CSCU Pathway Transfer A. A. Degree: Mathematics Studies
Justification for Designated General Education Courses
Draft October 5, 2015

The Mathematics Transfer Articulation Pathway provides a common pathway for students graduating with an A. A. degree from the Connecticut Community Colleges and transferring to one of the five postsecondary institutions in the CSCU system. The TAP Mathematics Committee recommends that 2 specific general education courses and one discipline sequence be designated in the Framework 30. These designated courses are important to the success of our students transferring seamlessly and completing the A. A./B. A. degrees in a timely manner.

ENG* 101 Composition: This course is a standard required course for students to complete their Written Competencies in the Framework 30 as well as possible additional general education courses. It is recommended as the Written Communications I course.

MAT* 186 Precalculus/MAT* 185 Trigonometry: These courses are important as prerequisites to MAT* 254 Calculus I. In order for students to complete Calculus I, II and III prior to A. A. degree completion, students will need to begin with the designated courses. Due to the sequential nature of the Calculus courses, students need 3 separate semesters to complete them. By taking MAT* 186/MAT* 185 in the first semester, students can complete the calculus courses in the next 3 semesters for a four semester total. Since MAT* 185 and MAT* 186 each have a prerequisite of MAT* 137 or higher, they satisfy the Quantitative Reasoning competency in the Framework 30.

Recommended sequence in Scientific Reasoning/Scientific Knowledge: One of the CSUs requires completion of a sequence in their scientific competency. Since all CSUs require 2 courses in this area, the TAP Math Pathway Committee felt that requiring the 2 courses to be a sequence would be beneficial to a seamless transfer and to a simplified Framework 30.

PROPOSED PATHWAY
CSCU Pathway Transfer A.A. Degree: Math 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	BIO, CHE or PHY sequence	4 credits
6	Scientific Knowledge & Understanding	BIO, CHE or PHY sequence	4 credits
7	Quantitative Reasoning	MAT 185 Trigonometry 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	*Additional General Education Courses*		
17			
18			
19	*Major Program Requirements*		
20	MAT 254	Calculus I	4 credits
21	MAT 256	Calculus II	4 credits
22	MAT 268	Calculus III: Multivariable	4 credits
23	Select one: MAT 274 MAT 285 MAT 287	Linear Algebra Differential Equations Foundations of Mathematics	4 credits
24	ACC – CS 106 CCC – CSC 105 GCC – CSC 110 HCC – CSC 105 CSC 106 MCC – CSC 124 CSC 125	Structured Programming (3) Programming Logic (3) Computer Logic and Problem Solving (3) Programming Logic (3); Structured Programming (3) Programming Logic and Design with Python (3); Programming Logic and Design with C++ (3)	3-4 credits

	MXCC – CSC 105 NCC – CSC 108 NVCC – CSC 205 NWCC – CSC 104 QVCC – CSC 106 TRCC – CSC 108 TXCC – CSC 126 3	Programming Logic (3) Introduction to Programming (3) Visual Basic I (3) Introduction to Logic and Programming (4) Structured Programming (3) Introduction to Programming (4) Programming Logic and Design with Visual Basic (3)	
25	*Unrestricted Electives*		
26	Students 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.		
27			8-9 credits
28	**Pathway30 Total**		28 credits

29	**Math Pathway Total**		**60-61 credits**

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

Mathematics B.A.

There are no additional requirements for admission to this program.

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	BIO, CHE or PHY Lab sequence	4	Study Area IV – Natural Sciences	4
10	Scientific Knowledge	BIO, CHE or PHY sequence	4	Study Area IV – Natural Sciences	4
11	Quantitative	MAT 185 Trigonometry MAT 186 Pre-Calculus[1]	4	Skill Area II – Mathematics	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	MAT 254 Calculus I		4	Skill Area II – Math/Stat/ Comp Sci: MATH 152 Calculus I	4
26				Skill Area III – Foreign Language Proficiency (Can be met with three years of the same foreign language in high school or the	6

			completion of a second semester at the college level. Credits will adjust accordingly.)	
27	**General Education Credits:**	**37**		**55**
28	**Major Program Courses**			
29	MAT 254 Calculus I	0	MATH 152 Calculus I – See Skill Area II above, line 25	0
30			MATH 218 Discrete Mathematics	
31	MAT 256 Calculus II	4	MATH 221 Calculus II	4
32	MAT 268 Calculus III: Multivariable	4	MATH 222 Calculus III	4
33			MATH 228 Introduction to Linear Algebra	4
34			MATH 366 Abstract Algebra	4
35			MATH 377 Real Analysis	4
36			MATH 450 Proof Seminar	4
37			*Choose Six (6) credits from the following:* MATH 300, 355, 383, 398, 400, 421, 440, 455, 465, 468, 469, 477, 491 STAT 315, 416, 425, 455, 456, 465, 476 ACTL 335, 465, 481, 482	6
38	Select one: MAT 274 Linear Algebra MAT 285 Differential Equations MAT 287 Foundations of Mathematics	4	Will count as: MATH 228 line 32 MATH 355 line 36 MATH 2##/218 Credits will adjust accordingly	
39				
40	Introduction to Programming ACC – Structured Programming (3) CCC – CSC 105 Programming Logic (3) GCC – CSC 110 Computer Logic and Problem Solving (3) HCC – CSC 105 Programming Logic (3); CSC 106 Structured Programming (3) MCC – CSC 124 Programming Logic and Design with Python (3); CSC 125 Programming Logic and Design with C++ (3) MXCC – CSC 105 Programming Logic (3)	3	*Strongly Recommended:* CS 151 Computer Science I	(3)

	NCC – CSC 108 Introduction to Programming (3) NVCC – CSC 205 Visual Basic I (3) NWCC – CSC 104 Introduction to Logic and Programming (4) QVCC – CSC 106 Structured Programming (3) TRCC – CSC 108 Introduction to Programming (4) TXCC – CSC 126 Programming Logic and Design with Visual Basic (3)			
41				
42				
43				
44				
45				
46				
47	**Program Course Credits:**	**15**		**34**
48	**Minor Course Credits:**			**18-24**
49	**Open Electives**			
50	**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:**	**8-9**		**8-14**
52	**Total Credits at the Community College**	**60-61**	**Total Credits for the 4-Year Degree**	**120**

[1] If a student arrives ready with placement above Pre-calculus, the student will receive 4 additional credits of open electives and four additional credits of open electives for each level of Calculus he/she places out of.

*Your work group may find itself listing several courses at places in this column due to differences in designations at the community colleges. In those cases, please list all courses and, next to each, the CC that offers it.

