BS in Mathematics - Data Science Emphasis

Program Requirements

A minimum total of 120 credit hours is required for the BS in mathematics with an emphasis in data science. 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
Plus two courses from the following list which must include MATH 646		6
MATH 646	Introduction to Mathematical Data Analysis	
MATH 553	Mathematical Models	
MATH 657	Optimization Theory	
Plus two computer courses from the following list		6-8
CS 211	Introduction to Programming	
CS 311	Object-Oriented Programming	
CS 400	Data Structures	
CS 410	Programming Paradigms	
Plus two statistics courses from the following list		6
STAT 460	Elementary Probability and Mathematical Statistics	
STAT 571	Statistical Methods I	
STAT 572	Statistical Methods II	
STAT 771	Theory of Statistics I	
STAT 772	Theory of Statistics II	
Open Electives		
Select enough electives to reach 120 credit hours		23-26
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/) of the catalog.

Applied Learning

Students in the BS in mathematics – data science 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, Pi Mu Epsilon or Math Awareness.
5. The student carries out a research project followed by a seminar presentation.