Archives:
AY 2017-2018
AY 2018-2019
AY 2019-2020
AY 2020-2021

CSCU Computer Science Transfer Pathway
2021-2022

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. For the 2017/18 academic year, the following 9 community colleges will offer the computer Science pathway: CCC, GCC, HCC, MCC, MXCC, NCCC, NVCC, QVCC, TRCC

Contents:

Changes

The CSCU Pathway Transfer A.A. Degree: Computer Science Studies was approved by the BOR during AY 2016-17 and first made available to students for AY 2017-18.

- 08/29/2017: Added course numbers to MCC transfer degree requirements: CSC 127, CSC 128, EET 252, CSC 121, and CSC 114).

Changes 10/24/2017:

- Updated ECSU program to reflect changes made beginning Fall 2017. These changes to the ECSU program do not affect the community college portion of the pathway.
- Added full lists of community college courses to all CSU templates – no change in program requirements.

Changes 12/11/2017

- SCSU: page 21, line 31 – course changed from CSC 153 to CSC 229 Object-oriented Programming; page 22, line 38, course changed from CSC 335 to CSC 235 Web and Database Development
- GCC: CSC 223 name corrected to Java Programming I throughout
- HCC: Updated course offerings

Changes 04/23/2018

- WCSU updated general education requirements

Changes made 5/31/2018

- CCSU updated both honors and alternative programs; changed ENG 110 to WRT 110
- WCSU updated program

Changes made 9/13/2018

- Updated SCSU program

Changes made 3/11/2020

- MXCC is now offering EET 252, change made to Page 3 line 21
- NCCC, Page 2 line 19 changed CSC 220 to CSC 124

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. 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 credits
6	Scientific Knowledge & Understanding		
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 124 Programming Logic and Design with Python (CCC, GCC) CSC 220 Java I (NCCC)	3 credits

		CSC 223 Java Programming I (4 credits, HCC) CSC 127 Java I (MCC) CSC 105 Programming Logic (CCC, MXCC) CSC 113 Programming I (NVCC) CSC 106 Structured Programming I (QVCC) CSC 108 Introduction to Programming (4 credits, NCC, TRCC)	
20	Computer Science/Programming II C or above	CSC 223 Java Programming I (4 credits, GCC, TRCC) CSC 224 Java Programming II (4 credits, HCC) CSC 128 Java II (MCC) CSC 220 Object-Oriented Programming Using Java (MXCC) CSC 221 Java II (NCCC) CSC 229 Programming II (NVCC) CSC 226 Object-Oriented Programming in Java (QVCC, 4 credits, NCC)	3 credits
21	Digital Systems C- or above	EET 252 Digital Electronics (4 credits, GCC, MCC, MXCC, NVCC [pre- / co-requisites required]) CST 145 Digital Circuits and Logic (4 credits, HCC, NCC, TRCC) OR CSC 283 Introduction to Assembler (4 credits, NCC)	4 credits
22	Discrete Math C or above	MAT 210 Discrete Math (NVCC, TRCC) MAT 287 Discrete Math (4 credits, MCC)	3-4 credits
23	Introduction to Database Design C or above	CSC 150 Data Base Applications and Design – Using SQL (4 credits, GCC)	3 credits

		CSC 121 Introduction to Database Design (MCC) CSC 231 Database Design I (MXCC, NCCC, NVCC) CSA 145 Database Management (QVCC) CSC 233 Database Development I (4 credits, HCC, NCC, TRCC)	
24	Client-side Web Design	CSC 257 Web Development with PHP (4 credits, GCC) CST 114 Client-Side Web Development (MCC) CST 150 Web Design and Development I (NCCC, QVCC) CST 153 Web Development and Design I (4 credits, HCC, NCC, TRCC) CSC 227 Web Programming with Java (NVCC)	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
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	WRT 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	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				