**There is no need to list community college courses in the Framework30 unless a specific course is designated in the pathway. Do list the competencies/courses that will be met at the four-year institution.

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

Mathematics B.A. Actuarial Science Specialization

No minor is required for students selecting this 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	BIO, CHE or PHY Lab sequence	4	Study Area IV – Natural Sciences	4
10	Scientific Knowledge	BIO, CHE or PHY sequence	4	Study Area IV – Natural Sciences	4
11	Quantitative	MAT 185 Trigonometry MAT 186 Pre-Calculus[1]	4	Skill Area II – Mathematics	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	MAT 254 Calculus I		4	Skill Area II – Math/Stat/ Comp Sci: MATH 152 Calculus I	4
26				Skill Area III – Foreign Language Proficiency (Can be met with three years of the same foreign language in high school or the	6

			completion of a second semester at the college level. Credits will adjust accordingly.)	
27	**General Education Credits:**	**37**		**55**
28	**Major Program Courses**			
29	MAT 254 Calculus I	0	MATH 152 Calculus I – See Skill Area II above, line 25	0
30			MAT 218 Discrete Mathematics	4
31	MAT 256 Calculus II	4	MATH 221 Calculus II	4
32	MAT 268 Calculus III: Multivariable	4	MATH 222 Calculus III	4
33			MATH 228 Introduction to Linear Algebra	4
34			STAT 315 Mathematical Statistics I	3
35			STAT 416 Mathematical Statistics II	3
36			STAT 425 Loss and Frequency Distributions and Credibility Theory	3
37			ACTL 335 Theory of Interest	3
38			ACTL 465 Actuarial Models I	4
39			ACTL 466 Actuarial Models II	4
40	Select one: MAT 274 Linear Algebra MAT 285 Differential Equations MAT 287 Foundations of Mathematics	4	Will count as: MATH 228 line 33 MATH 355 line 41 MATH 2##/218 Credits will adjust accordingly	
41	Introduction to Programming ACC – Structured Programming (3) CCC – CSC 105 Programming Logic (3) GCC – CSC 110 Computer Logic and Problem Solving (3) HCC – CSC 105 Programming Logic (3); CSC 106 Structured Programming (3) MCC – CSC 124 Programming Logic and Design with Python (3); CSC 125 Programming Logic and Design with C++ (3) MXCC – CSC 105 Programming Logic (3) NCC – CSC 108 Introduction to Programming (3)	3	Major Electives (as approved by advisor): 18 credits from: ACTL 480 ACTL 481 Review – SOA/CAS Course I ACTL 482 Review – SOA/CAS Course II MATH 300 Mathematics Internship MATH 355 Introduction to Differential Equations with Applications MATH 366 Introduction to Abstract Algebra MATH 377 Introduction to Real Analysis AC 211 Introduction to Financial Accounting AC 212 Introduction to Managerial Accounting	18

	NVCC – CSC 205 Visual Basic I (3) NWCC – CSC 104 Introduction to Logic and Programming (4) QVCC – CSC 106 Structured Programming (3) TRCC – CSC 108 Introduction to Programming (4) TXCC – CSC 126 Programming Logic and Design with Visual Basic (3)		CS 151 Computer Science I CS 152 Computer Science II CS 213 Applications of Computing I CS 473 Simulation Techniques ECON 460 Economic Forecasting FIN 295 Managerial Finance FIN 301 Intermediate Managerial Finance FIN 310 Principles of Investments FIN 320 Financial Markets and Institutions FIN 321 Insurance LAW 250 Legal Environment of Business MGT 295 Fundamentals of Management and Organizational Behavior	
42				
43				
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47				
48	**Program Course Credits:**	**15**		**54**
49	**Open Electives**			
50	**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:**	**8-9**		**11**
52	**Total Credits at the Community College**	**60-61**	**Total Credits for the 4-Year Degree**	**120**

[1] If a student arrives ready with placement above Pre-calculus, the student will receive 4 additional credits of open electives and four additional credits of open electives for each level of Calculus he/she places out of.

*Your work group may find itself listing several courses at places in this column due to differences in designations at the community colleges. In those cases, please list all courses and, next to each, the CC that offers it.

**There is no need to list community college courses in the Framework30 unless a specific course is designated in the pathway. Do list the competencies/courses that will be met at the four-year institution.

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

Mathematics B.A. Statistics Specialization

No minor is required for students selecting this 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	BIO, CHE or PHY Lab sequence	4	Study Area IV – Natural Sciences	4
10	Scientific Knowledge	BIO, CHE or PHY sequence	4	Study Area IV – Natural Sciences	4
11	Quantitative	MAT 185 Trigonometry MAT 186 Pre-Calculus[1]	4	Skill Area II – Mathematics	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	MAT 254 Calculus I		4	Skill Area II – Math/Stat/ Comp Sci: MATH 152 Calculus I	4
26				Skill Area III – Foreign Language Proficiency (Can be met with three years of the same foreign language in high school or the	6

			completion of a second semester at the college level. Credits will adjust accordingly.)	
27	**General Education Credits:**	**37**		**55**
28	**Major Program Courses**			
29	MAT 254 Calculus I	0	MATH 152 Calculus I – See Skill Area II above, line 25	0
30			MAT 218 Discrete Mathematics	4
31	MAT 256 Calculus II	4	MATH 221 Calculus II	4
32	MAT 268 Calculus III: Multivariable	4	MATH 222 Calculus III	4
33			MATH 228 Introduction to Linear Algebra	4
34			MATH 366 Abstract Algebra OR MATH 377 Real Analysis	4
35			STAT 215 Statistics for Behavioral Sciences	
36			STAT 315 Mathematical Statistics I	3
37			STAT 416 Mathematical Statistics II	3
38			STAT 216 Statistics for Behavioral Sciences II OR STAT 453 Applied Statistical Analysis	3
39			2 courses chosen from: STAT 425 Loss and Frequency Distributions and Credibility Theory STAT 455 Experimental Design STAT 456/MKT 444 Fundamentals of SAS STAT 465 Nonparametric Statistics STAT 476 Topics in Statistics	6
40	Introduction to Programming ACC – Structured Programming (3) CCC – CSC 105 Programming Logic (3) GCC – CSC 110 Computer Logic and Problem Solving (3) HCC – CSC 105 Programming Logic (3); CSC 106 Structured Programming (3)	3	16 credits selected from the courses listed above or from the following: MATH 300 Mathematics Internship MATH 491 Advanced Vector Calculus CS 151 Computer Science I CS 152 Computer Science II CS 253 Data and File Structures CS 473 Simulation Techniques	16

