

**Bachelor of Science (Computer and Information Science Mathematics)**  
**BS (CIS/MATH)**  
 FALL 2021

Curriculum:

1. Complete all of the following 4 courses	<b>15 cr. hrs.**</b>
MATH 115 (4) : Calculus I, MATH 116 (4) : Calculus II, MATH 227 (3): Introduction to Linear Algebra, and CIS 275 (4): Discrete Structures I	
2. MATH 215: Calculus III	<b>4 cr. hrs.</b>
3. Choose one:	<b>3 cr. hrs.</b>
MATH 395: Numbers Theory OR MATH 472: Numerical Analysis	
4. CIS/MATH electives	<b>8<sup>^</sup> to 9 cr. hrs.</b>
^ 8 credit hours can only be fulfilled by taking two 3-credit hour classes from the approved list of electives and two credit hours of topics/independent study in mathematics (MATH 390).	

## Approved List of CIS/MATH Electives

- MATH 300 Math Lang Proof & Struct (3)
- MATH 335 Mathematical Interest Theory (3)
- MATH 390 Topics in Mathematics (1-3) (Prior approval by CECS for use in CIS Math degree needed)
- MATH 395 Elementary Number Theory (3)
- MATH 396 Introduction to Cryptography (3)
- MATH 404 Dynamical Systems (3)
- MATH 412 First Course in Modern Algebra (3)
- MATH 413<sup>+</sup> Linear Algebra 2 (3)
- MATH 420 Stochastic Processes (3)
- MATH 425 Mathematical Statistics (3)
- MATH 435 Mathematics of Finance (3)
- MATH 451 Advanced Calculus I (3)
- MATH 452 Advanced Calculus II (3)
- MATH 454 Fourier and Boundary (3)
- MATH 455 Func of a Complex Var with App 3 (3)
- MATH 458 Introduction to Wavelets (3)
- MATH 462 Mathematical Modeling (3)
- MATH 472 Intro to Numerical Analysis (3)
- MATH 473 Matrix Computation (3)
- MATH 492 Introduction to Topology (3)
- MATH 514 Fin Diff Meth for Diff Equat (3)
- MATH 516 Fin Elemnt Meth for Diff Equat (3)
- MATH 523<sup>+</sup> Linear Algebra w/Applications (3)
- MATH 590 Topics in Math & Stat (3) (Prior approval by CECS for use in CIS Math degree needed)
- The following CECS graduate courses may also be used towards the CIS Mathematics degree: CIS 451, 515\*, 551\*, ECE 555\*, 560\*, 567\*, 580\*; IMSE 505\*, 506\*, 510\*, 511\*; ME 518\*

\* Graduate tuition assessment applies. Permission is required to take graduate courses. A minimum of nine hours is taken from the Mathematics department (MATH) courses beyond the 15 credit hours required for the CIS degrees

+ Credit for only one course from MATH 413 and MATH 523