Roadmap: Applied Mathematics - Computational Mathematics - Bachelor of Science

[AS-BS-AMTH-CMTH]
College of Arts and Sciences
Department of Mathematical Sciences
Catalog Year: 2009-2010

Critical requirements are boldface in shaded areas

Course Subject and Title	Credit Hours	Upper Division	Min. Grade	Important Notes
Semester One: [16 Credit Hours]				
MATH 12002 Analytic Geometry and Calculus I	**5**			
CS 10051 Introduction to Computer Science	4			Fulfills LER Mathematics and Critical Reasoning
ENG 11011 College Writing I	3			Enrollment based on placement tests; fulfills LER Composition
US 10097 Destination Kent State: FYE	1			Not required for transfer students with 25 credits
LER Humanities or Fine Arts	3			Should fulfill domestic diversity requirement; visit www.kent.edu/catalog and search "LER" and "diversity" for course lists
Semester Two: [15 Credit Hours]				
MATH 12003 Analytic Geometry and Calculus II	**5**			
CS 23021 Computer Science I: Programming and Problem Solving	4			
LER Humanities	3			Should fulfill domestic diversity requirement; visit www.kent.edu/catalog and search "LER" and "diversity" for course lists
LER Social Sciences	3			
Semester Three: [14 Credit Hours]				
MATH 22005 Analytic Geometry and Calculus III	**3**			
CS 33001 Computer Science II: Data Structures and Abstraction	3	■		
ENG 21011 College Writing II	3			Fulfills LER Composition
PHY 23101 General University Physics I	5			Fulfills LER Basic Sciences
Semester Four: [14 Credit Hours]				
MATH 21001 Linear Algebra with Applications	**3**			
MATH 23022 Discrete Structures for Computer Science	**3**			
PHY 23102 General University Physics II	5			Fulfills LER Basic Sciences
LER Fine Arts	3			Should fulfill domestic diversity requirement if not satisfied earlier; visit www.kent.edu/catalog and search "LER" and "diversity" for course lists
Semester Five: [16-17 Credit Hours]				
MATH 32044 Introduction to Ordinary Differential Equations	**3**	■		
MATH 40011 Introduction to Probability Theory and Applications	**3**	■		
Foreign Language Elementary I	4-5			
LER Additional	3			Should fulfill domestic diversity requirement if not satisfied earlier; visit www.kent.edu/catalog and search "LER" and "diversity" for course lists
LER Social Sciences	3			
Semester Six: [16-17 Credit Hours]				
MATH 40012 Introduction to Statistical Concepts	**3**	■		
MATH 41021 Theory of Matrices	**3**	■		**Offered in spring only**
Foreign Language Elementary II	4-5			
LER Additional	3			Should fulfill domestic diversity requirement if not satisfied earlier; visit www.kent.edu/catalog and search "LER" and "diversity" for course lists
General Elective (upper division)	3	■		

Course Subject and Title	Credit Hours	Upper Division	Min. Grade	Important Notes
Semester Seven: [15 Credit Hours]				
MATH 42031 Mathematical Models and Dynamical Systems	3	■		
MATH 42201 Introduction to Numerical Computing I	3	■		
Allied Area Electives (upper division)	6	■		Selected from approved courses in BSCI, CHEM, CS, MATH or PHY in consultation with major advisor
General Elective (upper division)	3	■		
Semester Eight: [15 Credit Hours]				
MATH 42091 Seminar: Modeling Projects	3	■	C	Fulfills writing-intensive course requirement
MATH 42202 Introduction to Numerical Computing II	3	■		
Allied Area Elective (upper division)	3	■		Selected from approved courses in BSCI, CHEM, CS, MATH or PHY in consultation with major advisor
General Electives (lower or upper division)	6			

Graduation Requirements Summary

Total Hours	Upper-Division Hours	Liberal Education Requirements Hours	Diversity Course Global / Domestic	Writing-Intensive	Minimum Major GPA	Overall GPA
121	42	45	LER or General Electives	MATH 42091	2.0	2.0

Liberal Education Requirements (LER)
Students must complete a minimum 36 credit hours of Liberal Education Requirements. Colleges or degree programs may specify certain courses to fulfill the requirements. Courses in the students' major field will not count toward the completion of any LER. Honors equivalents shall satisfy the LER. None of the courses on the LER list may be taken with a pass/fail grade.

Diversity Course Requirement
Students must complete a two-course diversity requirement, consisting of one with a domestic focus and one with a global focus. One course must be come from the LER and cannot be in the student's major. The second course may be taken as a second LER; or within a major or minor; or as a general elective; or, with dean's approval, by completing one semester of study in another country.

Writing-Intensive Course Requirement
Students must complete a one-course writing-intensive requirement in their major and earn minimum C (2.00) grade.

Upper-Division Requirement
In general, baccalaureate programs require the successful completion of at least 39 upper-division (numbered 30000 to 49999) credit hours of coursework. Programs in the College of Arts and Sciences require a minimum of 42 hours of upper-division coursework.