	MCC – CSC 124 Programming Logic and Design with Python (3); CSC 125 Programming Logic and Design with C++ (3) MXCC – CSC 105 Programming Logic (3) NCC – CSC 108 Introduction to Programming (3) NVCC – CSC 205 Visual Basic I (3) NWCC – CSC 104 Introduction to Logic and Programming (4) QVCC – CSC 106 Structured Programming (3) TRCC – CSC 108 Introduction to Programming (4) TXCC – CSC 126 Programming Logic and Design with Visual Basic (3)		BIO 405 Ecology ECON 460 Economic Forecasting ECON 485 Econometrics GEOG 476 Advanced Cartography PSY 222 Research Methods in Psychology II PSY 451 Psychological Evaluation ACTL 335 Theory of Interest ACTL 465 Actuarial Models I ACTL 466 Actuarial Models II ACTL 481 Review – SOA/CAS Course I *Strongly Recommended:* CS 151 Computer Science I	
41				
42				
43				
44	Select one: MAT 274 Linear Algebra MAT 285 Differential Equations MAT 287 Foundations of Mathematics	4	Will count as: MATH 228 line 33 MATH 355 line 37 MATH 2##/218 Credits will adjust accordingly	
45				
46				
47	**Program Course Credits:**	**15**		**54**
48				
49	**Open Electives**			
50	**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:**	**8-9**		**11**
52	**Total Credits at the Community College**	**60-61**	**Total Credits for the 4-Year Degree**	**120**

[1] If a student arrives ready with placement above Pre-calculus, the student will receive 4 additional credits of open electives and four additional credits of open electives for each level of Calculus he/she places out of.

*Your work group may find itself listing several courses at places in this column due to differences in designations at the community colleges. In those cases, please list all courses and, next to each, the CC that offers it.

**There is no need to list community college courses in the Framework30 unless a specific course is designated in the pathway. Do list the competencies/courses that will be met at the four-year institution.

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

Mathematics B.A.

For all Mathematics courses number 300 or higher used to satisfy the math major requirement, students must fulfill at least one of the following:

1. C in all these courses OR
2. C+ average in all these courses.

1	Community Colleges*:			CCSU	
2			Credits		Credits
3	**Framework30****				
4	**General Education Requirements**				
5	**Competency:**				
6	**Section A**				
7	Written I	English 101	3	T1 College Writing, Literature and Thought	3
8	Written II	Gen Ed	3	T1 College Writing, Literature and Thought	3
9	Scientific Reasoning	BIO, CHE or PHY Lab sequence	4	T1 Natural Sciences	4
10	Scientific Knowledge	BIO, CHE or PHY Lab sequence	4	T2 Natural Sciences	4
11	Quantitative	MAT 185 Trigonometry MAT 186 Pre-Calculus[1]	4	T1 Math	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):**				**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				MAT 315 Applied Probability and Statistics	4
25				Tier 3 Capstone (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:**	**33**		**52**
28	**Major Program Courses**			
29			MAT 230 Discrete Structures	3
30	MAT 254 Calculus I	4	MAT 243 Calculus I with Technology	4
31	MAT 256 Calculus II	4	MAT 244 Calculus II with Technology	4
32			MAT 310 Applied Linear Algebra	3
33			MAT 315 Applied Probability and Statistics See line 24 above	0
34	MAT 268 Calculus III: Multivariable	4	MAT 340 Calculus III	4
35			MAT 380 Geometry	3
36			MAT 400 Abstract Algebra I	3
37			MAT 420 Real Analysis I	3
38			MAT 421 Real Analysis II	3
39	Introduction to Programming ACC – Structured Programming (3) CCC – CSC 105 Programming Logic (3) GCC – CSC 110 Computer Logic and Problem Solving (3) HCC – CSC 105 Programming Logic (3); CSC 106 Structured Programming (3) MCC – CSC 124 Programming Logic and Design with Python (3); CSC 125 Programming Logic and Design with C++ (3) MXCC – CSC 105 Programming Logic (3) NCC – CSC 108 Introduction to Programming (3) NVCC – CSC 205 Visual Basic I (3)	3	CSC 210 Computer Programming I	3

	NWCC – CSC 104 Introduction to Logic and Programming (4) QVCC – CSC 106 Structured Programming (3) TRCC – CSC 108 Introduction to Programming (4) TXCC – CSC 126 Programming Logic and Design with Visual Basic (3)			
40			Two addition MAT courses numbered 300 or above but not MAT 303 or internships	6
41	Select one: MAT 274 Linear Algebra MAT 285 Differential Equations MAT 287 Foundations of Mathematics	4	Will count as: MAT 310 line 32 One of the additional MAT courses line 40 MAT 230 line 29 Credits will adjust accordingly	
42				
43				
44				
45				
46				
47	**Program Course Credits:**	**19**		43
48	**Open Electives**			
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 requirements will end up with more open elective credits at the ECSU.**			
50	**Open Elective credits:**	**8-9**		**25**
51	**Total Credits at the Community College**	**60-61**	**Total Credits for the 4-Year Degree**	**120**

[1] If a student arrives ready with placement above Pre-calculus, the student will receive 4 additional credits of open electives and four additional credits of open electives for each level of Calculus he/she places out of.

*Your work group may find itself listing several courses at places in this column due to differences in designations at the community colleges. In those cases, please list all courses and, next to each, the CC that offers it.

**There is no need to list community college courses in the Framework30 unless a specific course is designated in the pathway.

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

Mathematics B.A.

In those mathematics courses which the student applies toward the major in mathematics, he/she must have a GPA of 2.0 and, at most, one grade below C-.

