PROPOSED PATHWAY
CSCU Pathway Transfer A.A. Degree: Computer Science Studies

Not all community colleges offer any or all of the courses that are required in the pathway. This pathway document lists existing courses at the community colleges. The computer science work group approved the current pathway with the understanding that community college computer science faculty will modify or create courses where necessary. The Framework and Implementation Review Committee recommends that the pathway be moved forward for endorsement votes on the campuses with the understanding that periodic updates will be made and that, before the pathway becomes available for students for the fall of 2017, community college faculty will work to develop or modify courses as necessary.

PROPOSED PATHWAY
CSCU Pathway Transfer A.A. Degree: Computer Science Studies

1	**FRAMEWORK30**		
2	*Section A: Common Designated Competencies*		
3	Written Communication I	ENG 101 Composition	3 credits
4	Written Communication II	General Education Elective	3 credits
5	Scientific Reasoning	One sequence intended for majors of that discipline. Must include labs.	8 credits
6	Scientific Knowledge & Understanding	BIO 121 General Biology I and BIO 122 General Biology II OR CHE 121 General Chemistry I and CHE 122 General Chemistry II OR PHY 221 Calculus-based Physics I and PHY 222 Calculus-based Physics II	
7	Quantitative Reasoning	MAT 186 Pre-Calculus	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	*Section B: Campus Designated Competencies*		
12	Competency 1	General Education Elective	3 credits
13	Competency 2	General Education Elective	3 credits
14	**Framework30 Total**		**33 credits**

15	**PATHWAY30**		
16	***Major Program Requirements***		
17	Calculus I C or above	MAT 254	4 credits
18	Calculus II C or above	MAT 256	4 credits
19	Computer Science/Programming I C or above	CSC 223 Java Programming I (4 credits, HCC) CSC 125 Programming Logic with C++ (MCC) CSC 105 Programming Logic (MXCC) CSC 220 Object-Oriented Programming Using Java (NCCC) CSC 106 Structured Programming (QVCC)	3 credits

		CSC 108 Introduction to Programming (4 credits, NCC, TRCC)	
20	Computer Science/Programming II C or above	CSC 224 Java Programming II (4 credits, HCC) CSC 215 Object-Oriented Programming with C++ (4 credits, MCC) CSC 220 Object-Oriented Programming Using Java (MXCC) CSC 221 (NCCC) CSC 226 Object-Oriented Programming in Java (QVCC, 4 credits, NCC) CSC 223 Java Programming I (4 credits, TRCC); Also CSC 224 Java Programming II (4 credits, TRCC)	3 credits
21	Digital Systems C- or above	CST 145 Digital Circuits and Logic (4 credits, HCC, NCC, TRCC) OR CSC 283 Introduction to Assembler (4 credits, NCC) CSC 287 Organization & Architecture PLUS EET 252 Digital Electronics (6 credits, MCC)	4 credits
22	Discrete Math C or above	MAT 210 Discrete Math (TRCC)	3 credits
23	Introduction to Database Design C or above	CSC 231 Database Design I OR CSC 238 SQL Fundamentals (HCC) CSC 230 Database Concepts with Web Application (MCC) CSC 231 Database Design I (MXCC) CSA 145 Database Management (QVCC) CSC 233 Database Development I (4 credits, NCC, NCCC, TRCC)	3 credits

24	Client-side Web Design	CST 150 Web Design and Development PLUS CSC 268 Client-Side Programming (6 credits, HCC) CST 150 Web Design & Development I PLUS CST 250 Web Design and Development II (6 credits, MCC) CST 150 Web Design and Development (NCCC, QVCC) CST 153 Web Development and Design I (4 credits, NCC, TRCC)	3 credits
25			
26	*Unrestricted Electives*		0 credits
27	Students who begin the Math sequence above MAT 186 will have unrestricted electives and should consider beginning or completing work on foreign language requirements not already met in high school and beginning work on minor requirements of some CSUs. They may also complete other General Education requirements, but only up to six (6) credits for ECSU.		
28	**Pathway30 Total**		**27 credits**

29	**Computer Science Pathway Total**		**60 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.