		PHY 222 Calculus-based Physics II			
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	CSC 257 Web Development with PHP (4 credits, GCC) CST 114 Client-Side Web Development (MCC) CST 150 Web Design and Development I (NCCC, QVCC) CST 153 Web Development and Design I (4 credits, HCC, NCC, TRCC) CSC 227 Web Programming with Java (NVCC)		3	Skill Area II – Math/Stat/ Comp Sci	3
26				Skill Area III – Foreign Language Proficiency: See requirements here. If the requirement has been met in whole or in part, general education and open elective credits will adjust accordingly.	6
27	**General Education Credits:**		**36**		**54**
28	**Major Program Courses**				
29	C or above		3	CS 151 Computer Science I	3

	CSC 124 Programming Logic and Design with Python (GCC) CSC 223 Java Programming I (4 credits, HCC) CSC 127 Java I (MCC) CSC 105 Programming Logic (MXCC) CSC 220 Java I (NCCC) CSC 113 Programming I (NVCC) CSC 106 Structured Programming I (QVCC) CSC 108 Introduction to Programming (4 credits, NCC, TRCC)			
30	C or above CSC 223 Java Programming I (4 credits, GCC, TRCC) CSC 224 Java Programming II (4 credits, HCC) CSC 128 Java II (MCC) CSC 220 Object-Oriented Programming Using Java (MXCC) CSC 221 Java II (NCCC) CSC 229 Programming II (NVCC) CSC 226 Object-Oriented Programming in Java (QVCC, 4 credits, NCC)	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	C- or above EET 252 Digital Electronics (4 credits, GCC, MCC, NVCC [pre- / co-requisites required])	4	Select 5 courses from the following: CS 354 Digital Systems Design CS 290 Topics	15

	CST 145 Digital Circuits and Logic (4 credits, HCC, NCC, TRCC) OR CSC 283 Introduction to Assembler (4 credits, NCC) **AND** C or above CSC 150 Data Base Applications and Design – Using SQL (4 credits, GCC) CSC 121 Introduction to Database Design (MCC) CSC 231 Database Design I (MXCC, NCCC, NVCC CSA 145 Database Management (QVCC) CSC 233 Database Development I (4 credits, HCC, NCC, TRCC)	3-4	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 410 Software Engineering CS 415 Game Development CS 416 Web Programming CS 417 Design Patterns 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 of Computation CS 490 Networking CS 491 Wireless CS 492 Computer Security CS 493 Software Security Systems CS 495 Legal, Social, Ethical Issues CS 300 Work Experience I CS 398 Independent Study CS 499 Seminar	
35				
36				
37	C or above MAT 254 Calculus I	4	MATH 152 Calculus I	4
38	C or above MAT 210 Discrete Math (NVCC, TRCC) MAT 287 Discrete Math (4 credits, MCC)	4	MATH 218 Discrete Math	4
39				
40	**Program Course Credits:**	**20**		**38**
41	**Minor Course Credits:**			**18-24**
42	**Open Electives**			
43	C- or above	4	MATH 221 Calculus II	4

	MAT 256 Calculus II			
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
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.

1	Community Colleges*:			CCSU	
2			Credits		Credits
3	**Framework30****				
4	**General Education Requirements**				
5	**Competency:**				
6	**Section A**				
7	Written I	English 101	3	WRT 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	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				

		PHY 221 Calculus-based Physics I and PHY 222 Calculus-based Physics II			
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	CSC 257 Web Development with PHP (4 credits, GCC) CST 114 Client-Side Web Development (MCC) CST 150 Web Design and Development I (NCCC, QVCC) CST 153 Web Development and Design I (4 credits, HCC, NCC, TRCC) CSC 227 Web Programming with Java (NVCC)		3	Skill Area II – Math/Stat/ Comp Sci	3
26				Skill Area III – Foreign Language Proficiency: See requirements here. If the requirement has been met in whole or in part, general education and open elective credits will adjust accordingly.	6
27	**General Education Credits:**		**36**		**54**

