

APPLIED MATHEMATICS - SUPPLEMENTAL MAJOR

The program consists of 24 credits in the designated list of courses. To earn a supplementary major in applied mathematics a student must earn 15 credits from Categories I.A and I.B of which at least 9 credits must be from Category I.B. A student must also earn 9 credits from the Category II list of related disciplines. The courses in Category II may be taken from any combination of areas. A student may not earn a bachelor's degree in mathematics and also a supplementary major in applied mathematics.

| Prefix | Title | Credits |
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| Requirements | | |
| <i>Category I.A.</i> | | |
| Select two from the following: | | 6 |
| MATH 3140 | Introduction to Numerical Methods | |
| MATH 3160 | Introduction to Ordinary Differential Equations | |
| STAT 3110 | Statistics for Engineers and Scientists | |
| <i>Category I.B.</i> | | |
| Select three from the following: | | 9 |
| MATH 3110 | Introduction to Modern Algebra | |
| MATH 3120 | Introduction to Analysis | |
| MATH 4320 | Logic and Set Theory | |
| MATH 4310 | Introduction to Topology | |
| MATH 4210 | Complex Variables | |
| MATH 4220 | Fourier Series and Boundary Value Problems | |
| MATH 4230 | Applied Linear Algebra | |
| STAT 4210 | Probability: Theory and Applications | |
| STAT 4220 | Statistics: Theory and Applications | |
| <i>Category II</i> | | |
| Select 9 credits from the following Related disciplines: | | 9 |
| C E 315 | Structural Analysis | |
| C E 331 | Fluid Mechanics and Hydraulics | |
| C E 356 | Fundamentals of Environmental Engineering | |
| C E 382 | Hydraulic and Hydrologic Engineering | |
| C S 372 | Data Structures and Algorithms | |
| C S 476 | Computer Graphics I | |
| C S 486 | Bioinformatics | |
| C S 491 | Parallel Programming | |
| CHME 305 | Transport Operations I: Fluid Flow | |
| CHME 306 | Transport Operations II: Heat and Mass Transfer | |
| CHME 412 | Process Dynamics and Control | |
| CHME 441 | Chemical Kinetics and Reactor Engineering | |
| CHEM 433 | Physical Chemistry I | |
| CHEM 434 | Physical Chemistry II | |
| CHEM 456 | Inorganic Structure and Bonding | |
| ECON 405 | Introductory Econometrics | |
| ECON 457 | Mathematical Economics | |
| ECON 498 | Independent Study (with approval) | |
| E E 395 | Introduction to Digital Signal Processing | |
| E E 473 | Introduction to Optics | |
| E E 475 | Control Systems Synthesis | |
| E E 496 | Introduction to Communication Systems | |
| E E 497 | Digital Communication Systems I | |
| BFIN 355 | Investments | |

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| BFIN 385 | Analysis of Financial Markets and Institutions |
| BFIN 406 | Theory of Financial Decisions |
| BFIN 435 | Investment Analysis |
| I E 365 | Quality Control |
| I E 413 | Engineering Operations Research I |
| I E 423 | Engineering Operations Research II |
| I E 460 | Evaluation of Engineering Data |
| I E 466 | Reliability |
| M E 332 | Vibrations |
| M E 333 | Intermediate Dynamics |
| M E 338 | Fluid Mechanics |
| M E 341 | Heat Transfer |
| PHYS 395 | Intermediate Mathematical Methods of Physics |
| PHYS 451 | Intermediate Mechanics I |
| PHYS 454 | Intermediate Modern Physics I |
| PHYS 455 | Intermediate Modern Physics II |
| PHYS 461 | Intermediate Electricity and Magnetism I |
| PHYS 462 | Intermediate Electricity and Magnetism II |
| PHYS 476 | Computational Physics |
| PHYS 480 | Thermodynamics |
| PHYS 485 | Independent Study |
| PHYS 495 | Mathematical Methods of Physics I |
| SUR 351 | Spatial Data Adjustment I |
| SUR 451 | Spatial Data Adjustment II |
| SUR 461 | GNSS Positioning |
| C S 510 | Automata, Languages, Computability ¹ |
| C S 570 | Analysis of Algorithms ¹ |
| Total Credits | 24 |

¹ Student must be eligible to take 500-level courses.