Transfer Pathway and Degree Program
Template 1
Central Connecticut State University
Complete four-year degree with articulation of community college degree to four-year degree
Computer Science B.S. – Alternative Program
Students must have a C- or above in all courses required for the major

1	Community Colleges*:			CCSU	
2			Credits		Credits
3	**Framework30****				
4	**General Education Requirements**				
5	**Competency:**				
6	**Section A**				
7	Written I	English 101	3	English 110	3
8	Written II	Gen Ed	3	Skill Area I – Communication	3
9	Scientific Reasoning	One sequence intended for majors of that discipline. Must include labs. BIO 121 General Biology I and BIO 122 General Biology II OR CHE 121 General Chemistry I and CHE 122 General Chemistry II OR PHY 121 General Physics I and PHY 122 General Physics II OR PHY 221 Calculus-based Physics I and PHY 222 Calculus-based Physics II	8	BIO 121 General Biology I and BIO 122 General Biology II OR CHEM 161 General Chemistry with CHEM 162 General Chemistry Laboratory and CHEM 200 Foundations of Inorganic Chemistry with CHEM 201 Foundations of Analytical Chemistry Laboratory OR PHYS 125 University Physics I and PHYS 126 University Physics II	8
10	Scientific Knowledge				
11	Quantitative	MAT 186 Pre-Calculus	4	MATH 119 Pre-Calculus with Trigonometry	4
12	Historical Knowledge	Gen Ed*	3	Study Area II – History	3
13	Social Phenomena	Gen Ed	3	Study Area II – Social Science	3
14	Aesthetic Dimensions	Gen Ed	3	Study Area I – Arts and Humanities	3
15	**Section B**				

16	Competency:	Gen Ed	3	Skill Area IV – University Requirement	3
17	Competency:	Gen Ed	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				Study Area I – Arts and Humanities	3
23				Study Area II – Social Sciences	3
24				Study Area III – Behavioral Sciences	3
25	Client-side Web Development		3	Skill Area II – Math/Stat/ Comp Sci	3
26				Skill Area III – Foreign Language Proficiency. Can be met through the following: 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	6

27	**General Education Credits:**	**36**		**54**
			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.)	
28		**Major Program Courses**		
29	Computer Programming I	3	CS 151 Computer Science I	3
30	Computer Programming II	3	CS 152 Computer Science II	3
31			CS 153 Computer Science III	3
32			CS 253 Data and File Structures	3
33			CS 254 Assembly Language	3
34	Digital Systems (C- or above) Introduction to Database Design (C or above)	3 3	Select 5 courses from the following: CS 354 Digital Systems Design CS 290 Topics The two courses above will be completed at the community college leaving the student to choose an additional 3 courses from the following: CS 355 Systems Programming CS 385 Computer Architecture CS 407 Advanced Topics CS 415 Game Development CS 416 Web Programming CS 423 Graphics CS 425 Image Processing CS 460 Database Concepts CS 462 Artificial Intelligence CS 463 Algorithms CS 464 Programming Languages CS 465 Compiler Design CS 473 Simulation Techniques CS 481 Operating Systems CS 483 Theory CS 490 Networking	15

			CS 491 Wireless CS 492 Security CS 495 Legal, Social, Ethical Issues CS 290 Topics CS 300 Work Experience I CS 301 Work Experience II CS 398 Independent Study CS 499 Seminar	
35				
36				
37	MAT 254 Calculus I (C or above)	4	MATH 152 Calculus I	4
38	Discrete Math (C or Above)	4	MATH 218 Discrete Math	4
39				
40	**Program Course Credits:**	**20**		**38**
41	**Minor Course Credits:**			**18-24**
42	**Open Electives**			
43	MAT 256 Calculus II (C- or above)	4	MATH 221 Calculus II	4
44	**Students who begin the Math sequence above MAT 186 will have additional unrestricted electives.** **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**			
45	**Open Elective credits:**			**0-6**
46	**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
Complete four-year degree with articulation of community college degree to four-year degree
Computer Science B.S. – Honors
Students must have a C- or above in all courses required for the major
Students are required to take a proficiency test specified by the department during their senior year.

	Community Colleges*:		Credits	CCSU	Credits
1	Community Colleges*:			CCSU	
2			Credits		Credits
3	**Framework30****				
4	**General Education Requirements**				
5	**Competency:**				
6	**Section A**				
7	Written I	English 101	3	English 110	3
8	Written II	Gen Ed	3	Skill Area I – Communication	3
9	Scientific Reasoning	One sequence intended for majors of that discipline. Must include labs. BIO 121 General Biology I and BIO 122 General Biology II OR CHE 121 General Chemistry I and CHE 122 General Chemistry II OR PHY 121 General Physics I and PHY 122 General Physics II OR PHY 221 Calculus-based Physics I and PHY 222 Calculus-based Physics II	8	BIO 121 General Biology I and BIO 122 General Biology II OR CHEM 161 General Chemistry with CHEM 162 General Chemistry Laboratory and CHEM 200 Foundations of Inorganic Chemistry with CHEM 201 Foundations of Analytical Chemistry Laboratory OR PHYS 125 University Physics I and PHYS 126 University Physics II	8
10	Scientific Knowledge				
11	Quantitative	MAT 186 Pre-Calculus	4	MATH 119 Pre-Calculus with Trigonometry	3
12	Historical Knowledge	Gen Ed*	3	Study Area II – History	3
13	Social Phenomena	Gen Ed	3	Study Area II – Social Science	3
14	Aesthetic Dimensions	Gen Ed	3	Study Area I – Arts and Humanities	3
15	**Section B**				

