BS in Mathematics - Computing Emphasis

Program Requirements

A minimum total of 120 credit hours is required for the BS in mathematics with an emphasis in computing. In addition to meeting the requirements of the WSU General Education Program (http://catalog.wichita.edu/undergraduate/academic-information/general-education-program/) and the requirements of Fairmount College of Liberal Arts and Sciences, students must meet the following requirements:

Course	Title	Hours
General Education		
Select courses to meet General Education requirements [1]		34-35
College Requirements		
Select courses to complete all LAS Competency Areas [1]		24
Major Requirements		
Complete all courses in Group R excluding MATH 613 [2]		18
Select an additional higher level programming language course		
CS 400	Data Structures	4
MATH 321	Discrete Structures I	3
MATH 322	Discrete Structures II	3
Select four of the following with at least three in computer science (CS)		12-13
MATH 553	Mathematical Models	
MATH 657	Optimization Theory	
MATH 751	Numerical Linear Algebra	
STAT 774	Statistical Computing I	
ECE 194	Introduction to Digital Design	
ECE 238	Assembly Language Programming for Engineers	
CS 410	Programming Paradigms	
CS 510	Programming Language Concepts	
CS 540	Operating Systems	
CS 560	Design and Analysis of Algorithms	
Open Electives		
Select enough electives to reach 120 credit hours		20-22
Total Credit Hours		**120**

[1] Required major courses may also count towards General Education and/or LAS Competencies. Students will need to select additional electives to reach 120 credit hours required for graduation with assistance from an advisor.

[2] A list of courses in each group can be found at the beginning of the Mathematics section (http://catalog.wichita.edu/undergraduate/fairmount-liberal-arts-sciences/mathematics-statistics-physics/mathematics/).

For students who are contemplating graduate work, it is highly recommended that they include MATH 548, MATH 625 and MATH 640 in their program, along with courses in one or more world languages.

Applied Learning

Students in the BS in mathematics – computing emphasis program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing one of the following:

1. The student completes a thesis.
2. The student attends a conference and presents at least a poster.
3. The student performs outreach in the local school district.
4. The student does a presentation in a venue involving members of the community, such as the Science Expo at Keeper of the Plains, or through participation in Math Circle, or Pi Mu Epsilon, or Math Awareness.
5. The student carries out a research project followed by a seminar presentation.