28	**Major Program Courses**			
29	C or above CSC 124 Programming Logic and Design with Python (GCC) CSC 223 Java Programming I (4 credits, HCC) CSC 127 Java I (MCC) CSC 105 Programming Logic (MXCC) CSC 220 Java I (NCCC) CSC 113 Programming I (NVCC) CSC 106 Structured Programming I (QVCC) CSC 108 Introduction to Programming (4 credits, NCC, TRCC)	3	CS 151 Computer Science I	3
30	C or above CSC 223 Java Programming I (4 credits, GCC, TRCC) CSC 224 Java Programming II (4 credits, HCC) CSC 128 Java II (MCC) CSC 220 Object-Oriented Programming Using Java (MXCC) CSC 221 Java II (NCCC) CSC 229 Programming II (NVCC) CSC 226 Object-Oriented Programming in Java (QVCC, 4 credits, NCC)	3	CS 152 Computer Science II	3
31			CS 253 Data and File Structures	3
32			CS 254 Computer Organization and Assembly Language Programming	3
33	C- or above	3	CS 354 Digital Systems Design	3

	EET 252 Digital Electronics (4 credits, GCC, MCC, NVCC [pre- / co-requisites required]) CST 145 Digital Circuits and Logic (4 credits, HCC, NCC, TRCC) OR CSC 283 Introduction to Assembler (4 credits, NCC)			
34			CS 355 Systems Programming	3
35			CS 385 Computer Architecture	3
36			CS 463 Algorithms	3
37			CS 464 Programming Languages	3
38			CS 483 Theory of Computation	3
39			CS 492 Computer Security	3
40	C or above CSC 150 Data Base Applications and Design – Using SQL (4 credits, GCC) CSC 121 Introduction to Database Design (MCC) CSC 231 Database Design I (MXCC, NCCC, NVCC) CSA 145 Database Management (QVCC) CSC 233 Database Development I (4 credits, HCC, NCC, TRCC)	3	CS 290 Topics in Computer Science	3
41			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 465 Compiler Design CS 473 Simulation Techniques CS 481 Operating Systems CS 490 Networking CS 495 Legal, Social, Ethical Issues	9
42			Capstone Requirement: CS 410 Introduction to Software Engineering	6

			CS 498 Senior Project	
43				
44				
45	C or above MAT 254 Calculus I	4	MATH 152 Calculus I	4
46	C- or above MAT 256 Calculus II	4	MATH 221 Calculus II	4
47	C or above MAT 210 Discrete Math (NVCC, TRCC) MAT 287 Discrete Math (4 credits, MCC)	4	MATH 218 Discrete Math	4
48			MATH 226 Linear Algebra and Probability for Engineers	4
49			An additional 7 credits in science, STAT, or MATH above MATH 119 (not counting those in the Math category)	7
50	**Program Course Credits:**	**24**		**74**
51	**Minor Course Credits:**		Minor not required	**0**
52	**Open Electives**			
53				
54	**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**			
55	**Open Elective credits:**			**0**
56	**Total Credits at the Community College**	**60-61**	**Total Credits for the 4-Year Degree**	**128**

Transfer Pathway and Degree Program
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	T1 – Natural Sciences (with Lab) T2 – Natural Sciences 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	T1 Math 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	CSC 257 Web Development with PHP (4 credits, GCC) CST 114 Client-Side Web Development (MCC) CST 150 Web Design and Development I (NCCC, QVCC) CST 153 Web Development and Design I (4 credits, HCC, NCC, TRCC) CSC 227 Web Programming with Java (NVCC)		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: See requirements here. If the requirement has been met in whole or in part, general education and open elective credits will adjust accordingly.	6
27	**General Education Credits:**		**36**		**54**
28	**Major Program Courses**				
29	C- or above EET 252 Digital Electronics (4 credits, GCC, MCC, NVCC [pre- / co-requisites required]) CST 145 Digital Circuits and Logic (4 credits, HCC, NCC, TRCC)		4	CSC 180 Fundamentals of Computing	4

