

Applied Math Minor 2023-2024 Curriculum Chart

Calculus
Complete one sequence

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|---|---|---|
| MATH 19A Calculus for Sci., Engr. & Math | & | MATH 19B Calculus for Sci., Engr. & Math |
| OR | | |
| MATH 20A Honors Calculus | & | MATH 20B Honors Calculus |

Linear Algebra & Differential Equations

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|---|----|--|----|---|
| AM 10 Math Methods for Engineers I AM 20 Math Methods for Engineers II | OR | Math 21* Linear Algebra Math 24* Differential Equations | OR | PHYS 116A* Math Methods in Physics |
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*Students who complete Math 21 and 24 or Physics 116A are strongly recommended to take the MATLAB self-paced trainings at: matlabacademy.mathworks.com

Multivariable Calculus
Complete one sequence

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| MATH 23A Vector Calculus | & | MATH 23B Vector Calculus |
| OR | | |
| AM 30 Multivariate Calculus for Engineers | | |

Mathematical Methods

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| AM 100 Mathematical Methods for Engineers |
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Applied Math Elective

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| ELECTIVE* |
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*Choose one elective from the following list:

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|-------------------|------------------|-------------------|
| AM 107/217 | AM 213A | MATH 117 |
| AM 115/215 | AM 213B | MATH 121A |
| AM 129 | AM 217 | PHYS 105 |
| AM 148 | AM 250 | PHYS 139A |
| AM 170A | ASTR 171 | PHYS 139B |
| AM 170B | ECE 103 | PHYS 171 |
| AM 198 | ECE 115 | STAT 132 |
| AM 212B | ECE 141 | CSE 107 OR |
| | MATH 103A | STAT 131 |

Students may also propose other electives which use applied mathematical methods, subject to approval by the department.

Dynamical Systems

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| AM 114 Introduction to Dynamical Systems | OR | AM 214* Applied Dynamical Systems |
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*Note: AM 214 recommended for students interested in 4+1 program

Numerical Methods

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| AM 147 Computational Methods & Applications | OR | PHYS 115 Computational Physics |
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Partial Differential Equations

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| AM 212A* Applied Partial Differential Equations | OR | AM 112 Introduction to Partial Differential Equations | OR | PHYS 116C Math Methods in Physics | OR | MATH 107 Partial Differential Equations |
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*Note: AM 212A recommended for students interested in 4+1 program

The applied mathematics minor is available for students who wish to develop (1) proficiency in modeling real-life problems using mathematics; and (2) knowledge of standard, practical analytical and numerical methods for the solution of these models. This minor could be combined with a major in any of the physical, biological, mathematical, or engineering sciences as preparation for a graduate degree in that field or in applied mathematics.

Please review the [Applied Math Career Electives](#) document as you select upper division electives that align with your professional goals: <https://docs.google.com/document/d/1dhLayvCKhc4PsO87nT5-apR5h-yIkyfWjYRWSNe2hOE/edit?usp=sharing>

**Applied Math Minor
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| Fall _____ | Winter _____ | Spring _____ | Summer _____ |
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| Fall _____ | Winter _____ | Spring _____ | Summer _____ |
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| Fall _____ | Winter _____ | Spring _____ | Summer _____ |
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| Fall _____ | Winter _____ | Spring _____ | Summer _____ |
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| Student Name: |
| Staff Advisor: |
| Faculty Advisor: |