MATHEMATICS COMPREHENSIVE, BACHELOR OF SCIENCE

Offered by Department of Mathematics and Statistics (http://catalog.unk.edu/undergraduate/departments-programs/mathematics-statistics)

Applied Mathematics, Computer Science, General Emphases

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<th>Code</th>
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General Studies

Foundational Core (Written, Math, Oral, Democracy)

Foundational Core courses (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses) 14

Including:

- MATH 115 Calculus I with Analytic Geometry

Portal

Select one course numbered 188 (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/portal-course) 3

Distribution

ENG 101 Introduction of Academic Writing 3

If ENG 101 is not taken as a prerequisite for ENG 102 then additional hours may be required to meet the 27 credit hour minimum in the Distribution Area of General Studies.

Aesthetics (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/aesthetics) 3

Humanities (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/humanities) 6

Social Sciences (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/social-sciences) 6

Natural Sciences (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/natural-sciences) 8

Including:

- PHYS 275 General Physics I (Calculus)
- & 275L General Physics I (Calculus) Laboratory

Analytical and Quantitative Thought (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/analytical-quantitative-thought) 3

Including:

- CSIT 111
- or csit 112
- or csit 130

Wellness (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/wellness) 0

Capstone

Select one course numbered 388 (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/capstone-course) 3

BS Science-related course requirements

Complete all required courses 0

Major Option

Complete all required courses 52-55

Unrestricted electives

Needed to reach 120 credit hour minimum 16-19

Total Credit Hours 117-123

Must be completed with no grade below a "C".

Major Option

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Math Comprehensive Core Requirements

- MATH 202 Calculus II with Analytic Geometry 5
- MATH 250 Foundations of Math 3
- MATH 260 Calculus III 5
- MATH 305 Differential Equations 3
- MATH 350 Abstract Algebra 3
- MATH 365 Complex Analysis 3
- MATH 404 Theory of Numbers 3
- MATH 413 Discrete Mathematics 3
- MATH 420 Numerical Analysis 3
- MATH 440 Linear Algebra 3
- MATH 460 Advanced Calculus I 3

Emphasis area

Select one of the following: 15-18

- Applied Mathematics Emphasis (p. 1)
- Computer Science Emphasis (p. 1)
- General Emphasis (p. 2)

Total Credit Hours 52-55

Applied Mathematics Emphasis

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Select at least 15 credit hours of the following: 15

- CSIT 150
- CSIT 180
- PHYS 276 General Physics II (Calculus)
- PHYS 276L General Physics II (Calculus) Laboratory
- PHYS 410 Mathematical Techniques in Physics I
- PHYS 411 Mathematical Techniques in Physics II
- STAT 345 Applied Statistics I
- STAT 441 Probability and Statistics
- STAT 442 Mathematical Statistics

Total Credit Hours 15

Computer Science Emphasis

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Select at least 15 credit hours of the following: 15

- CSIT 150
- CSIT 180
- PHYS 276 General Physics II (Calculus)
- PHYS 276L General Physics II (Calculus) Laboratory
- PHYS 410 Mathematical Techniques in Physics I
- PHYS 411 Mathematical Techniques in Physics II
- STAT 345 Applied Statistics I
- STAT 441 Probability and Statistics
- STAT 442 Mathematical Statistics

Total Credit Hours 15
CSIT 402 3
CSIT 408 3
Total Credit Hours 18

General Emphasis

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<td>Select a combination of 15 credit hours of CSIT, MATH, PHYS, STAT 3</td>
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Total Credit Hours 15

1 Students without sufficient preparation will also need to take the following courses, increasing the total credit hours needed:
   • MATH 102
   • MATH 103

2 Students who plan a Computer Science Emphasis are advised to take CSIT 130.

3 Except CSIT 188, CSIT 388, PHYS 188, PHYS 388