16	Competency:	Gen Ed	3	Skill Area IV – University Requirement	3
17	Competency:	Gen Ed	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				Study Area I – Arts and Humanities	3
23				Study Area II – Social Sciences	3
24				Study Area III – Behavioral Sciences	3
25	Client-side Web Development		3	Skill Area II – Math/Stat/ Comp Sci	3
26				Skill Area III – Foreign Language Proficiency. Can be met through the following: 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	6

			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.)	
27	**General Education Credits:**	**36**		**54**
28	**Major Program Courses**			
29	Computer Programming I	3	CS 151 Computer Science I	3
30	Computer Programming II	3	CS 152 Computer Science II	3
31			CS 153 Computer Science III	3
32			CS 253 Data and File Structures	3
33			CS 254 Computer Organization and Assembly Language Programming	3
34	Digital Systems (C- or above)	3	CS 354 Digital Systems Design	3
35			CS 355 Systems Programming	3
36			CS 385 Computer Architecture	3
37	Introduction to Database Design (C or above)	3	CS 290 Topics in Computer Science	3
38			Select 9 hours from the following advanced electives: CS 407 Advanced Topics CS 415 Game Development CS 416 Web Programming CS 423 Graphics CS 425 Image Processing CS 460 Database Concepts CS 462 Artificial Intelligence CS 463 Algorithms CS 464 Programming Languages CS 465 Compiler Design CS 473 Simulation Techniques CS 481 Operating Systems CS 483 Theory CS 490 Networking CS 491 Wireless CS 492 Security CS 495 Legal, Social, Ethical Issues	9

39			Select one: PHIL 245 Computer Ethics PHIL 242 Ethical Problems in Technology	3
40			Capstone Requirement: CS 410 Introduction to Software Engineering CS 498 Senior Project	6
41				
42				
43	MAT 254 Calculus I (C or above)	4	MATH 152 Calculus I	4
44	MAT 256 Calculus II (C- or above)	4	MATH 221 Calculus II	4
45	Discrete Math (C or above)	4	MATH 218 Discrete Math	4
46			MATH 226 Linear Algebra and Probability for Engineers	4
47			An additional 7 credits in science, STAT, or above MATH 119 (not counting those in the Math category)	7
48	**Program Course Credits:**	**24**		**68**
49	**Minor Course Credits:**		Minor not required	**0**
50	**Open Electives**			
51				
52	**Students who begin the Math sequence above MAT 186 (MATH 119) will have additional unrestricted electives. 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**
54	**Total Credits at the Community College**	**60-61**	**Total Credits for the 4-Year Degree**	**122**

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
Computer Science B.S.
There are no additional requirements for admission to this program.

1	Community Colleges*:			ECSU	
2			Credits		Credits
3	**Framework30****				
4	**General Education Requirements**				
5	**Competency:**				
6	**Section A**				
7	Written I	English 101	3	T1 College Writing	3
8	Written II	Gen Ed	3	T1 Literature and Thought	3
9	Scientific Reasoning	One sequence intended for majors of that discipline. Must include labs. BIO 121 General Biology I and BIO 122 General Biology II OR CHE 121 General Chemistry I and CHE 122 General Chemistry II OR PHY 221 Calculus-based Physics I and PHY 222 Calculus-based Physics II	8	BIO 120 Organismal Biology w/Lab and BIO 130 Ecology w/Lab OR CHE 210 General Chemistry I with CHE 212 General Chemistry Laboratory I and CHE 211 General Chemistry II with CHE 213 General Chemistry Laboratory II OR PHY 208 Physics w/Calculus I w/Lab and PHY 209 Physics w/Calculus II w/Lab	8
10	Scientific Knowledge				
11	Quantitative	MAT 186 Pre-Calculus	4	MATH 155 Pre-Calculus Mathematics	4
12	Historical Knowledge	Gen Ed*	3	T1 Historical Perspectives	3
13	Social Phenomena	Gen Ed	3	T1 Social Sciences	3
14	Aesthetic Dimensions	Gen Ed	3	T1 Arts in Context	3
15	**Section B**				
16	Competency:	Gen Ed	3	T1 FYI 100	3
17	Competency:	Gen Ed	3	T1 Health and Wellness	3
18	**Framework30 Credits (30-31):**				
19	**Pathway30**				