	OR CSC 283 Introduction to Assembler (4 credits, NCC)			
30	C or above CSC 124 Programming Logic and Design with Python (GCC) CSC 223 Java Programming I (4 credits, HCC) CSC 127 Java I (MCC) CSC 105 Programming Logic (MXCC) CSC 220 Java I (NCCC) CSC 113 Programming I (NVCC) CSC 106 Structured Programming I (QVCC) CSC 108 Introduction to Programming (4 credits, NCC, TRCC)	3	CSC 210 CS & Programming I	3
31	C or above CSC 223 Java Programming I (4 credits, GCC, TRCC) CSC 224 Java Programming II (4 credits, HCC) CSC 128 Java II (MCC) CSC 220 Object-Oriented Programming Using Java (MXCC) CSC 221 Java II (NCCC) CSC 229 Programming II (NVCC) CSC 226 Object-Oriented Programming in Java (QVCC, 4 credits, NCC)	3	CSC 231 CS & Programming II	3
32			CSC 270 Data Structures	3
33			CSC 320 Computer Architecture	3
34			CSC 335 Algorithm Design and Analysis	3

35			CSC 341 Database and Information Management	3
36			CSC 401 Networking and Distributed Computing	3
37			CSC 440 Operating Systems	3
38			CSC 445 Software Engineering	3
39			CSC 3XX/4XX CS Elective	3
40			CSC 3XX/4XX CS Elective	3
41			CSC 3XX/4XX CS Elective	3
42				
43				
44				
45	C or above MAT 254 Calculus I	4	MAT 243 Calculus I	4
46	C- or above MAT 256 Calculus II	4	MAT 244 Calculus II	4
47	C or above MAT 210 Discrete Math (NVCC, TRCC) MAT 287 Discrete Math (4 credits, MCC)	3	MAT 230 Discrete Structures	3
48	**Program Course Credits:**	**21**		**51**
49	**Open Electives**			
50	C or above CSC 150 Data Base Applications and Design – Using SQL (4 credits, GCC) CSC 121 Introduction to Database Design (MCC) CSC 231 Database Design I (MXCC, NCCC, NVCC) CSA 145 Database Management (QVCC) CSC 233 Database Development I (4 credits, HCC, NCC, TRCC)	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**		**15**

53	**Total Credits at the Community College**	**60-61**	**Total Credits for the 4-Year Degree**	**120**

Transfer Pathway and Degree Program
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 102 General Biology I and BIO 103 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 (33):**				
19	**Pathway30**				
20	**Additional General Education Courses**				
21	CSC 257 Web Development with PHP (4 credits, GCC) CST 114 Client-Side Web Development (MCC) CST 150 Web Design and Development I (NCCC, QVCC) CST 153 Web Development and Design I (4 credits, HCC, NCC, TRCC) CSC 227 Web Programming with Java (NVCC)		3	Creative Drive	3
22	Select two out of three from the following three areas:				
23				Global Awareness	0-3
24				Mind and Body	0-3
25				American Experience	0-3
26				**Must be taken at SCSU:**	
27				Tier 3 Connections Capstone: CSC 400 Computer Science Project Seminar	3
28	**General Education Credits:**				**45**
29	**Major Program Courses**				
30	C or above CSC 124 Programming Logic and Design with Python (GCC) CSC 223 Java Programming I (4 credits, HCC) CSC 127 Java I (MCC) CSC 105 Programming Logic (MXCC) CSC 220 Java I (NCCC)		3	CSC 152 Computer Programming I	3

	CSC 113 Programming I (NVCC) CSC 106 Structured Programming I (QVCC) CSC 108 Introduction to Programming (4 credits, NCC, TRCC)			
31	C or above CSC 223 Java Programming I (4 credits, GCC, TRCC) CSC 224 Java Programming II (4 credits, HCC) CSC 128 Java II (MCC) CSC 220 Object-Oriented Programming Using Java (MXCC) CSC 221 Java II (NCCC) CSC 229 Programming II (NVCC) CSC 226 Object-Oriented Programming in Java (QVCC, 4 credits, NCC)	3	CSC 229 Object-oriented Programming	3
32	C- or above EET 252 Digital Electronics (4 credits, GCC, MCC, NVCC [pre- / co-requisites required]) CST 145 Digital Circuits and Logic (4 credits, HCC, NCC, TRCC) OR CSC 283 Introduction to Assembler (4 credits, NCC)	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	C or above CSC 150 Data Base Applications and Design – Using SQL (4 credits, GCC)	3	CSC 235 Web and Database Development	3