1	Community Colleges*:			CCSU	
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, CHE or PHY sequence	4	Natural World 1 – Physical Realm	4
10	Scientific Knowledge	BIO, CHE or PHY sequence	4	Natural World II – Life and Environment	4
11	Quantitative	MAT 254 Calculus I[1]	4	Quantitative Reasoning	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				American Experience	3
22				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	9

			an equivalent. Credits will adjust accordingly.)	
26			**Must be taken at SCSU:**	
27			Tier 3 Connections Capstone	0
28	**General Education Credits:**	**33**		**54**
29	**Major Program Courses**			
30	See line 11		MAT 150 Calculus I (C- or better) See line 11 above	0
31	MAT 256 Calculus II	4	MAT 151 Calculus II (C- or better)	4
32			MAT 250 Foundations of Mathematics: An Introduction (C- or better)	3
33	MAT 268 Calculus III: Multivariable	4	MAT 252 Calculus III (C- or better)	4
34			MAT 320 Probability and Statistics I	4
35			MAT 372 Linear Algebra (C- or better)	3
36			MAT 375 Abstract Algebra I	3
37			MAT 450 Analysis	3
38			Select 1: MAT 488 Seminar in Mathematical Modeling MAT 498 Seminar in Mathematics	3
39			Select, with approval of a department advisor, three courses from: MAT 245 Differential Equations MAT 300 History of Mathematics MAT 321 Mathematical Statistics MAT 322 Numerical Analysis I MAT 325 Design of Experiments MAT 326 Regression Analysis MAT 360 Foundations of Geometry MAT 370 Number Theory MAT 376 Abstract Algebra II MAT 378 Discrete Mathematics MAT 398 Special Topics in Mathematics MAT 405 Elementary Mathematics from an Advanced Standpoint MAT 480 Topology MAT 488 Seminar in Mathematical Modeling	9

			MAT 498 Seminar in Mathematics	
40	Introduction to Programming ACC – Structured Programming (3) CCC – CSC 105 Programming Logic (3) GCC – CSC 110 Computer Logic and Problem Solving (3) HCC – CSC 105 Programming Logic (3); CSC 106 Structured Programming (3) MCC – CSC 124 Programming Logic and Design with Python (3); CSC 125 Programming Logic and Design with C++ (3) MXCC – CSC 105 Programming Logic (3) NCC – CSC 108 Introduction to Programming (3) NVCC – CSC 205 Visual Basic I (3) NWCC – CSC 104 Introduction to Logic and Programming (4) QVCC – CSC 106 Structured Programming (3) TRCC – CSC 108 Introduction to Programming (4) TXCC – CSC 126 Programming Logic and Design with Visual Basic (3)	3	CSC 152 Computer Programming I	3
41	Select one: MAT 274 Linear Algebra MAT 285 Differential Equations MAT 287 Foundations of Mathematics	4	Will count as MAT 372 line 35 MAT 245 line 39 MAT 250 line 32 Credits will adjust accordingly	
42				
43				
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47				

48	**Program Course Credits:**	**15**		**39**
49	**Open Electives**			
50	MAT 185 Trigonometry[1] MAT 186 Pre-Calculus[1]	4		
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:**	**8-9**		**27**
53	**Total Credits at the Community College**	**60-61**	**Total Credits for the 4-Year Degree**	**120**

[1] If a student arrives ready with placement above Pre-calculus, the student will receive 4 additional credits of open electives and four additional credits of open electives for each level of Calculus he/she places out of.

*Your work group may find itself listing several courses at places in this column due to differences in designations at the community colleges. In those cases, please list all courses and, next to each, the CC that offers it.

**There is no need to list community college courses in the Framework30 unless a specific course is designated in the pathway.

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

Mathematics B.S. – Concentration: Applied

In those mathematics courses which the student applies toward the major in mathematics, he/she must have a GPA of 2.0 and, at most, one grade below C-.

1	Community Colleges*:			CCSU	
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, CHE or PHY sequence	4	Natural World 1 – Physical Realm	4
10	Scientific Knowledge	BIO, CHE or PHY sequence	4	Natural World II – Life and Environment	4
11	Quantitative	MAT 254 Calculus I[1]	4	Quantitative Reasoning	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
22				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	9

			an equivalent. Credits will adjust accordingly.)	
26			**Must be taken at SCSU:**	
27			Tier 3 Connections Capstone	0
28	**General Education Credits:**	**33**		**54**
29	**Major Program Courses**			
30	See line 11		MAT 150 Calculus I (C- or better) See line 11 above	0
31	MAT 256 Calculus II	4	MAT 151 Calculus II (C- or better)	4
32			MAT 245 Differential Equations	3
33			MAT 250 Foundations of Mathematics: An Introduction (C- or better)	3
34	MAT 268 Calculus III: Multivariable	4	MAT 252 Calculus III (C- or better)	4
35			MAT 320 Probability and Statistics I	4
36			MAT 322 Numerical Analysis I	4
37			MAT 372 Linear Algebra (C- or better)	3
38			MAT 378 Discrete Mathematics	3
39			MAT 488 Seminar in Mathematical Modeling	3
40			Select 1: MAT 321 Mathematical Statistics MAT 325 Design of Experiments MAT 326 Regression Analysis	3
41			Select 2: MAT 375 Abstract Algebra MAT 450 Analysis MAT 480 Topology	3
42	Introduction to Programming ACC – Structured Programming (3) CCC – CSC 105 Programming Logic (3) GCC – CSC 110 Computer Logic and Problem Solving (3) HCC – CSC 105 Programming Logic (3); CSC 106 Structured Programming (3) MCC – CSC 124 Programming Logic and Design with Python (3); CSC 125 Programming Logic and Design with C++ (3)	3	CSC 152 Computer Programming I	3

	MXCC – CSC 105 Programming Logic (3) NCC – CSC 108 Introduction to Programming (3) NVCC – CSC 205 Visual Basic I (3) NWCC – CSC 104 Introduction to Logic and Programming (4) QVCC – CSC 106 Structured Programming (3) TRCC – CSC 108 Introduction to Programming (4) TXCC – CSC 126 Programming Logic and Design with Visual Basic (3)			
43			Select two cognate courses beyond those used to satisfy LEP requirements from any of the following areas of application. Selections must be approved through memo from the Mathematics department to the Registrar's Office Biology Chemistry Computer Science Earth Science Economics Physics Or other approved areas	6
44	Select one: MAT 274 Linear Algebra MAT 285 Differential Equations MAT 287 Foundations of Mathematics	4	Will count as MAT 372 line 37 MAT 245 line 32 MAT 250 line 33 Credits will adjust accordingly	
45				
46				
47				
48	**Program Course Credits:**	**15**		**42**
49	**Open Electives**			
50	MAT 185 Trigonometry[1] MAT 186 Pre-Calculus[1]	4		
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:**	**8-9**		**24**
53	**Total Credits at the Community College**	**60-61**	**Total Credits for the 4-Year Degree**	**120**

[1] If a student arrives ready with placement above Pre-calculus, the student will receive 4 additional credits of open electives and four additional credits of open electives for each level of Calculus he/she places out of.
*Your work group may find itself listing several courses at places in this column due to differences in designations at the community colleges. In those cases, please list all courses and, next to each, the CC that offers it.
**There is no need to list community college courses in the Framework30 unless a specific course is designated in the pathway.

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

Mathematics B.A.