20	**Additional General Education Courses**			
21			T2 Cultural Perspectives	3
22			T2 Individuals and Societies	3
23			T2 Creative Expressions	3
24	Client-side Web Development	3	T2 Applied Information Technologies CSC 215 Introduction to Web Development	3
25			Tier 3 Independent Inquiry (Must be taken at ECSU)	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:**	**36**		**54**
28	**Major Program Courses**			
29	Computer Programming I	3	CSC 210 CS & Programming I	3
30	Computer Programming II	3	CSC 231 CS & Programming II	3
31			CSC 251 Net-centric Computing	3
32			CSC 320 Computer Organization and Architecture	3
33			CSC 330 Data Structures and Algorithms	3
34			CSC 340 Programming Languages and Translation	3
35			CSC 341 Database and Information Management	3
36			CSC 385 Software Engineering and Professional Practice	3
37			CSC 440 Operating Systems	3
38			CSC 3XX/4XX CS Elective	3
39			CSC 3XX/4XX CS Elective	3
40			CSC 3XX/4XX CS Elective	3
41				
42				
43				
44	MAT 254 Calculus I (C- or above)	4	MAT 243 Calculus I	4
45	MAT 256 Calculus II (C or above)	4	MAT 244 Calculus II	4
46	Discrete Math (C or above)	3	MAT 230 Discrete Mathematics	3
47	**Program Course Credits:**	**17**		**47**
48	**Open Electives**			

49	Digital Systems C- or above)	4	CSC 2XX Computer Science Elective	4
50	Introduction to Database Design (C or above)	3	CSC 2XX Computer Science Elective	3
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**		**19**
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

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

Computer Science B.S. General Program

There are no additional requirements for admission to this program.

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	One sequence intended for majors of that discipline. Must include labs. BIO 121 General Biology I and BIO 122 General Biology II OR CHE 121 General Chemistry I and CHE 122 General Chemistry II OR PHY 221 Calculus-based Physics I and PHY 222 Calculus-based Physics II	8	BIO 110 General Biology I and BIO 111 General Biology II OR CHE 120 General Chemistry I and CHE 121 General Chemistry II OR PHY 230 Physics for Scientists and Engineers I and PHY 231 Physics for Scientists and Engineers II	8
10	Scientific Knowledge				
11	Quantitative	MAT 186 Pre-Calculus	4	MAT 122 Pre-Calculus	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):**				
19	**Pathway30**				
20	**Additional General Education Courses**				
21				American Experience	3

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22	Client-side Web Development	3	Creative Drive	3
23			Global Awareness	3
24			Mind and Body	3
25			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
26			**Must be taken at SCSU:**	
27			Tier 3 Connections Capstone	0
28	**General Education Credits:**			**54**
29	**Major Program Courses**			
30	Computer Programming I	3	CSC 152 Computer Programming I	3
31	Computer Programming II	3	CSC 153 Computer Programming II	3
32	Digital Systems (C- or above)	4	CSC 207 Digital Systems	4
33			CSC 212 Data Structures	3
34			CSC 305 Computer Organization	3
35			CSC 321 Algorithms	3
36			CSC 324 Computer Ethics	3
37			CSC 330 Software Design and Development	3
38	Introduction to Database Design (C or above)	3	CSC 335 Database Management	3
39			CSC 425 Operating Systems	3
40			CSC 465 Communications & Networks	3
41			Select 2 from the following: CSC 341 Digital Imaging CSC 431 Fundamentals of Computer Graphics CSC 477 Fundamentals of Data Mining CSC 481 Artificial Intelligence	6
42			Select 1 from the following: CSC 334 Human Computer Interactions CSC 443 Fundamentals of Internet Programming CSC 453 Information Security CSC 463 Development of E-Commerce Applications	3

			CSC 476 Fundamentals of Data Warehousing	
43			CSC 400 Computer Science Project Seminar (also counts as LEP Tier 3)	3
44	MAT 254 Calculus I (C or above)	4	MAT 150 Calculus I	4
45	MAT 256 Calculus II (C- or above)	4	MAT 151 Calculus II	4
46	Discrete Math (C or above)	4	MAT 178 Discrete Math	3
47			MAT 221 Intermediate Statistics	4
			Select 1 from the following: MAT 252 Calculus III MAT 322 Numerical Analysis I PHY 355 Electricity and Electronics	4
48	**Program Course Credits:**	**22**		**65**
49	**Open Electives**			
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:**	**0**		**3**
53	**Total Credits at the Community College**	**60-61**	**Total Credits for the 4-Year Degree**	**122**

Transfer Pathway and Degree Program

Template 1

Western Connecticut State University

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

Computer Science B.S.

