



DEGREE SHEET / 2019-2020 CATALOG		
Student name:		
Eagle ID:		
Eagle Email:		
Phone:		
BS Mathematics		
<p>The curriculum of the BS Mathematics degree prepares students for a career in mathematics or a mathematics related field and emphasizes applied mathematics courses including ordinary differential equations, linear algebra, numerical analysis, partial differential equations, and probability and statistics. The degree does offer students a choice of a physics concentration. However, the concentration is optional. The total number of hours required for graduation is 120 credits that includes 40 credit hours of upper-division coursework. GENERAL EDUCATION REQUIREMENTS (31 CR) SEMESTER</p>		
GENERAL EDUCATION REQUIREMENTS (31 Credits)	SEMESTER	GRADE
AREA I: COMMUNICATIONS (6 Credits)		
ENGL 1110 Composition I (3) <i>Pre-requisites: ENG 109 or adequate score on the Course Placement Evaluation</i>		
Choose one of the following courses (3).		
ENGL 1120 Composition II (3) <i>Pre-requisite: ENG 1110</i>		
ENGL 1210 Technical Communications (3) <i>Pre-requisite: ENG 1110</i>		
AREA II: MATHEMATICS (3 Credits)		
MATH 1220 College Algebra (3) <i>Pre-Requisite: Math 1215</i>		
AREA III: LABORATORY SCIENCES (4 Credits) <i>You must select one science course with a lab</i>		
Area III Course (4)		
AREA IV: SOCIAL/BEHAVIORAL SCIENCES (3 Credits) <i>Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation</i> <i>You must select one Area IV course.</i>		
Area IV Course (3)		
AREA V: HUMANITIES (3 Credits) <i>Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation</i> <i>You must select one Area V course.</i>		
Area V Course (3)		

AREA VI: FINE ARTS (3 Credits) <i>You must select one Area VI course</i>		
Area VI Course (3)		
ADDITIONAL NINE CREDIT HOURS (9 Credits)		
COMM 1130 Public Speaking (3) <i>Pre-requisite: ENG 109</i>		
Choose one of the following Civics Courses (3)		
POLS 1100 Introduction to Political Science (3) POLS 1120 American National Government (3) CJUS 1110 Introduction to Criminal Justice (3) HIST 1110 United States History I (3) HIST 1120 United States History II (3)		
Choose one of the following STEMH recommended Courses (3)		
ENVS 2130 Critical Thinking in Science (3)		
PROGRAM REQUIREMENTS (73 Credits)		
Choose one of the following sequences (8)		
(CHEM 1215/L <i>Pre-requisite: MATH 1215, ENGL 110</i> and CHEM 1225/L <i>Pre-requisite: CHEM 1215/L</i>) (8)		
(PHYS 1230/L <i>Pre-requisite: MATH 1215</i> and PHYS 1240/L <i>Pre-requisite: PHYS 1230/L</i>) (8)		
(CHEM 1215/L <i>Pre-requisite: MATH 1215, ENGL 110</i> and PHYS 1230/L <i>Pre-requisite: MATH 1215</i>) (8)		
8 hours total		
EECE 152L Computer Programming (3)		
EECE 231L Intermediate Programming (3) <i>Pre-requisite: EECE 152L</i>		
Choose one of the following courses (3 or 4)		
EECE 3351 Advanced Programming (3) <i>Pre-requisite: EECE 231L</i>		
PHYS 3330 Introduction to Modern Physics (3) <i>Pre-requisite: PHYS 2115/L</i>		
PHYS 3331 Thermodynamics and Statistical Methods (3) <i>Pre-requisite: MATH 311 and MATH 314</i>		
CHEM 3301/L Organic Chemistry I with Lab (4) <i>Pre-requisite: CHEM 1225/L</i>		
CHEM 3311 Physical Chemistry (3) <i>Pre-requisite: CHEM 1225/L, CHEM 2310, MATH 1520, PHYS 1240/L</i>		