Math Majors must earn a C or better [2]

Math Majors must earn a B of better [3]

1	Community Colleges*:			CCSU	
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	BIO, CHE or PHY sequence	4	Scientific Inquiry I	4
10	Scientific Knowledge	BIO, CHE or PHY sequence	4	Scientific Inquiry II	4
11	Quantitative	MAT 254 Calculus I[1,3]	4	Quantitative Reasoning	4
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):**				**33**
19	**Pathway30**				
20	**Additional General Education Courses**				
21				General Education Elective	3
22				General Education Elective	3
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 level or above. Students who have completed three years of language in high school with at least a C average have satisfied this requirement.	6

26			**Must be taken at WCSU:**	
27			First Year Navigation – fulfilled by MAT 151/151 See lines 32 and 33	0
28			Written Communication III—embedded in MAT 450/451 See lines 44 and 45	0
29			Culminating Gen Ed Experience – satisfied by MAT 450/451 See lines 44 and 45	0
30	**General Education Credits:**			**51**
31	**Major Program Courses**			
32			MAT 150 Mathematics Seminar I	.5
33			MAT 151 Mathematics Seminar II	.5
34			MAT 141 Foundational Discrete Mathematics^2	3
35	See line 11		MAT 181 Calculus I See line 11 above	0
36	MAT 256 Calculus II	4	MAT 182 Calculus II^3	4
37			MAT 185 Introduction to Symbolic Computations	3
38			MAT 207 Proofs	3
39			MAT 222 Introductory Statistics	3
40			MAT 272 Introduction to Linear Algebra^2	3
41	MAT 268 Calculus III: Multivariable	4	MAT 281 Calculus III^2	4
42			MAT 282 Differential Equations	3
43			MAT 332 Introduction to Applied Mathematics	3
44			MAT 375 Algebraic Structures^2	3
45			MAT 383 Introduction to Mathematical Analysis	3
46			MAT 450 Senior Seminar I	1.5
47			MAT 451 Senior Seminar II	1.5
48			One course which completes a sequence in Analysis, Algebra or Applied Math	3
49			One elective from the Department's Approved List	3
50			A year sequence from one of the following: BIO, CHE, ECO, PHY, met in the Framework30 above; see lines 9 and 10	
51	Introduction to Programming ACC – Structured Programming (3)	3	CS 140 Introduction to Programming OR CS 143 Visual BASIC	3

	CCC – CSC 105 Programming Logic (3) GCC – CSC 110 Computer Logic and Problem Solving (3) HCC – CSC 105 Programming Logic (3); CSC 106 Structured Programming (3) MCC – CSC 124 Programming Logic and Design with Python (3); CSC 125 Programming Logic and Design with C++ (3) MXCC – CSC 105 Programming Logic (3) NCC – CSC 108 Introduction to Programming (3) NVCC – CSC 205 Visual Basic I (3) NWCC – CSC 104 Introduction to Logic and Programming (4) QVCC – CSC 106 Structured Programming (3) TRCC – CSC 108 Introduction to Programming (4) TXCC – CSC 126 Programming Logic and Design with Visual Basic (3)			
52	Select one: MAT 274 Linear Algebra MAT 285 Differential Equations MAT 287 Foundations of Mathematics	4	Will count as MAT 272 line 40 MAT 282 line 42 MAT 207 line 38 Credits will adjust accordingly	
53	**Program Course Credits:**	**15**		**48**
54	**Open Electives**			
55	MAT 185 Trigonometry[1] MAT 186 Pre-Calculus[1]	4		
56	**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.**			
57	**Open Elective credits:**	**8-9**		**21**

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

[1] If a student arrives ready with placement above Pre-calculus, the student will receive 4 additional credits of open electives and four additional credits of open electives for each level of Calculus he/she places out of.

*Your work group may find itself listing several courses at places in this column due to differences in designations at the community colleges. In those cases, please list all courses and, next to each, the CC that offers it.

**There is no need to list community college courses in the Framework30 unless a specific course is designated in the pathway.

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

Mathematics B.A. – Computer Science Option

Math Majors must earn a C or better [2]

1	Community Colleges*:			CCSU	
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	BIO, CHE or PHY sequence	4	Scientific Inquiry I	4
10	Scientific Knowledge	BIO, CHE or PHY sequence	4	Scientific Inquiry II	4
11	Quantitative	MAT 254 Calculus I[1,2]	4	Quantitative Reasoning	4
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):**				**33**
19	**Pathway30**				
20	**Additional General Education Courses**				
21				General Education Elective	3
22				General Education Elective	3
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 level or above. Students who have completed three years of language in high school with at least a C average have satisfied this requirement.	6
26				**Must be taken at WCSU:**	

27			First Year Navigation – fulfilled by MAT 151/151 See lines 32 and 33	0
28			Written Communication III—embedded in MAT 450/451 See lines 43 and 44	0
29			Culminating Gen Ed Experience – satisfied by MAT 450/451 See lines 43 and 44	0
30	**General Education Credits:**			**52-54**
31	**Major Program Courses**			
32			MAT 150 Mathematics Seminar I	.5
33			MAT 151 Mathematics Seminar II	.5
34			MAT 165 Introductory Discrete Mathematics[2]	4
35	See line 11		MAT 181 Calculus I[2] See line 11 above	0
36	MAT 256 Calculus II	4	MAT 182 Calculus II[2]	4
37			MAT 207 Proofs[2]	3
38			MAT 272 Introduction to Linear Algebra[2]	3
39	MAT 268 Calculus III: Multivariable	4	MAT 281 Calculus III[2]	4
40			MAT 282 Differential Equations or MAT 222 Introductory Statistics	3
41			MAT 332 Introduction to Applied Mathematics or MAT 359 Theory of Computation	3
42			MAT 375 Algebraic Structures[2]	3
43			MAT 450 Senior Seminar I	1.5
44			MAT 451 Senior Seminar II	1.5
45	Select one: MAT 274 Linear Algebra MAT 285 Differential Equations MAT 287 Foundations of Mathematics	4	Will count as MAT 272 line 38 MAT 282 line 40 MAT 207 line 37 Credits will adjust accordingly	
46			*Computer Science Option Courses:*	
47	Introduction to Programming ACC – Structured Programming (3) CCC – CSC 105 Programming Logic (3) GCC – CSC 110 Computer Logic and Problem Solving (3)	3	CS 140 Introduction to Programming CS 143 Visual Basic	3-4

