MATHEMATICS B.S./ STATISTICS AND DATA SCIENCE M.S.

Admission Requirements

Complete the following admission requirements:

- Current admission into a baccalaureate degree program
- · At least a 3.0 cumulative GPA
- Completion of 24 credits in the undergraduate major program requirements
- Junior standing

Program Requirements

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Minimum Requirements for Mathematics B.S./Statistics and Data Science M.S.: 138 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University	v Requirements	
Complete the gene catalog.uaf.edu/b	eral university requirements. (https:// achelors/#gurbachelorsdegreestext)	
General Education	Requirements	
Complete the gene (https://catalog.ua #generaleducation	eral education requirements. af.edu/bachelors/ nrequirementstext)	36-40
As part of the gen following:	eral education requirements, complete the	
MATH F252X	Calculus II	
B.S. Degree Requi	rements	
Complete the B.S. catalog.uaf.edu/b	degree requirements. (https:// achelors/#bachelorofsciencetext)	16
As part of the B.S.	requirements, complete the following:	
MATH F253X	Calculus III	
PHYS F123X and PHYS F124	College Physics I IX and College Physics II	
or PHYS F21 and PHYS F2	1X General Physics I 212Xand General Physics II	
Undergraduate Ma	athematics Program Requirements	
Complete the follo	owing:	
CS F201	Computer Science I	3
or NRM F338	Introduction to Geographic Information	Systems
ENGL F314	Technical Writing	3
or ENGL F414	Research Writing	
MATH F265	Introduction to Mathematical Proofs	3
MATH F314	Linear Algebra	3
MATH F371	Probability	3
MATH F401	Introduction to Real Analysis	3

or MATH F405	Abstract Algebra	
MATH F408	Mathematical Statistics	3
STAT F300	Statistics	3
STAT F401	Regression and Analysis of Variance	4
STAT F454	Statistical Consulting Seminar ¹	1
Upper-division mathe	matics or statistics electives ²	3
General University Re	quirements	
Complete the graduat (https://catalog.uaf.e	te general university requirements. du/masters/#gurmastersdegreestext)	
Master's Degree Requ	uirements	
Complete the master' catalog.uaf.edu/mast	s degree requirements. (https:// ters/#masterofscienceproject)	
As part of the master following:	's degree requirements, complete the	
STAT F698	Non-thesis Research/Project	6
Graduate Statistics a	nd Data Science Program Requirements	
Complete the following	ng:	
STAT F402	Scientific Sampling	3
STAT F651	Statistical Theory I	3
STAT F652	Statistical Theory II	3
STAT F653	Statistical Theory III: Linear Models	3
STAT F654	Statistical Consulting Seminar	1
Complete two of the following:		6
STAT F461	Applied Multivariate Statistics	
STAT F602	Experimental Design	
STAT F605	Spatial Statistics	
STAT F611	Time Series	
STAT F621	Nonparametric Statistics and Machine Learning	
STAT F631	Categorical Data Analysis	
STAT F641	Bayesian Statistics	
STAT F661	Sampling Theory	
Complete the following	ng:	
Graduate Statistics Electives ³		6
Total Credits		115-119

¹ Fulfills the baccalaureate capstone requirement.

² Acceptable elective courses include any mathematics or statistics course at the F300 level or above. In some cases, courses with strong statistical content from other disciplines may be used as electives. Such an elective must be approved by an advisor in the Department of Mathematics and Statistics.
 ³ Acceptable elective ourses include any statistical course at the E600.

³ Acceptable elective courses include any statistics course at the F600 level or above. In some cases, courses with strong statistical content from other disciplines may be used as electives. Such an elective must be approved by an advisor in the Department of Mathematics and Statistics.

Note: All mathematics majors must have an advisor from the Department of Mathematics and Statistics.

Note: At least 12 approved mathematics or statistics credits at the F300 level or above must be taken while in residence on the Fairbanks campus.

