

# Mathematics Major Check-Off Form: Computational Mathematics BS

(Major Declared *Spring 2020 and Thereafter*)

Name:	
Student ID #:	Expected Graduation (month & year):

- C average (2.0) required in courses fulfilling the Mathematics majors.
- No requirement for the Mathematics major (BA or BS) may be taken P/F
- At least **four** Mathematics courses numbered 300s or more must be taken at UMB.
- **Capstone requirement** may be met through any of the courses with numbers between 420-499

### Required Core Math Courses:

Sem	Grade	Course	Sem	Grade	Course
		<b>Math 140</b> – Calculus I			<b>Math 291</b> – Mathematical Software
		<b>Math 141</b> – Calculus II			<b>Math 314</b> – Intro to Proofs
		<b>Math 242</b> – Multivariable & Vector Calc			<b>Math 345</b> – Prob & Stats
		<b>Math 260</b> – Linear Algebra			<b>Physics 113</b> – Fundamentals of Physics I
		<b>Math 265</b> – Discrete Structures in Math			<b>CS 110</b> – Intro to Computing
		<b>Math 270</b> – Applied ODEs			

### Concentration Requirements:

Electives have to be chosen from Math 300+ courses.

Sem	Grade	Course
		<b>Math 425</b> – Numerical Analysis
		<b>Math 426</b> – Numerical Linear Algebra
		<b>Math 447</b> – Probability Models
		<b>Math 448</b> – Computational Statistics
		<b>Math360</b> – Abstract Algebra I <i>or</i> <b>Math 450</b> Real Analysis
		Elective: MATH

### Required Science Courses: *three science courses (excluding Physics 113 and 114 and CS 110)*

For the BS degree you must take four science courses INCLUDING Physics 114. One of these courses can be a lab. The courses have to be offered by Biology, Chemistry, Computer Science, Engineering or Physics Department and **MUST** be required for a major in the program offered by the respective department.

Sem	Grade	Course	Sem	Grade	Course
		Physics 114 - Fundamentals of Physics II			

**\*Advisors:** Please release the advising hold at the end of the advising session if you feel the student is ready to register. Navigate to “Advising Center” --> “Student Summary All Terms (UM)” --> “⊗” symbol on top of the page --> “ADV” in the holds list --> Release. If the student shows math as their additional major (AM), ensure that the student see’s their primary major’s advisor to release the hold. If you have any questions, please contact [math@umb.edu](mailto:math@umb.edu).