 (Can be met by completing the third level of a foreign language or demonstrating knowledge via a STAMP test (Standards-based Measurement of Proficiency) or an equivalent. Credits will adjust accordingly.)	9
10	Tier 3 Connections Capstone	0
11	General Education Credits	18-21
12	Remaining Major Program Requirements	
13	Course	Credits
14	PHY 200 General Physics I if not taken at the community college	(4)
15	PHY 201 General Physics II if not taken at the community college	(4)
16	CHEM 260 Organic Chemistry I if not was not taken at the community college	(4)
17	Lines 13-15 will add up to 4-8 credits	4-8
18	BIO 103 – Botany	4
19	BIO 220 Genetics An equivalent course may have been taken at the community college.	(4)
20	<u>Select one Entry Level Anatomy/Physiology</u> BIO 230 – Plant Anatomy and Morphology or BIO 231 – Comparative Vertebrate Anatomy or BIO 235 - Histology	4
21	<u>Select one Upper Level Anatomy/Physiology</u> BIO 301 – Physiology or BIO 401 – Animal Physiology or BIO 420 – Plant Physiology or BIO 454 – Brain Anatomy and Transmission	4
22	<u>Select one Entry Level Cell/Molecular Biology</u> – if BIO 235 Microbiology was not taken at the community college. BIO 205 – Forensic Biology or BIO 233 – General Microbiology or BIO 240 – Human Heredity (3 cr)	(3-4)
23	<u>Select one Upper Level Cell/Molecular Biology</u> BIO 335 – Pathogenic Microbiology or	4

	BIO 360- Plant Growth and Development or BIO 435 – Developmental Biology or BIO 436 – Molecular Biology or BIO 451 – Tissue Culture or BIO 466 – Advanced Molecular and Cell Biology or BIO 467 – Laboratory Course in Biotechnology	
24	<u>Select one Entry Level Biodiversity/ Ecology/ Organismal</u> – If BIO 270 Ecology was not taken at the community college BIO 202 – Ecology or BIO 210 – Environmental Biology and Conservation (3 cr) or BIO 228- Vertebrate Zoology or BIO229 – Invertebrate Zoology or BIO 250 – Plant Taxonomy and Systematics	(3-4)
25	<u>Select one Upper Level Biodiversity/ Ecology/ Organismal</u> BIO 334 – Microbial Ecology or BIO 337 – Medically Important Arthropods (3 cr) or BIO 427 – Entomology or BIO 429 – Limnology or BIO 430 – Marine Ecology or BIO 432 – Mycology or BIO 438 – Aquatic Entomology or BIO 440 – Parasitic Infections (3 cr) or BIO 460 – Paleontology	3-4
26	One other upper level BIO course from upper level lists above	4
27	MAT 221 – Intermediate Applied Statistics	4
28		
29	Program Course Credits	31-48
30	Remaining Open Electives	
31	Courses	Credits
32	Open Elective credits	0-11
33	Students who have fulfilled foreign language requirements through assessment (STAMP or equivalent), who place beyond first semester, or who use open elective credits at the community college to fulfill foreign language requirements will end up with more open elective credits at SCSU.	
34	Total Credits Remaining for the 4-Year Degree	60-69

Transfer Pathway and Degree Program

Template 2

Western Connecticut State University

Biology – Professional Option B.A.

1	Western Connecticut State University	
2	Remaining General Education Courses	
3	Course	Credits
4	Health and Wellness	3
5	Intercultural Competency	3
6	Students must complete a foreign language requirement for this program. This may be done by completing a language at the elementary II level or above. Students who have completed three years of language in high school with at least a C average have satisfied this requirement. Three credits of foreign language may count as fulfilling the Intercultural Competency requirement.	3
7	<i>The following must be taken at WCSU:</i>	
8	First Year Navigation	0
9	Written Comm III – embedded in a major course	0
10	Culminating Gen Ed Experience – may be satisfied by a major capstone	0
11	General Education Credits	9
12	Remaining Major Program Requirements	
13	Course	Credits
14	BIO 205 Animal Physiology	4
15	BIO 200 Ecology if not taken at the community college	(4)
16	Biology Elective – 200-level or above – if Ecology was taken at the community college	(4)
17	A total of 4 credits will be required from lines 17-18.	4
18	BIO 300 Cell Biology	4
19	BIO 312 Genetics	4
20	BIO 325 Evolutionary Biology	3
21	BIO 360 Scientific Communication	2
22	BIO 480 Group Senior Research <i>or</i> BIO 490 Senior Research	3
23	CHE 210 Organic I if not taken at the community college	(4)
24	CHE 211 Organic II if not taken at the community college	(4)
25	Science/Math Approved Electives, chosen with department approval.	(2-6)
26	Lines 25-27 will add up to 22 credits; 11 of these credits will have been completed at the community college, 8 with either the Organic Chemistry sequence or the Physics sequence and 3 with Precalculus, which also fulfills a general education requirement.	11
27		
28	Program Course Credits	35
35	Remaining Open Electives	
36	Courses	Credits
37	Open Elective credits	15

38	Students who have fulfilled foreign language requirements in high school or who use open elective credits at the community college to fulfill foreign language requirements will end up with more open elective credits at WCSU.	
39	Total Credits Remaining for the 4-Year Degree	60

AY 2016-2017

Transfer Pathway and Degree Program
Template 2
Western Connecticut State University
Biology – Ecological Option B.A.