	HCC – CSC 105 Programming Logic (3); CSC 106 Structured Programming (3) MCC – CSC 124 Programming Logic and Design with Python (3); CSC 125 Programming Logic and Design with C++ (3) MXCC – CSC 105 Programming Logic (3) NCC – CSC 108 Introduction to Programming (3) NVCC – CSC 205 Visual Basic I (3) NWCC – CSC 104 Introduction to Logic and Programming (4) QVCC – CSC 106 Structured Programming (3) TRCC – CSC 108 Introduction to Programming (4) TXCC – CSC 126 Programming Logic and Design with Visual Basic (3)			
48			CS 170 Computer Science I: Language	4
49			CS 205 Data Modeling and Database Design	4
50			CS 315 Design and Analysis of Algorithms	4
51			Choose one: CS 305 Database Applications Engineering CS 350 Object Oriented Software Engineering CS 360 Distributed Applications Engineering	4
52			A year sequence from one of the following: BIO, CHE, ECO, PHY, met in the Framework30 above; see lines 9 and 10	
53				
54				
55	**Program Course Credits:**			**50-51**
56	**Open Electives**			

57	MAT 185 Trigonometry[1] MAT 186 Pre-Calculus[1]	4		
58	**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.**			
59	**Open Elective credits:**	**8-9**		**15-18**
60	**Total Credits at the Community College**	**60-61**	**Total Credits for the 4-Year Degree**	**120**

[1] If a student arrives ready with placement above Pre-calculus, the student will receive 4 additional credits of open electives and four additional credits of open electives for each level of Calculus he/she places out of.

*Your work group may find itself listing several courses at places in this column due to differences in designations at the community colleges. In those cases, please list all courses and, next to each, the CC that offers it.

**There is no need to list community college courses in the Framework30 unless a specific course is designated in the pathway.

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: Mathematics Concentration B.A.

There are no additional requirements for admission to this program.

1	Community Colleges*:			CCSU	
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	BIO, CHE or PHY sequence	4	Natural Sciences	8
10	Scientific Knowledge	BIO, CHE or PHY sequence	4		
11	Quantitative	MAT 185 Trigonometry MAT 186 Pre-Calculus[1]	4	Quantitative Reasoning	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				General Education elective	3
24					
25					
26					
27	**General Education Credits:**		**33**		**42**
28	**Major Program Courses**				
29	MAT 254 Calculus I		4	Calculus 1	3
30	MAT 256 Calculus II		4	Calculus 2	3
31	MAT 268 Calculus III: Multivariable		4	Calculus 3	3

32			Linear Algebra	3
33			Abstract/Modern Algebra	3
34			Real Analysis, Complex Analysis or Variables or Advanced Calculus	3
35			Upper level electives: 15 credits of which two courses must be in sequence (within the concentration), except for the algebras.	15
36	Select one: MAT 274 Linear Algebra MAT 285 Differential Equations MAT 287 Foundations of Mathematics	4	Will count as Linear Algebra line 32 Will count as Math elective line 35 Will count as Math elective line 35 Credits will adjust accordingly	
37			*Prerequisites or Co-requisites:*	
38	Introduction to Programming ACC – Structured Programming (3) CCC – CSC 105 Programming Logic (3) GCC – CSC 110 Computer Logic and Problem Solving (3) HCC – CSC 105 Programming Logic (3); CSC 106 Structured Programming (3) MCC – CSC 124 Programming Logic and Design with Python (3); CSC 125 Programming Logic and Design with C++ (3) MXCC – CSC 105 Programming Logic (3) NCC – CSC 108 Introduction to Programming (3) NVCC – CSC 205 Visual Basic I (3) NWCC – CSC 104 Introduction to Logic and Programming (4) QVCC – CSC 106 Structured Programming (3)	3	Computer language	3

	TRCC – CSC 108 Introduction to Programming (4) TXCC – CSC 126 Programming Logic and Design with Visual Basic (3)			
39			Laboratory-based science See lines 9 and 10	
40				
41				
42				
43				
44				
45				
46				
47	**Program Course Credits:**	**19**		
48	**Open Electives**			
49				
50	**Open Elective credits:**	**8-9**		
51	**Total Credits at the Community College**	**60-61**	**Total Credits for the 4-Year Degree**	**120**

[1] If a student arrives ready with placement above Pre-calculus, the student will receive 4 additional credits of open electives and four additional credits of open electives for each level of Calculus he/she places out of.

*Your work group may find itself listing several courses at places in this column due to differences in designations at the community colleges. In those cases, please list all courses and, next to each, the CC that offers it.

**There is no need to list community college courses in the Framework30 unless a specific course is designated in the pathway.

Transfer Pathway and Degree Program

Template 2

Credits remaining in the four-year degree

Mathematics B.A.

There are no additional requirements for admission to this program.

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 – Foreign Language Proficiency (Can be met with completion of the third year or higher of a 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	MATH 218 Discrete Mathematics	4
14	MATH 228 Linear Algebra	4
15	MATH 366 Abstract Algebra	4
16	MATH 377 Real Analysis	4
17	MATH 450 Proof Seminar	4
18	*Choose Six (6) credits from the following:* MATH 300, 355, 383, 398, 400, 421, 440, 455, 465, 468, 469, 477, 491 STAT 315, 416, 425, 455, 456, 465, 476 ACTL 335, 465, 481, 482	6
19		
20	MATH 2##/218 line 13 MATH 228 line 14 Or MATH 355 line 18 will have been completed at the community college.	Subtract 3-4
21		
22		
23		
24		
25		
26		
27		
28		
29		
30	**Program Course Credits**	**22-23**

31	**Minor** – Students should consider beginning work on a minor at the community college.	**18-24**
32	**Remaining Open Electives**	
33	**Courses**	**Credits**
34	**Open Elective credits**	0-2
35	**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.**	
36	**Total Credits Remaining for the 4-Year Degree**	**60**

Transfer Pathway and Degree Program

Template 2

Credits remaining in the four-year degree

Mathematics B.A. Actuarial Science Specialization

No minor is required for students selecting this 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 – Foreign Language Proficiency (Can be met with completion of the third year or higher of a 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	MAT 218 Discrete Mathematics	4
14	MATH 228 Introduction to Linear Algebra	4
15	STAT 315 Mathematical Statistics I	3
16	STAT 416 Mathematical Statistics II	3
17	STAT 425 Loss and Frequency Distributions and Credibility Theory	3
18	ACTL 335 Theory of Interest	3
19	ACTL 465 Actuarial Models I	4
20	ACTL 466 Actuarial Models II	4
21	Major Electives (as approved by advisor): 18 credits from: ACTL 480 ACTL 481 Review – SOA/CAS Course I ACTL 482 Review – SOA/CAS Course II MATH 300 Mathematics Internship MATH 355 Introduction to Differential Equations with Applications MATH 366 Introduction to Abstract Algebra MATH 377 Introduction to Real Analysis AC 211 Introduction to Financial Accounting AC 212 Introduction to Managerial Accounting CS 151 Computer Science I CS 152 Computer Science II CS 213 Applications of Computing I CS 473 Simulation Techniques ECON 460 Economic Forecasting FIN 295 Managerial Finance FIN 301 Intermediate Managerial Finance	18