MATH 1350 or MATH 1220 (depending upon which course was not used for General Education requirements) (3) <i>Pre-requisite: MATH 1215</i>		
MATH 1250 Trigonometry and Pre-calculus (4) <i>Pre-requisite: MATH 1220</i>		
MATH 1510 Calculus I (4) <i>Pre-requisite: MATH 1250</i>		
MATH 1520 Calculus II (4) <i>Pre-requisite: MATH 1510</i>		
MATH 2530 Calculus III (4) <i>Pre-requisite: MATH 1520</i>		
MATH 3311 Vector Analysis (3) <i>Pre-requisite: MATH 264</i>		
MATH 3312 Partial Differential Equations for Engineering (3) <i>Pre-requisite: MATH 2530 and MATH 316</i>		
MATH 3313 Complex Variables for Engineering (3) <i>Pre-requisite: MATH 2530</i>		
MATH 3314 Linear Algebra with Applications (3) <i>Pre-requisite: MATH 1510</i>		
MATH 3316 Applied Ordinary Differential Equations (3) <i>Pre-requisite: MATH 1520</i>		
MATH 3327 Discrete Structures (3) <i>Pre-requisite: MATH 1520</i>		
MATH 3345 Elements of Applied Statistics and Probability (3) <i>Pre-requisite: MATH 1510</i>		
MATH 3375 Numerical Computing (3) <i>Pre-requisite: MATH 1520</i>		
MATH 3395 Practicum in Mathematics (3) <i>Pre-requisite: MATH 2410 or MATH 316 or permission from instructor</i>		
MATH 4401 Advanced Calculus (4) <i>Pre-requisite: MATH 2530</i>		
MATH 4441 Probability (3) <i>Pre-requisite: MATH 2530</i>		
OR		
MATH 4464 Applied Matrix Theory (3) <i>Pre-requisite: MATH 314</i>		
MATH 4466 Mathematical Methods in Science and Engineering (3) <i>Pre-requisite: MATH 312 and MATH 316</i>		
ELECTIVES (16 Credit Hours) Electives may be chosen from any NNMC College or department subject to advisor consultation. At least one of the electives needs to be a STEM (Science, Technology, Engineering, or Mathematics) course (3)		
Students may opt to use the Physics Concentration to fulfill their elective requirement. However, the Physics Concentration is optional and not required.		
PHYSICS CONCENTRATION (Optional)		
Physics (20 CR)		

PHYS 1310 Engineering Physics with lab (4) <i>Pre-requisites: MATH 1510 or ENGR 120</i>		
PHYS 2115 General Physics with lab (4) <i>Pre-requisites: PHYS 1240 or PHYS 1320</i>		
PHYS 3302 Optics (3) <i>Pre-requisites: PHYS 2115</i>		
PHYS 3330 Introduction to Modern Physics (3) <i>Pre-requisite: PHYS 2115</i>		
PHYS 3331 Thermodynamics and Statistical Methods (3) <i>Pre-requisites: MATH 311 and MATH 314</i>		
PHYS 4405 Electricity and Magnetism (3) <i>Pre-requisites: MATH 311 and MATH 312</i>		
TOTAL CREDITS 120 CR		
ADVISOR APPROVAL	DATE	

SUGGESTED SEQUENCE OF COURSES

First Semester (16 crs)

ENG 1110 English Composition I (3)
MATH 1215 Intermediate Algebra (4)
ENVS 2130 Critical Thinking in Science (3)
HUM/SOC/ART/Civics (3)
Elective (3)

Second Semester (16 crs)

COMM 1130 Public Speaking (3)
MATH 1220 College Algebra (3)
CHEM 1215/L or GEOL 1110/L or ASTR 1115/L or PHYS 1230/L or BIOL 1110/L (4)
HUM/ART/SOC/Civics (3)
Elective (3)

Third Semester (17 crs)

ENG 1120 or ENG 1210 (3)
MATH 1350 Introduction to Statistics (3)
MATH 1250 Trigonometry and Precalculus (4)
EECE 152L Computer Programming (4)
Elective (3)

Fourth Semester (17 crs)

MATH 1510 Calculus I (4)
HUM/SOC/ART/Civics (3)
HUM/SOC/ART/Civics (3)
CHEM 1225/L or ASTR 1115/L or PHYS 1240/L or BIOL 1110/L (4)
Elective (3)

Fifth Semester (15 crs)

MATH 1520 Calculus II (4)
MATH 3314 Linear Algebra (3)
CHEM 1225/L or ASTR 1115/L or PHYS 1240/L or BIOL 1110/L (4)
EECE 231L Intermediate Programming (3)
Elective (1)

Sixth Semester (16 crs)

MATH 2530 Calculus III (4)
MATH 3375 Introduction to Numerical Computing (3)
MATH 3316 Ordinary Differential Equations (3)
MATH 3327 Discrete Structures (3)
EECE 3351 Advanced Programming (3)

Seventh Semester (15 crs)

MATH 3313 Complex Analysis (3)
MATH 3311 Vector Analysis (3)
MATH 3312 Partial Differential Equations (3)
MATH 3345 Applied Statistics and Probability (3)
300 or 400 level course in MATH, PHYS, ENGR, BIOL, or CHEM (3)

Eighth Semester (13 crs)

MATH 3395 Practicum in Mathematics (3)

MATH 4401 Advanced Calculus I (4)

MATH 4466 Mathematical Methods in Science and Engineering (3)

MATH 4441 Probability (3) OR MATH 4464 Applied Matrix Theory (3)