



## BA, Mathematics/Computer Science Option

### Major requirements (114 credits):

#### Required Courses:

Course Number	Course Name	Credits
MATH 161	Calculus I	5
MATH 162	Calculus II	5
MATH 163	Calculus III	5
MATH 241	Calculus IV	5
MATH 225	Foundations of Mathematics	5
MATH 231	Linear Algebra	5
MATH 345	Numerical Analysis I	4
MATH 360 or 460	Continuous Functions	4
MATH 385	Probability and an Introduction to Statistics	4
MATH 494	Senior Seminar	2
CSCD 110	Introduction to Programming	4
CSCD 210	Programming Principles I	5
CSCD 211	Programming Principles II	5
CSCD 240	C and UNIX Programming	4
CSCD 260	Architecture and Organization I	4
CSCD 300	Data Structures	4
CSCD 305	C++ Programming	4
CSCD 310	Discrete Structures	4
CSCD 320	Algorithms	4
ENGR 160	Digital Circuits	4

Select three courses from one of two categories, and four from the remaining category (for a total of 7 courses):

#### Category 1:

MATH 347 Introductory Differential Equations (4 credits)

MATH 431 Introduction to Modern Algebra I (4 credits)

MATH 445 Numerical Analysis II (4 credits)

MATH 447 Differential Equations (4 credits)

MATH 485 Theoretical Probability and Mathematical Statistics (4 credits)

Any other MATH course numbered at or above 400 with the approval of the designated adviser for this degree (4 credits)

#### Category 2:

CSCD 340 Operating Systems (4 credits)

CSCD 360 Architecture and Organization II (4 credits)

CSCD 420 Automata (4 credits)

CSCD 421 Automata and Languages (4 credits)

CSCD 441 Operating Systems II (4 credits)

CSCD 442 Operating Systems III (4 credits)

CSCD 480 Artificial Intelligence (4 credits)

Any other CSCD course numbered at or above 400 with the approval of the designated adviser for this degree (4 credits)

## NEW FRESHMAN FOUR-YEAR SCHEDULE

	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>
<b>Freshman</b>	CPLA 100/101 - 2 cr. MATH 161 - 5 cr. ENGL 101 - 5 cr. GEGR - 5 cr.	MATH 162 - 5 cr. ENGL 201 - 5 cr. GEGR - 5 cr.	MATH 163 - 5 cr. ENGR 160 - 4 cr. GEGR - 5 cr. Cultural Div. - 4-5 cr
<b>Sophomore</b>	MATH 231 - 5 cr. MATH 241 - 5 cr. CSCD 110 - 5 cr	MATH 225 - 5 cr. CSCD 210 - 5 cr. GEGR - 5 cr.	CSCD 240 - 4 cr. CSCD 300 - 4 cr GEGR - 5 cr.
<b>Junior</b>	MATH 347 or 431 - 4 cr. MATH 360 - 4 cr. CSCD 260 - 4 cr. CSCD 420 - 4 cr (even yr) GEGR (odd yr)	MATH 345 or 385 - 4 cr. GEGRs (two) - 10 cr Intern. Studies - 4-5 cr.	MATH 445 or 485 - 4 cr. CSCD 305 - 4 cr. CSCD 320 - 4 cr. GEGR - 5 cr (even yr)
<b>Senior</b>	CSCD 360 - 4 cr. CSCD 340 - 4 cr. ITGS 400 - 4 cr. CSCD 420 - 4 cr. (even yr)	MATH 345 or 385 - 4 cr. CSCD 421 or 441 - 4 cr. MATH 494 - 2 cr. Free Elective - 4-5 cr	CSCD 422 or 442- 4 cr. Category 1 or 2 elective Free Electives - 4-5 cr.

If the major shown above is your chosen program, you should meet with the Department Chair to plan your first quarter of classes and to be assigned to a departmental adviser. Please contact:

Dr. Barbara L. Alvin  
 Department Chair  
 Department of Mathematics  
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 E-Mail: balvin@ewu.edu