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

MATHEMATICS B.S./STATISTICS AND DATA SCIENCE M.S. - ODD YEAR START

Course	Title	Credits
First Year		
Fall		
LS F101X	Library Information and Research	1
MATH F252X	Calculus II	4
GER (Art)		3
GER (Lab Science I)		3
GER (WRTG)		3
	Credits	14
Spring		
MATH F253X	Calculus III	4
MATH F265	Introduction to Mathematical Proofs	3
GER (Social Science	. I)	3
GER (WRTG)		3
Elective (CS F103)		3
	Credits	16
Second Year		
Fall		
CS F201	Computer Science I	3
MATH F314	Linear Algebra	3
PHYS F211X	General Physics I	4
GER (Humanities)		3
Elective		3
	Credits	16
Spring		
PHYS F212X	General Physics II	4
STAT F300	Statistics	3
GER (COM)		3
Elective		3
Elective		3
	Credits	16
Third Year		
Fall		
MATH F371	Probability	3
MATH F401	Introduction to Real Analysis	3
GER (Social Science	l)	3
ANT Course		3

Elective		3
	Credits	15
Spring		
MATH F408	Mathematical Statistics	3
STAT F401	Regression and Analysis of Variance	4
Math or Stat Elec	tive (F400 level)	3
GER (Art/Social Science/Humanities)		3
Ethics Course		3
	Credits	16
Fourth Year		
Fall		
STAT F402	Scientific Sampling	3
STAT F651	Statistical Theory I	3
GER (Lab Science	e II)	4
Elective		3
Elective		3
	Credits	16
Spring		
STAT F454	Statistical Consulting Seminar	1
STAT F652	Statistical Theory II	3
Stat Elective (F600 level)		3
Elective		3
Elective		3
	Credits	13
Fifth Year		
Fall		
MATH F698	Non-thesis Research/Project	3
Stat Elective (F600 level)		3
Stat Elective (F600 level)		3
	Credits	9
Spring		
STAT F653	Statistical Theory III: Linear Models	3
STAT F654	Statistical Consulting Seminar	1
STAT F698	Non-thesis Research/Project	3
Stat Elective (F600 level)		3
	Credits	10
	Total Credits	141

MATHEMATICS B.S./STATISTICS AND DATA SCIENCE **M.S. - EVEN YEAR START**

Course First Year	Title	Credits
Fall		
LS F101X	Library Information and Research	1
MATH F252X	Calculus II	4
GER (Art)		3
GER (Lab Science I)		3
GER (WRTG)		3
	Credits	14
Spring		
MATH F253X	Calculus III	4
MATH F265	Introduction to Mathematical Proofs	3