	FIN 310 Principles of Investments FIN 320 Financial Markets and Institutions FIN 321 Insurance LAW 250 Legal Environment of Business MGT 295 Fundamentals of Management and Organizational	
22		
23	MATH 218 line 13 MATH 228 line 14 Or MATH 355 line 21 will have been completed at the community college.	Subtract 3-4
24		
25		
26		
27		
28		
29		
30	**Program Course Credits**	**42-43**
31		
32	**Remaining Open Electives**	
33	**Courses**	**Credits**
34	**Open Elective credits**	0
35	**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.**	
36	**Total Credits Remaining for the 4-Year Degree**	**60-61**

Transfer Pathway and Degree Program

Template 2

Mathematics B.A. Statistics Specialization

No minor is required for students selecting this 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 – Foreign Language Proficiency (Can be met with completion of the third year or higher of a 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	MAT 218 Discrete Mathematics	4
14	MATH 228 Introduction to Linear Algebra	4
15	MATH 366 Abstract Algebra OR MATH 377 Real Analysis	4
16	STAT 215 Statistics for Behavioral Sciences	
17	STAT 315 Mathematical Statistics I	3
18	STAT 416 Mathematical Statistics II	3
19	STAT 216 Statistics for Behavioral Sciences II OR STAT 453 Applied Statistical Analysis	3
20	2 courses chosen from: STAT 425 Loss and Frequency Distributions and Credibility Theory STAT 455 Experimental Design STAT 456/MKT 444 Fundamentals of SAS STAT 465 Nonparametric Statistics STAT 476 Topics in Statistics	6
21	16 credits selected from the courses listed above or from the following: MATH 300 Mathematics Internship MATH 491 Advanced Vector Calculus CS 151 Computer Science I CS 152 Computer Science II CS 253 Data and File Structures CS 473 Simulation Techniques BIO 405 Ecology ECON 460 Economic Forecasting	16

	ECON 485 Econometrics GEOG 476 Advanced Cartography PSY 222 Research Methods in Psychology II PSY 451 Psychological Evaluation ACTL 335 Theory of Interest ACTL 465 Actuarial Models I ACTL 466 Actuarial Models II ACTL 481 Review – SOA/CAS Course I *Strongly Recommended:* CS 151 Computer Science I	
22		
23	MATH 218 line 13 MATH 228 line 14 Or MATH 355 (Not required in the program – so what happens to it at CCSU?) will have been completed at the community college.	Subtract 3-4
24		
25		
26		
27		
28		
29		
30	**Program Course Credits**	**42-43**
31		
32	**Remaining Open Electives**	
33	**Courses**	**Credits**
34	**Open Elective credits**	0
35	**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.**	
36	**Total Credits Remaining for the 4-Year Degree**	**60-61**

Transfer Pathway and Degree Program

Template 2

Credits remaining in the four-year degree

Mathematics B.A.

For all Mathematics courses number 300 or higher used to satisfy the math major requirement, students must fulfill at least one of the following:

3. C in all these courses OR
4. C+ average in all these courses.

1	**Eastern Connecticut State University**	
2	**Remaining General Education Courses**	
3	**Course**	**Credits**
4	*Two of the first four below must be completed at ECSU.*	
5	Cultural Perspectives	3
6	Individuals and Societies	3
7	Creative Expressions	3
8	MATH 315 Applied Probability and Statistics	4
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**	**19**
11	**Remaining Major Program Requirements**	
12	**Course**	**Credits**
13	MAT 230 Discrete Structures	3
14	MAT 310 Applied Linear Algebra	3
15	MAT 315 Applied Probability and Statistics See line 8	0
16	MAT 380 Geometry	3
17	MAT 400 Abstract Algebra I	3
18	MAT 420 Real Analysis I	3
19	MAT 421 Real Analysis II	3
20	Two addition MAT courses numbered 300 or above but not MAT 303 or internships	6
21		
22	One of the following will have been completed at the community college: MAT 230 line 13 MAT 310 line 3 One of the additional MAT courses line 20	Subtract 3
23		
24		
25		
26		
27		
28		
29		
30		
31	**Program Course Credits**	**21**

32	**Remaining Open Electives**	
33	**Courses**	**Credits**
34	**Open Elective credits**	**20**
35	**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.**	
36	**Total Credits Remaining for the 4-Year Degree**	**60**

Transfer Pathway and Degree Program

Template 2

Credits remaining in the four-year degree

Mathematics B.A.

In those mathematics courses which the student applies toward the major in mathematics, he/she must have a GPA of 2.0 and, at most, one grade below C-.

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	Creative Drive	3
7	Global Awareness	3
8	Mind and Body	3
9	Tier 3 Connections Capstone	3
10	**General Education Credits**	**24**
11	**Remaining Major Program Requirements**	
12	**Course**	**Credits**
13	MAT 250 Foundations of Mathematics: An Introduction (C- or better)	3
14	MAT 320 Probability and Statistics I	4
15	MAT 372 Linear Algebra (C- or better)	3
16	MAT 375 Abstract Algebra I	3
17	MAT 450 Analysis	3
18	Select 1: MAT 488 Seminar in Mathematical Modeling MAT 498 Seminar in Mathematics	3
19	Select, with approval of a department advisor, three courses from: MAT 245 Differential Equations MAT 300 History of Mathematics MAT 321 Mathematical Statistics MAT 322 Numerical Analysis I MAT 325 Design of Experiments MAT 326 Regression Analysis MAT 360 Foundations of Geometry MAT 370 Number Theory MAT 376 Abstract Algebra II MAT 378 Discrete Mathematics MAT 398 Special Topics in Mathematics MAT 405 Elementary Mathematics from an Advanced Standpoint MAT 480 Topology MAT 488 Seminar in Mathematical Modeling	9

	MAT 498 Seminar in Mathematics	
20	One of the following will have been completed at the community college: MAT 372 line 15 MAT 245 line 19 MAT 250 line 13	Subtract 3
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31	**Program Course Credits**	**25**
32	**Remaining Open Electives**	
33	**Courses**	**Credits**
34	**Open Elective credits**	**11**
35	**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.**	
36	**Total Credits Remaining for the 4-Year Degree**	**60**

Transfer Pathway and Degree Program

Template 2

Credits remaining in the four-year degree

Mathematics B.S. – Concentration: Applied

In those mathematics courses which the student applies toward the major in mathematics, he/she must have a GPA of 2.0 and, at most, one grade below C-.