A G.P.A. of 2.5 or better for all CS and MAT courses in the major is required.

	Community Colleges*:		WCSU		
1	Community Colleges*:		WCSU		
2		Credits		Credits
3	**Framework30****				
4	**General Education Requirements**				
5	**Competency:**				
6	**Section A**				
7	Written I	English 101	3	Written Communication I	3
8	Written II	Gen Ed	3	Written Communication II	3
9	Scientific Reasoning	One sequence intended for majors of that discipline. Must include labs. BIO 121 General Biology I and BIO 122 General Biology II OR CHE 121 General Chemistry I and CHE 122 General Chemistry II OR PHY 221 Calculus-based Physics I and PHY 222 Calculus-based Physics II	8	BIO 103 General Biology I and BIO 104 General Biology II OR CHE 110 General Chemistry I and CHE 111 General Chemistry II OR PHYS 110 General Physics I (Calculus) and PHY 111 General Physics II (Calculus)	8
10	Scientific Knowledge				
11	Quantitative	MAT 186 Pre-Calculus	4 One credit goes to free elective at WCSU	MAT 170 Calculus of Polynomials	3
12	Historical Knowledge	Gen Ed*	3	Critical Thinking	3
13	Social Phenomena	Gen Ed	3	Information Literacy	3
14	Aesthetic Dimensions	Gen Ed	3	Creative Process	3
15	**Section B**				
16	Competency:	Gen Ed	3	Oral Communication	3

17	Competency:	Gen Ed	3	General Education Elective	3
18	**Framework30 Credits (30-31):**				32
19			**Pathway30**		
20			**Additional General Education Courses**		
21				General Education Elective – second exposure to a competency other than Quantitative Reasoning and Scientific Inquiry.	3
22				Intercultural Competence	3
23				Health and Wellness	3
24				Students must complete a foreign language requirement. 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.	3
25				**Must be taken at WCSU:**	
26				First Year Navigation	0
27				Written Communication III—embedded in a major course	0-3
28				Culminating Gen Ed Experience – may be satisfied by a major capstone	3
29	**General Education Credits:**				**47-50**
30			**Major Program Courses**		
31	Computer Programming I		3	CS 140 Introduction to Programming with Java	3
32	Computer Programming II		1 The other two credits will be received as free electives. See line 53	CS 140 Introduction to Programming with Java	1
33				CS 170 Language C++	4

34	Introduction to Database Design (C or above)	3	CS 205 Data Modeling and Database Design	3 1 credits will be added at WCSU (line 44)
35	Digital Systems (C- or above)	4	CS 215 Computer Architecture	4
36			CS 221 Object Oriented Programming	4
37			CS 240 Computer Organization & Software	4
38			Select 1 from the following: CS 305 Database Applications Engineering CS 350 Object Oriented Software Engineering CS 360 Distributed Applications Engineering	4
39			CS 315 Design and Analysis of Algorithms	4
40			CS 355 Programming Languages	4
41			CS 450 Operating Systems	4
42	Client-side Web Development MAT 256 Calculus II (C- or above)	3 4	Computer Science Electives: Select 12 credits from the following: CS 245 Web Applications Development MAT 182 Calculus II The above two courses are completed at the community college for a total of 7 credits) (Select 5 credits from the following once matriculated to WCSU): CS 235 Digital Media CS 250 Advanced Topics in Programming CS 270 CS 297 Cooperative Education (1-9 SH) CS 298 Faculty Developed Study (1-4 SH) CS 299 Student Developed Study (1-4 SH) CS 285 Artificial Intelligence	12

			CS 305 Database Applications Engineering. CS 330 Computer Graphics CS 340 Computer Animation CS 350 Object Oriented Software Engineering CS 351 Independent Study (3 SH) CS 360 Distributed Applications Engineering CS 399 Honors Project (3 SH) CS 410 Compiler Construction CS 444 Computer Networks CS 484 Special Topics in Computer Science MAT 272 Introduction to Linear Algebra	
43			CS 2XX Topics in Database Design	1
44			MAT 120 Elementary Statistics	3
45	Discrete Math (C or above)	3	CS/MAT 165 Introductory Discrete Mathematics	3
			CS/MAT 1XX Topics in Discrete Mathematics	1
46			CS/MAT 359 Introduction to Theory of Computation	3
47	MAT 254 Calculus I (C or above)	4	MAT 171 Calculus I with Review OR MAT 181 Calculus I	4
48				
49	**Program Course Credits:**			**66**
50		**Open Electives**		
51	One credit from line 11			1
52	Computer Programming II See line 33	2	CS 102 Intermediate Java Programming	2
53	**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.**			
54	**Open Elective credits:**			**1-4**
55	**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: Computer Science Studies B.A.
There are no additional requirements for admission to this program.