1	Western Connecticut State University	
2	Remaining General Education Courses	
3	Course	Credits
4	Health and Wellness	3
5	Intercultural Competency	3
6	Students must complete a foreign language requirement for this program. This may be done by completing a language at the elementary II level or above. Students who have completed three years of language in high school with at least a C average have satisfied this requirement. Three credits of foreign language may count as fulfilling the Intercultural Competency requirement.	3
7	<i>The following must be taken at WCSU:</i>	
8	First Year Navigation	0
9	Written Comm III – embedded in a major course	0
10	Culminating Gen Ed Experience – may be satisfied by a major capstone	0
11	General Education Credits	9
12	Remaining Major Program Requirements	
13	Course	Credits
14	BIO 205 Animal Physiology	4
15	BIO 216 Microbiology if not taken at the community college	(4)
16	BIO 200 Ecology if not taken at the community college	(4)
17	11-12 credits of Biology Major Electives, 200-level or above. 4-8 of these credits may have been taken at the community college.	(3-12)
18	Students will have 11-12 credits of lines 16-18 remaining. Courses will depend upon the choices made at the community college.	11-12
19	BIO 312 Genetics	4
20	BIO 325 Evolutionary Biology	3
21	BIO 360 Scientific Communication	2
22	BIO 320 Conservation Ecology or BIO 450 Population Ecology or BIO 475 Climate Ecology	3-4
23	BIO 480 Group Senior Research <i>or</i> BIO 490 Senior Research	3
24	3-4 credits in Physical Sciences/Math Courses, chosen from: All BIO courses 200 level or above All CHE courses 200 level or above MAT 170 Calculus of Polynomials (3) MAT 171 Calculus I with Review MAT 181 Calculus I – if not taken at the community college MAT 182 Calculus II PHY 110 General Physics I w/Calculus PHY 111 General Physics II w/Calculus PHY 120 General Physics I	3-4

	PHY 121 General Physics II AST 150 General Astronomy MTR 150 Meteorology ES 110 Physical Geography CS 140 Introduction to Programming CS 143 Visual BASIC (3)	
25	MAT 115 Biostatistics OR MAT 120 Elementary Statistics	3
26	Program Course Credits	36-39
27	Remaining Open Electives	
28	Courses	Credits
29	Open Elective credits	12-15
30	Students who have fulfilled foreign language requirements in high school or who use open elective credits at the community college to fulfill foreign language requirements will end up with more open elective credits at WCSU.	
31	Total Credits Remaining for the 4-Year Degree	60

Transfer Pathway and Degree Program

Template 2

Charter Oak State College

Complete four-year degree with articulation of community college degree to four-year degree

General Studies – Biology Concentration, B.S.

1	Charter Oak State College	
2	Remaining General Education Courses	
3	Course	Credits
4	U.S. History/Gov or Non-U.S Hist (Must meet both requirements)	3
5	Global Understanding	3
7	General Education Credits	6
8	Remaining Major Program Requirements	
9	Course	Credits
10	Additional Biology electives beyond the introductory level, in any one or combination of subject areas, such as Botany, Embryology, Comparative Anatomy, Evolution, Ecology or Microbiology. If Genetics was completed at the community college, then	7-21
11	Organic Chemistry I if not taken at the community college.	(4)
12	One course in Genetics is required. This requirement may have been met at the community college.	(4)
13	One course in Biochemistry, Physiology or Cell Biology is required. This requirement may have been met at the community college.	(4)
	Calculus I or Statistics if MAT 254 was not taken at the community college.	(3-4)
14	Biology Capstone	3
15		
16	<i>Recommended:</i>	
17	Organic Chemistry II	(4)*
18	Computer Literacy, including spreadsheets	(3)*
27	Calculus II for students planning to go to graduate school	(4)*
28	Program Course Credits	18-32
29	Remaining Open Electives	
30	Courses	Credits
31		
32	Open Elective credits	22-36
33	Total Credits Remaining for the 4-Year Degree	60

*These courses are not counted in the possible remaining credits for the degree.