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	Creative Drive	3
7	Global Awareness	3
8	Mind and Body	3
9	Tier 3 Connections Capstone	3
10	**General Education Credits**	**24**
11	**Remaining Major Program Requirements**	
12	**Course**	**Credits**
13	MAT 245 Differential Equations	3
14	MAT 250 Foundations of Mathematics: An Introduction (C- or better)	3
15	MAT 320 Probability and Statistics I	4
16	MAT 322 Numerical Analysis I	4
17	MAT 372 Linear Algebra (C- or better)	3
18	MAT 378 Discrete Mathematics	3
19	MAT 488 Seminar in Mathematical Modeling	3
20	Select 1: MAT 321 Mathematical Statistics MAT 325 Design of Experiments MAT 326 Regression Analysis	3
21	Select 2: MAT 375 Abstract Algebra MAT 450 Analysis MAT 480 Topology	3
22		
23	One of the following will have been completed at the community college: MAT 372 line 17 MAT 245 line 13 MAT 250 line 14	Subtract 3
24		
25		
26		

27		
28		
29		
30		
31	**Program Course Credits**	**26**
32	**Remaining Open Electives**	
33	Courses	**Credits**
34	**Open Elective credits**	**10**
35	**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.**	
36	**Total Credits Remaining for the 4-Year Degree**	**60**

Transfer Pathway and Degree Program

Template 2

Credits remaining in the four-year degree

Mathematics B.A.

Math Majors must earn a C or better [2]

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	3
7	General Ed Elective	3
8	*Remove this language if the program does not require a foreign language:* 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.	6
9	*The following must be taken at WCSU:*	
10	First Year Navigation – fulfilled by MAT 151/151 See lines 16 and 17	0
11	Written Communication III—embedded in MAT 450/451 See lines 27 and 28	0
12	Culminating Gen Ed Experience – satisfied by MAT 450/451 See lines 27 and 28	0
13	**General Education Credits**	**18**
14	**Remaining Major Program Requirements**	
15	**Course**	**Credits**
16	MAT 150 Mathematics Seminar I	.5
17	MAT 151 Mathematics Seminar II	.5
18	MAT 141 Foundational Discrete Mathematics[2]	3
19	MAT 185 Introduction to Symbolic Computations	3
20	MAT 207 Proofs	3
21	MAT 222 Introductory Statistics	3
22	MAT 272 Introduction to Linear Algebra[2]	3
23	MAT 282 Differential Equations	3
24	MAT 332 Introduction to Applied Mathematics	3
25	MAT 375 Algebraic Structures[2]	3
26	MAT 383 Introduction to Mathematical Analysis	3
27	MAT 450 Senior Seminar I	1.5
28	MAT 451 Senior Seminar II	1.5
29	One course which completes a sequence in Analysis, Algebra or Applied Math	3
30	One elective from the Department's Approved List	3
31		
32	One of the following will have been completed at the community college: MAT 272 line 22 MAT 282 line 23 MAT 207 line 20	Subtract 3

33		
34	**Program Course Credits**	**34**
35	**Remaining Open Electives**	
36	**Courses**	**Credits**
37	**Open Elective credits**	**8**
38	*Remove this language if the program does not require a foreign language:* **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**

Transfer Pathway and Degree Program

Template 2

Credits remaining in the four-year degree

Mathematics B.A. – Computer Science Option

Math Majors must earn a C or better [2]

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	3
7	General Ed Elective	3
8	*Remove this language if the program does not require a foreign language:* 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.	6
9	*The following must be taken at WCSU:*	
10	First Year Navigation – fulfilled by MAT 151/151 See lines 16 and 17	0
11	Written Communication III—embedded in MAT 450/451 See lines 24 and 25	0
12	Culminating Gen Ed Experience – satisfied by MAT 450/451 See lines 24 and 25	0
13	**General Education Credits**	**18**
14	**Remaining Major Program Requirements**	
15	**Course**	**Credits**
16	MAT 150 Mathematics Seminar I	.5
17	MAT 151 Mathematics Seminar II	.5
18	MAT 165 Introductory Discrete Mathematics[2]	4
19	MAT 207 Proofs[2]	3
20	MAT 272 Introduction to Linear Algebra[2]	3
21	MAT 282 Differential Equations or MAT 222 Introductory Statistics	3
22	MAT 332 Introduction to Applied Mathematics or MAT 359 Theory of Computation	3
23	MAT 375 Algebraic Structures[2]	3
24	MAT 450 Senior Seminar I	1.5
25	MAT 451 Senior Seminar II	1.5
26	*Computer Science Option:*	
27	CS 170 Computer Science I: Language	4
28	CS 205 Data Modeling and Database Design	4
29	CS 315 Design and Analysis of Algorithms	4
30	Choose one: CS 305 Database Applications Engineering CS 350 Object Oriented Software Engineering CS 360 Distributed Applications Engineering	4
31		
32	One of the following will have been completed at the community college:	Subtract

	MAT 272 line 20 MAT 282 line 21 MAT 207 line 19	3
33		
34	**Program Course Credits**	**35**
35	**Remaining Open Electives**	
36	**Courses**	**Credits**
37	**Open Elective credits**	**7**
38	*Remove this language if the program does not require a foreign language:* **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**

Transfer Pathway and Degree Program

Template 2

Credits remaining in the four-year degree

General Studies: Mathematics Concentration B.A.

There are no additional requirements for admission to this program.

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
6	General Education elective	3
7	**General Education Credits**	**9**
8	**Remaining Major Program Requirements**	
9	**Course**	**Credits**
10	Linear Algebra	3
11	Abstract/Modern Algebra	3
12	Real Analysis, Complex Analysis or Variables or Advanced Calculus	3
13	Upper level electives: 15 credits of which two courses must be in sequence (within the concentration), except for the algebras.	15
14		
15	One of the following will have been completed at the community college: Linear Algebra line 10 Math elective line 13	Subtract 3
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26		
27		
28	**Program Course Credits**	**21**
29	**Remaining Open Electives**	
30	**Courses**	**Credits**
31		
32	**Open Elective credits**	**30**
33	**Total Credits Remaining for the 4-Year Degree**	**60**