	CSC 121 Introduction to Database Design (MCC) CSC 231 Database Design I (MXCC, NCCC, NVCC) CSA 145 Database Management (QVCC) CSC 233 Database Development I (4 credits, HCC, NCC, TRCC)			
39			CSC 425 Operating Systems	3
40			CSC 265 Computer Networks & Security I	3
41			Select 3 from the following: CSC 334 Human Computer Interactions CSC 335 Database Management CSC 341 Digital Imaging CSC 431 Fundamentals of Computer Graphics CSC 443 Fundamentals of Internet Programming CSC 453 Information Security CSC 463 Development of E-Commerce Applications CSC 465 Computer Network & Security II CSC 476 Fundamentals of Data Warehousing CSC 477 Fundamentals of Data Mining CSC 481 Artificial Intelligence	9
42	C or above MAT 254 Calculus I	4	MAT 150 Calculus I	4
43	C- or above MAT 256 Calculus II	4	MAT 151 Calculus II	4
44	C or above MAT 210 Discrete Math (NVCC, TRCC) MAT 287 Discrete Math (4 credits, MCC)	4	MAT 178 Discrete Math	3
45			MAT 221 Intermediate Statistics	4
46			Select 1 from the following: MAT 252 Calculus III MAT 322 Numerical Analysis I	4

			PHY 355 Electricity and Electronics	
47	**Program Course Credits:**	**25**		**63**
48	**Open Electives**			
49				
50	**Open Elective credits:**	**0**		**9**
51	**Total Credits at the Community College**	**61**	**Total Credits for the 4-Year Degree**	**120**

Transfer Pathway and Degree Program
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.

1	Community Colleges*:			WCSU	
2			Credits		Credits
3	**Framework30****				
4	**General Education Requirements**				
5	**Competency:**				
6	**Section A**				
7	Written I	English 101	3	Writing I	3
8	Written II	Gen Ed	3	Writing 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) Counts as first and second exposure to Scientific Inquiry.	8
10	Scientific Knowledge				
11	Quantitative	MAT 186 Pre-Calculus	4	Quantitative Reasoning: MAT 170 Calculus of Polynomials	3

			One credit goes to free elective at WCSU	Will complete a Second Exposure to Quantitative Reasoning at the community college – see lines 41, 44, and 47.	
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 / Exploration	3
18	**Framework30 Credits (30-31):**				32
19	**Pathway30**				
20	**Additional General Education Courses**				
	Students complete a two-part general education curriculum. Part I (Foundations) addresses life-long learning in and through 10 competencies. Part II (Explorations) requires students to complete a minimum of 40 credits outside their major. Students must also repeat three different competencies, excluding writing and first-year navigation. *In the Framework30 portion of the transfer degree, students who complete a TAP degree will receive credit for having met 8 competencies in Foundations, including at least one repeat (Scientific Inquiry), and 30 of the 40 credits of Explorations.* *For this program, the student will have completed at the community college two General Education Elective / Second Exposures, one in Scientific Inquiry and one in Quantitative Reasoning. One second exposure requirement remains at WCSU. The student will also have completed the Explorations requirement, see lines 41, 44, and 47.*				
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				A foreign language is required for this major. Follow this link and click on the program sheet for requirements. Three credits will count as a second exposure to Intercultural Competence.	3
25				**Must be taken at WCSU:**	

