Computer and Mathematical Sciences Secondary Education
Typical Four-Year Sequence

Freshman Year			
Fall Term		**Spring Term**	
Course	**Units**	**Course**	**Units**
SEMS110 Introduction to STEM Teaching I: Inquiry Approaches to Teaching	1	SEMS 120 Introduction to STEM Teaching II: Inquiry-Based Lesson Design	1
MATH 273 Calculus I	4	MATH 274 Calculus II **(Core Category 3)**	4
COSC 109 Computers & Creativity **(Core Category 4)**	3	COSC 236: CS I	4
TSEM 102 **(Core Category 1)**	3	ENGL 102 **(Core Category 2)**	3
Core Curriculum 6,7,8,10,11,12,13	3	Core Curriculum 6,**7**,8,10,11,12,13	4
Total	**14**	**Total**	**16**

Sophomore Year			
Fall Term		**Spring Term**	
Course	**Units**	**Course**	**Units**
SEMS 230 Knowing and Learning	3	SEMS 240 Classroom Interactions	3
MATH 265 Elementary Linear Algebra	4	MATH 263Discrete Mathematics or MATH 267 Intro to Abstract Mathematics	3-4
COSC 237: CS II	4	COSC 336 Data Structures and Algorithm Analysis	4
Core Curriculum 6,7,8,10,11,12,13	3	Core Curriculum 6,7,8,10,11,12,13	3
Core Curriculum 6,7,8,10,11,12,13	3	Core Curriculum 6,7,8,10,11,12,13	3
Total	**17**	**Total**	**16-17**

Shading indicates that the course has a clinical experience.
Distribution of credits:
Red indicates education course: 25 credits
Green indicates computer science course: 36 credits
Blue indicates mathematics course: 38-39 credits
Black indicates core curriculum course that is not included in major: 28 credits
There are no free electives.

Junior Year			
Fall Term		**Spring Term**	
Course	**Units**	**Course**	**Units**
SEMS 250 Perspectives on Science and Math **(Core Category 5)**	3	SEMS 370 Project-Based Instruction	3
MATH 353 Euclidean and Non-Euclidean Geometries	3	SCED 460 Using Reading & Writing in the Secondary Schools	4
MATH 275 Calculus III	4	MATH 310 Functions & Modeling **(Core Category 9)**	3
ITEC 250 Fundamentals of Computer Networks	3	COSC 412 Software Engineering	3
CIS 377 Information Systems Security	3	Core Curriculum 6,7,8,10,11,12,13	3
Total	**16**	**Total**	**16**

Senior Year			
Fall Term		**Spring Term**	
Course	**Units**	**Course**	**Units**
SEMS 498 Internship in Mathematics and Science Secondary Education	3	MATH 426 Internship in Secondary Education – Mathematics	6
SCED 461 Teaching Reading in the Secondary Content Areas	3		
MATH 423 Teaching Mathematics in the Secondary Schools	3	COSC 492 Internship in Secondary Education – Computer Science	6
MATH 330 Intro to Statistical Methods	4		
COSC 482 Teaching Computer Science in the Secondary Schools	3	SEMS 430 Seminar in STEM Secondary Education	1
COSC 418 Computer Ethics **(Core Category 14)** Needs junior/senior standing.	3		
Total	**19**	**Total**	**13**

TU Core Categories <u>not satisfied</u> by major: 1, 2, 6, 7, 8, 10, 11, 12, 13
The minimum total number of required units for graduation is 127.