1	Community Colleges*:			CO	
2		Credits			Credits
3	**Framework30****				
4	**General Education Requirements**				
5	**Competency:**				
6	**Section A**				
7	Written I	English 101	3	Composition 101	3
8	Written II	Gen Ed	3	Composition 102	3
9	Scientific Reasoning	One sequence intended for majors of that discipline. Must include labs. BIO 121 General Biology I and BIO 122 General Biology II OR CHE 121 General Chemistry I and CHE 122 General Chemistry II OR PHY 221 Calculus-based Physics I and PHY 222 Calculus-based Physics II	8	BIO 121 General Biology I and BIO 122 General Biology II OR CHEM 161 General Chemistry with CHEM 162 General Chemistry Laboratory and CHEM 260 Foundations of Inorganic Chemistry with CHEM 201 Foundations of Analytical Chemistry Laboratory OR PHYS 125 University Physics I and PHYS 126 University Physics II	8
10	Scientific Knowledge				
11	Quantitative	MAT 186 Pre-Calculus	4	Pre-Calculus	4
12	Historical Knowledge	Gen Ed*	3	U.S History/Gov or Non-U.S Hist	3
13	Social Phenomena	Gen Ed	3	Social/Behavioral Science	3
14	Aesthetic Dimensions	Gen Ed	3	Literature and Fine Arts	3
15	**Section B**				
16	Competency:	Gen Ed	3	Oral Communication	3
17	Competency:	Gen Ed	3	Ethical Decision Making	3
18	**Framework30 Credits (30-31):**				**33**
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	Client-side Web Development	3	General Education elective	3
24				
25				
26				
27	**General Education Credits:**			**42**
28	**Major Program Courses**			
29	Discrete Math (C or above)	3	Discrete Math	3
30	MAT 254 Calculus I (C or above)	4	Calculus I	4
31	MAT 256 Calculus II (C- or above)	4	Calculus II	4
32			Linear Algebra	3
33			Introduction to Computer Science	3
34	Introduction to Data Structures (C or above)		Algorithm Development and Data Structures	3
35			Software Engineering/Software Systems Design	3
36			Networking	3
37			Database Systems	3
38			Computer Architecture/Computer Organization	3
39			Choose 1 from the following: Compilers Analysis of Algorithms Survey Comparison of Programming Languages Microprocessors Operating Systems Other faculty-approved areas	3
40			Capstone	3
41			Co-requisites:	
42			Logic: Programming Logic Philosophical Logic Digital Logic Mathematical Logic	3
43			Technical Communication	3
44				
45				
46				
47	**Program Course Credits:**			**44**
48	**Open Electives**			
49	Digital Systems (C- or above)	3		3

50	Open Elective credits:			21
51	Total Credits at the Community College	60-61	Total Credits for the 4-Year Degree	120

Transfer Pathway and Degree Program

Template 2

Credits remaining in the four-year degree

Computer Science B.S. – Alternative Program

Students must receive a C- or above in all courses required for the major

1	**Central Connecticut State University**	
2	**Remaining General Education Courses**	
3	**Course**	**Credits**
4	Study Area I – Literature	3
5	Study Area I – Arts and Humanities	3
6	Study Area II – Social Sciences	3
7	Study Area III – Behavioral Sciences	3
8		
9	Skill Area III – Skill Area III – Foreign Language Proficiency. Can be met through the following: 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
10	**General Education Credits**	**18**
11	**Remaining Major Program Requirements**	
12	**Course**	**Credits**
13	CS 153 Computer Science III	3
14	CS 253 Data and File Structures	3
15	CS 254 Assembly Language	3
16	Select 3 courses from the following: CS 355 Systems Programming CS 385 Computer Architecture CS 407 Advanced Topics CS 415 Game Development CS 416 Web Programming CS 423 Graphics	9

	CS 425 Image Processing CS 460 Database Concepts CS 462 Artificial Intelligence CS 463 Algorithms CS 464 Programming Languages CS 465 Compiler Design CS 473 Simulation Techniques CS 481 Operating Systems CS 483 Theory CS 490 Networking CS 491 Wireless CS 492 Security CS 495 Legal, Social, Ethical Issues CS 290 Topics CS 300 Work Experience I CS 301 Work Experience II CS 398 Independent Study CS 499 Seminar	
17	**Program course credits**	**18**
18	**Minor** – Students should consider beginning work on a minor at the community college.	**18-24**
19	**Remaining Open Electives**	
20	**Courses**	**Credits**
21	**Open Elective credits**	**0-6**
22	**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 CCSU.**	
23	**Total Credits Remaining for the 4-Year Degree**	**60**

Version under Review: 18 March 2016

Template 2

Credits remaining in the four-year degree

Computer Science B.S. – Honors

Students must have a C- or above in all courses required for the major

Students are required to take a proficiency test specified by the department during their senior year.

