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
Requirements		
Category I.A.		
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	
Category I.B.		
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	
Category II		
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	
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.