26			Written Communication III—embedded in a major course	0
27			Culminating Gen Ed Experience – may be satisfied by a major capstone	3
28	**General Education Credits:**			**47**
29	**Major Program Courses**			
30	C or above CSC 124 Programming Logic and Design with Python (GCC) CSC 223 Java Programming I (4 credits, HCC) CSC 127 Java I (MCC) CSC 105 Programming Logic (MXCC) CSC 220 Java I (NCCC) CSC 113 Programming I (NVCC) CSC 106 Structured Programming I (QVCC) CSC 108 Introduction to Programming (4 credits, NCC, TRCC)	3	CS 140 Introduction to Programming with Java	3
31	C or above CSC 223 Java Programming I (4 credits, GCC, TRCC) CSC 224 Java Programming II (4 credits, HCC) CSC 128 Java II (MCC) CSC 220 Object-Oriented Programming Using Java (MXCC) CSC 221 Java II (NCCC) CSC 229 Programming II (NVCC) CSC 226 Object-Oriented Programming in Java (QVCC, 4 credits, NCC)	1 The other two credits will be received as free electives. See line 53	CS 140 Introduction to Programming with Java	1

32			CS 170 Language C++	4
33	C or above CSC 150 Data Base Applications and Design – Using SQL (4 credits, GCC) CSC 121 Introduction to Database Design (MCC) CSC 231 Database Design I (MXCC, NCCC, NVCC) CSA 145 Database Management (QVCC) CSC 233 Database Development I (4 credits, HCC, NCC, TRCC)	3	CS 2xx Database Design I	3
34	C- or above EET 252 Digital Electronics (4 credits, GCC, MCC, NVCC [pre- / co-requisites required]) CST 145 Digital Circuits and Logic (4 credits, HCC, NCC, TRCC) OR CSC 283 Introduction to Assembler (4 credits, NCC)	4	CS 215 Computer Architecture	4
35			CS 221 Object Oriented Programming	4
36			CS 240 Computer Organization & Software	4
37			Select 1 from the following: CS 305 Database Applications Engineering CS 350 Object Oriented Software Engineering CS 360 Distributed Applications Engineering	4
38			CS 315 Design and Analysis of Algorithms	4
39			CS 355 Programming Languages	4
40			CS 450 Operating Systems	4
41	CSC 257 Web Development with PHP (4 credits, GCC)	3	Computer Science Electives: Select 12 credits from the following:	12

	CST 114 Client-Side Web Development (MCC) CST 150 Web Design and Development I (NCCC, QVCC) CST 153 Web Development and Design I (4 credits, HCC, NCC, TRCC) CSC 227 Web Programming with Java (NVCC) **AND** C- or above MAT 256 Calculus II	4	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 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 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	
42			CS 3xx Database Design II	1
43			MAT 222 Introductory Statistics	3
44	C or above MAT 210 Discrete Math (NVCC, TRCC) MAT 287 Discrete Math (4 credits, MCC)	3	MAT 141 Foundational Discrete Mathematics	3

45			CS/MAT 3xx Discrete Mathematics for Computer Science	2
46			CS/MAT 359 Introduction to Theory of Computation	3
47	C or above MAT 254 Calculus I	4	MAT 171 Calculus I with Review OR MAT 181 Calculus I	4
48				
49	**Program Course Credits:**			**67**
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:**			**0-3**
55	**Total Credits at the Community College**	**60-61**	**Total Credits for the 4-Year Degree**	**120**

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: See requirements here. If the requirement has been met in whole or in part, general education and open elective 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 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 410 Software Engineering CS 415 Game Development	15

	CS 416 Web Programming CS 417 Design Patterns 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 of Computation CS 490 Networking CS 491 Wireless CS 492 Computer Security CS 493 Software Security Systems CS 495 Legal, Social, Ethical Issues CS 300 Work Experience I 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**

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: See requirements here. If the requirement has been met in whole or in part, general education and open elective credits will adjust accordingly.	6
10	**General Education Credits**	**18**
11	**Remaining Major Program Requirements**	
12	**Course**	**Credits**
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	CS 463 Algorithms	3
19	CS 464 Programming Languages	3
20	CS 483 Theory of Computation	3
21	CS 492 Computer Security	3
22	Select 9 hours from the following advanced electives: 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 465 Compiler Design CS 473 Simulation Techniques CS 481 Operating Systems CS 490 Networking CS 495 Legal, Social, Ethical Issues	
23	Capstone Requirement: CS 410 Introduction to Software Engineering CS 498 Senior Project	6
24	MATH 226 Linear Algebra and Probability for Engineers	4
25	An additional 7 credits in science, STAT, or above MATH 119 (not counting those in the Math category)	7
26	**Major Course credits**	**50**
27	**Minor** – A minor is not required for this major.	**0**
28	**Remaining Open Electives**	
29	**Courses**	**Credits**
30	**Open Elective credits**	**0**
31	**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.**	
32	**Total Credits Remaining for the 4-Year Degree**	**68**