1	**Central Connecticut State University**	
2	**Remaining General Education Courses**	
3	**Course**	**Credits**
4	Study Area I – Literature	3
5	Study Area I – Arts and Humanities	3
6	Study Area II – Social Sciences	3
7	Study Area III – Behavioral Sciences	3
8		

9	Skill Area III – Skill Area III – Foreign Language Proficiency. Can be met through the following:
	  6. Three sequential years of one foreign language at the high-school level.
	  7. 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.
	  8. Passing the CLEP, a standardized examination which demonstrates knowledge of a foreign language equivalent to completion of a second-semester course or higher.
	  9. Successful completion of a foreign-language course at a level higher than the second- semester level.
	  10. 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

10	**General Education Credits**	**18**
11	**Remaining Major Program Requirements**	
12	**Course**	**Credits**
13	CS 153 Computer Science III	3
14	CS 253 Data and File Structures	3
15	CS 254 Computer Organization and Assembly Language Programming	3
16	CS 355 Systems Programming	3
17	CS 385 Computer Architecture	3
18	Select 9 hours from the following advanced electives: CS 407 Advanced Topics CS 415 Game Development CS 416 Web Programming	9

	CS 423 Graphics CS 425 Image Processing CS 460 Database Concepts CS 462 Artificial Intelligence CS 463 Algorithms CS 464 Programming Languages CS 465 Compiler Design CS 473 Simulation Techniques CS 481 Operating Systems CS 483 Theory CS 490 Networking CS 491 Wireless CS 492 Security CS 495 Legal, Social, Ethical Issues	
19	Select one: PHIL 245 Computer Ethics PHIL 242 Ethical Problems in Technology	3
20	Capstone Requirement: CS 410 Introduction to Software Engineering CS 498 Senior Project	6
21	MATH 226 Linear Algebra and Probability for Engineers	4
22	An additional 7 credits in science, STAT, or above MATH 119 (not counting those in the Math category)	7
23		
24		
25		
26		
27		
28		
29	**Major Course credits**	**44**
30	**Minor** – A minor is not required for this major.	**0**
31	**Remaining Open Electives**	
32	**Courses**	**Credits**
33	**Open Elective credits**	**0**
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**	**62**

Transfer Pathway and Degree Program
Template 2
Credits remaining in the four-year degree
Computer Science B.S.

1	**Eastern Connecticut State University**	
2	**Remaining General Education Courses**	
3	**Course**	**Credits**
4	*Two of the T2 courses must be completed at ECSU.*	
5	T2 Cultural Perspectives	3
6	T2 Individuals and Societies	3
7	T2 Creative Expressions	3
8	T3 Independent Inquiry (Capstone – CSC 450 Senior Research)	3
9	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
10	**General Education Credits**	**18**
11	**Remaining Major Program Requirements**	
12	**Course**	**Credits**
13	CSC 251 Net-centric Computing	3
14	CSC 320 Computer Organization and Architecture	3
15	CSC 330 Data Structures and Algorithms	3
16	CSC 340 Programming Languages and Translation	3
17	CSC 341 Database and Information Management	3
18	CSC 385 Software Engineering and Professional Practice	3
19	CSC 440 Operating Systems	3
20	CSC 3XX/4XX CS Elective	3
21	CSC 3XX/4XX CS Elective	3
22	CSC 3XX/4XX CS Elective	3
23	**Major Course credits**	**30**
24	**Remaining Open Electives**	
25	**Courses**	**Credits**
26	**Open Elective credits**	**12**
27	**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.**	
28	**Total Credits Remaining for the 4-Year Degree**	**60**

Transfer Pathway and Degree Program
Template 2
Credits remaining in the four-year degree
Computer Science B.S. – General Program
Students must complete 2 "W" courses at SCSU.

