

Name _____
 Advisor _____



BS in Applied and Computational Mathematics

Applied Differential Equations and Scientific Computing

Option - 120 Credits Required

A minimum of 32 credits must be taken at WCSU.

A minimum cumulative GPA of 2.0 is required.

Complete a foreign language at an 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. Consult your advisor. (IC)

Part 1: General Education Competency Requirements

Students must complete each of the competencies listed below. In addition, students must complete 3 of the competencies a second time excluding First Year (FY), WRT 101 (WI), Writing Intensive Tier II (W2) and Writing Intensive Tier III (W3).

Creative Process (CP)	_____	_____
Critical Thinking (CT)	_____	_____
Oral Communication (OC)	_____	_____
Health and Wellness (HW)	_____	_____
Scientific Inquiry (SI)	_____	_____
Intercultural Competence (IC)	_____	_____
Information Literacy (IL)	_____	_____
First Year Experience (FY)	_____	_____
Culminating Experience (CE)	_____	_____
Writing Course (WRT 101)	_____	_____
Writing Intensive II (W2)	_____	_____
Writing Intensive III (W3)	_____	_____
Quantitative Reasoning (QR)	_____	_____

MAT 150

MAT 453

WRT 101

MAT 453

MAT 181

MAT 182

Part 2: General Education Exploration Including Cognates

40 credits are required.

APPLIED AND COMPUTATIONAL MATH COGNATE REQUIREMENTS

Meteorology Sequence (8 S.H.)	_____
Chemistry Sequence (4 S.H.)	_____
WRT 101 Composition I: Habit of Writing	_____
CS 140 Introduction to Programming (Python)	_____
PHY 110 General Physics I (Calculus) (Required for MTR Sequence)	_____
29-33 CREDITS IN CLASSES OUTSIDE MAJOR (29 credits for students completing Meteorology Sequence and 33 credits for students completing Chemistry Sequence)	_____

MAT 281 Calculus III (C or better) _____

MAT 282 Ordinary Differential Equations (C or better) _____

MAT 322 Probability (C or better) _____

MAT 332 Appl Linear Alg and Math of Machine Learning (C or better) _____

MAT 380 Math Modeling with Symbolic and Scientific Computations (C or better) _____

MAT 383 Introduction to Mathematical Analysis _____

MAT 453 Senior Sem.(CE,W3) or SIS w/Project or Senior Thesis or Internship _____

APPLIED DIFFERENTIAL EQUATIONS AND SCIENTIFIC COMPUTING OPTION

MAT 468 Partial Differential Equations (PDEs) _____

MAT 469 Numerical Methods for Ordinary & Partial DEs _____

MAT 470 Applications of Machine Learning and Wavelets _____

Choose from 1 of the following:

Chemistry Sequence: CHE 110, 111*, 300 and 301 (Lectures only required. If labs are taken, additional credits will apply as free electives) _____

Meteorology Sequence: PHY 111, MTR 310, 311 and 340 _____

Part 3: Major in Applied & Computational Math

64 credits are required.

Minimum 2.0 major GPA

A minimum of 32 credits must be taken at WCSU.

APPLIED and COMPUTATIONAL MATH MAJOR CORE

MAT 141 Foundational Discrete Math (C or better)	_____
MAT 150 Mathematics Seminar I (FY)	_____
MAT 151 Mathematics Seminar II	_____
MAT 181 Calculus I (C or better) (QR)	_____
MAT 182 Calculus II (C or better) (QR)	_____
MAT 207 Proofs	_____
MAT 222 Introductory Statistics (C or better)	_____
MAT 272 Introduction to Linear Algebra (C or better)	_____

Part 4: Free Elective Credits

15 Free Electives for Meteorology Sequence _____

16 Free Electives for Chemistry Sequence _____

*Student enrolled in CHE 111 lecture and lab will meet the Scientific Inquiry (SI) competency.