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: See requirements here. If the requirement has been met in whole or in part, general education and open elective credits will adjust accordingly.	6
10	**General Education Credits**	**18**
11	**Remaining Major Program Requirements**	
12	**Course**	**Credits**
13	CSC 270 Data Structures	3
14	CSC 320 Computer Architecture	3
15	CSC 335 Algorithm Design and Analysis	3
16	CSC 341 Database and Information Management	3
17	CSC 251 Networking Fundamentals	3
18	CSC 440 Operating Systems	3
19	CSC 445 Software Engineering	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**

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	Select two out of three from the following three areas:	
5	American Experience	0-3
6	Global Awareness	0-3
7	Mind and Body	0-3
8	Tier 3 Connections Capstone: CSC 400 Computer Science Project Seminar	3
9		
10	**General Education Credits**	**9**
11	**Remaining Major Program Requirements**	
12	**Course**	**Credits**
13	CSC 212 Data Structures	3
14	CSC 265 Computer Network & Security I	3
15	CSC 305 Computer Organization	3
16	CSC 321 Algorithms	3
17	CSC 324 Computer Ethics	3
18	CSC 330 Software Design and Development	3
19	CSC 425 Operating Systems	3
20	Select 3 from the following: CSC 334 Human Computer Interactions CSC 335 Database Management CSC 341 Digital Imaging CSC 431 Fundamentals of Computer Graphics CSC 443 Fundamentals of Internet Programming CSC 453 Information Security CSC 463 Development of E-Commerce Applications CSC 465 Computer Network & Security II CSC 476 Fundamentals of Data Warehousing CSC 477 Fundamentals of Data Mining CSC 481 Artificial Intelligence	9
21	MAT 221 Intermediate Statistics	4
22	Select 1 from the following: MAT 252 Calculus III MAT 322 Numerical Analysis I PHY 355 Electricity and Electronics	4
23	Science Cognate	4
24	**Major Course Credits**	**42**
25	**Remaining Open Electives**	
26	**Courses**	**Credits**
27	**Open Elective credits**	**9**
28	**Total Credits Remaining for the 4-Year Degree**	**60**

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**
	For this program, the student will have completed at the community college two General Education Elective / Second Exposures, one in Scientific Inquiry and one in Quantitative Reasoning. One second exposure requirement remains at WCSU.	
4	Health and Wellness	3
5	Intercultural Competency	3
6	General Ed Elective other than Quantitative Reasoning and Scientific Inquiry.	3
7	A foreign language is required for this major. Follow this link and click on the program sheet for requirements. Three credits will count as a second exposure to Intercultural Competence.	3
8	*The following must be taken at WCSU:*	
10	Written Comm III – embedded in a major course	0
11	Culminating Gen Ed Experience – may be satisfied by a major capstone	3
12		
13	**General Education Credits**	**15**
14	**Remaining Major Program Requirements**	
15	**Course**	**Credits**
16	CS 170 Language C++	4
17	CS 221 Object Oriented Programming	4
18	CS 240 Software Organization	4
19	CS 302 Database Development II	1
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 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 CS 340 Computer Animation CS 350 Object Oriented Software Engineering	5

	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 222 Introductory Statistics	3
27	MAT 304 Discrete Mathematics for Computer Science	2
28	CS/MAT 359 Theory of Computation	3
29		
30	**Major Course credits**	**41**
31	**Remaining Open Electives**	
32	**Courses**	**Credits**
33	**Open Elective credits**	**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**