1	**Southern Connecticut State University**	
2	**Remaining General Education Courses**	
3	**Course**	**Credits**
4	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
5	American Experience	3
6	Global Awareness	3
7	Mind and Body	3
8	Tier 3 Connections Capstone	0
9		
10	**General Education Credits**	**18**
11	**Remaining Major Program Requirements**	
12	**Course**	**Credits**
13	CSC 212 Data Structures	3
14	CSC 305 Computer Organization	3
15	CSC 321 Algorithms	3
16	CSC 324 Computer Ethics	3
17	CSC 330 Software Design and Development	3
18	CSC 335 Database Management	3
19	CSC 425 Operating Systems	3
20	CSC 465 Communications & Networks	3
21	Select 2 from the following: CSC 341 Digital Imaging CSC 431 Fundamentals of Computer Graphics CSC 477 Fundamentals of Data Mining CSC 481 Artificial Intelligence	6
22	Select 1 from the following: CSC 334 Human Computer Interactions CSC 443 Fundamentals of Internet Programming CSC 453 Information Security CSC 463 Development of E-Commerce Applications CSC 476 Fundamentals of Data Warehousing	3
23	CSC 400 Computer Science Project Seminar (also counts as LEP Tier 3)	3
24	Select 1 from the following: MAT 252 Calculus III MAT 322 Numerical Analysis I PHY 355 Electricity and Electronics	4
25		

26		**40**
27	**Remaining Open Electives**	
28	**Courses**	**Credits**
29	**Open Elective credits**	**3**
30	**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.**	
31	**Total Credits Remaining for the 4-Year Degree**	**61**

Transfer Pathway and Degree Program
Template 2
Credits remaining in the four-year degree
Computer Science B.S.
A G.P.A. of 2.5 or better for all CS and MAT courses in the major is required.

1	**Western Connecticut State University**	
2	**Remaining General Education Courses**	
3	**Course**	**Credits**
4	Health and Wellness	3
5	Intercultural Competency	3
6	General Ed Elective other than Quantitative Reasoning and Scientific Inquiry.	3
7	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.	3
8	*The following must be taken at WCSU:*	
9	First Year Navigation	0
10	Written Comm III – embedded in a major course	0-3
11	Culminating Gen Ed Experience – may be satisfied by a major capstone	3
12		
13	**General Education Credits**	**15-18**
14	**Remaining Major Program Requirements**	
15	**Course**	**Credits**
16	CS 170 Language C++	4
17	CS 2XX Topics in Database Design	1
18	CS 221 Object Oriented Programming	4
19	CS 240 Computer Organization & Software	4
20	Select 1 from the following: CS 305 Database Applications Engineering CS 350 Object Oriented Software Engineering CS 360 Distributed Applications Engineering	4
21	CS 315 Design and Analysis of Algorithms	3
22	CS 355 Programming Languages	4
23	CS 450 Operating Systems	4
24	Computer Science Electives: Select 5 credits from the following: CS 235 Digital Media CS 250 Advanced Topics in Programming CS 270 CS 297 Cooperative Education (1-9 SH) CS 298 Faculty Developed Study (1-4 SH) CS 299 Student Developed Study (1-4 SH) CS 285 Artificial Intelligence CS 305 Database Applications Engineering CS 330 Computer Graphics	5

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	CS 340 Computer Animation CS 350 Object Oriented Software Engineering CS 351 Independent Study (3 SH) CS 360 Distributed Applications Engineering CS 399 Honors Project (3 SH) CS 410 Compiler Construction CS 444 Computer Networks CS 484 Special Topics in Computer Science MAT 272 Introduction to Linear Algebra	
25		
26	MAT 120 Elementary Statistics	3
27	CS/MAT 1XX Topics in Discrete Mathematics	1
28	CS/MAT 359 Theory of Computation	4
29		
30	**Major Course credits**	**41**
31	**Remaining Open Electives**	
32	**Courses**	**Credits**
33	**Open Elective credits**	**1-4**
34	**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.**	
35	**Total Credits Remaining for the 4-Year Degree**	**60**

Transfer Pathway and Degree Program

Template 2

Credits remaining in the four-year degree
General Studies: Computer Science Studies B.A.

1	**Charter Oak State College**
2	**Remaining General Education Courses**

	Course	**Credits**
3	**Course**	**Credits**
4	U.S. History/Gov or Non-U.S Hist (Must meet both requirements)	3
5	Global Understanding	3
6		
7	**General Education Credits**	**6**
8	**Remaining Major Program Requirements**	
9	**Course**	**Credits**
10	Linear Algebra	3
11	Introduction to Computer Science	3
12	Software Engineering/Software Systems Design	3
13	Networking	3
14	Database Systems	3
15	Computer Architecture/Computer Organization	3
16	Choose 1 from the following: Compilers Analysis of Algorithms Survey Comparison of Programming Languages Microprocessors Operating Systems Other faculty-approved areas	3
17	Capstone	3
18	Co-requisites:	
19	Logic: Programming Logic Philosophical Logic Digital Logic Mathematical Logic	3
20	Technical Communication	3
21	**Major Course credits**	**30**
22	**Remaining Open Electives**	
23	**Courses**	**Credits**
24		
25	**Open Elective credits**	**24**
26	**Total Credits Remaining for the 4-Year Degree**	**60**