GER (Social Science))	3
GER (WRTG)		3
Elective (CS F103)		3
	Credits	16
Second Year		
Fall		
CS F201	Computer Science I	3
MATH F314	Linear Algebra	3
MATH F371	Probability	3
PHYS F211X	General Physics I	4
GER (Humanities)		3
	Credits	16
Spring		
MATH F408	Mathematical Statistics	3
PHVS F212X	General Physics II	4
STAT E300	Statistics	3
CER (COM)	Statistics	2
Elective		3
Liective	Cradita	16
Third Voor	cleans	10
	Introduction to Dool Apolysia	2
Math er Chat Elective		3
Math of Stat Elective	(F400 level)	3
GER (Social Science)	3
ANT Course		3
Elective		3
	Credits	15
Spring	Credits	15
Spring STAT F401	Credits Regression and Analysis of Variance	15
Spring STAT F401 GER (Art/Social Scien	Credits Regression and Analysis of Variance nce/Humanities)	15 4 3
Spring STAT F401 GER (Art/Social Scien Ethics Course	Credits Regression and Analysis of Variance nce/Humanities)	15 4 3 3
Spring STAT F401 GER (Art/Social Scien Ethics Course Elective	Credits Regression and Analysis of Variance nce/Humanities)	15 4 3 3 3
Spring STAT F401 GER (Art/Social Scien Ethics Course Elective Elective	Credits Regression and Analysis of Variance nce/Humanities)	15 4 3 3 3 3 3
Spring STAT F401 GER (Art/Social Scien Ethics Course Elective Elective	Credits Regression and Analysis of Variance nce/Humanities) Credits	15 4 3 3 3 3 3 16
Spring STAT F401 GER (Art/Social Scien Ethics Course Elective Elective Fourth Year	Credits Regression and Analysis of Variance nce/Humanities) Credits	15 4 3 3 3 3 16
Spring STAT F401 GER (Art/Social Scien Ethics Course Elective Elective Fourth Year Fall	Credits Regression and Analysis of Variance nce/Humanities) Credits	15 4 3 3 3 3 16
Spring STAT F401 GER (Art/Social Scien Ethics Course Elective Elective Fourth Year Fall STAT F402	Credits Regression and Analysis of Variance nce/Humanities) Credits Scientific Sampling	15 4 3 3 3 3 16 3
Spring STAT F401 GER (Art/Social Scient Ethics Course Elective Elective Fourth Year Fall STAT F402 STAT F651	Credits Regression and Analysis of Variance nce/Humanities) Credits Scientific Sampling Statistical Theory I	15 4 3 3 3 3 16 3 3 3
Spring STAT F401 GER (Art/Social Scien Ethics Course Elective Elective Fourth Year Fall STAT F402 STAT F651 GER (Lab Science II)	Credits Regression and Analysis of Variance nce/Humanities) Credits Scientific Sampling Statistical Theory I	15 4 3 3 3 3 16 3 3 4
Spring STAT F401 GER (Art/Social Scien Ethics Course Elective Elective Fourth Year Fall STAT F402 STAT F651 GER (Lab Science II) Elective	Credits Regression and Analysis of Variance nce/Humanities) Credits Scientific Sampling Statistical Theory I	15 4 3 3 3 3 16 3 3 3 4 3 3
Spring STAT F401 GER (Art/Social Scien Ethics Course Elective Elective Fourth Year Fall STAT F402 STAT F651 GER (Lab Science II) Elective Elective	Credits Regression and Analysis of Variance nce/Humanities) Credits Scientific Sampling Statistical Theory I	15 4 3 3 3 3 16 3 3 4 3 3 3 3 3
Spring STAT F401 GER (Art/Social Scien Ethics Course Elective Elective Fourth Year Fall STAT F402 STAT F651 GER (Lab Science II) Elective Elective	Credits Regression and Analysis of Variance nce/Humanities) Credits Scientific Sampling Statistical Theory I Credits Credits	15 4 3 3 3 3 16 3 3 4 3 3 4 3 3 16
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Spring STAT F401 GER (Art/Social Scien Ethics Course Elective Elective Fourth Year Fall STAT F402 STAT F651 GER (Lab Science II) Elective Elective Spring STAT F454	Credits Regression and Analysis of Variance nce/Humanities) Credits Scientific Sampling Statistical Theory I Credits Statistical Consulting Seminar	15 4 3 3 3 3 16 3 3 4 3 3 3 16 16
Spring STAT F401 GER (Art/Social Scien Ethics Course Elective Elective Fourth Year Fall STAT F402 STAT F651 GER (Lab Science II) Elective Elective Spring STAT F454 STAT F454 STAT F653	Credits Regression and Analysis of Variance nce/Humanities) Credits Scientific Sampling Statistical Theory I Credits Statistical Consulting Seminar Statistical Theory III: Linear Models	15 4 3 3 3 3 16 3 3 4 3 3 3 16 1 3
Spring STAT F401 GER (Art/Social Scient Ethics Course Elective Elective Fourth Year Fall STAT F402 STAT F651 GER (Lab Science II) Elective Elective Spring STAT F454 STAT F454 STAT F653 Stat Elective (F600 let	Credits Regression and Analysis of Variance nce/Humanities) Credits Scientific Sampling Statistical Theory I Credits Statistical Consulting Seminar Statistical Theory III: Linear Models vel)	15 4 3 3 3 3 16 3 3 4 3 3 16 11 3 3 3
Spring STAT F401 GER (Art/Social Scient Ethics Course Elective Elective Fourth Year Fall STAT F402 STAT F651 GER (Lab Science II) Elective Elective Spring STAT F454 STAT F454 STAT F653 Stat Elective (F600 let Elective	Credits Regression and Analysis of Variance nce/Humanities) Credits Scientific Sampling Statistical Theory I Credits Statistical Consulting Seminar Statistical Theory III: Linear Models vel)	15 4 3 3 3 3 16 3 3 4 3 3 4 3 3 16 1 1 3 3 3 3 3 3
Spring STAT F401 GER (Art/Social Scient Ethics Course Elective Elective Fourth Year Fall STAT F402 STAT F651 GER (Lab Science II) Elective Elective Spring STAT F454 STAT F653 Stat Elective (F600 let Elective Elective	Credits Regression and Analysis of Variance nce/Humanities) Credits Scientific Sampling Statistical Theory I Credits Statistical Consulting Seminar Statistical Theory III: Linear Models vel)	15 4 3 3 3 3 16 3 3 4 3 3 3 16 11 3 3 3 3 3 3 3 3 3
Spring STAT F401 GER (Art/Social Scien Ethics Course Elective Elective Fourth Year Fall STAT F402 STAT F651 GER (Lab Science II) Elective Elective Spring STAT F454 STAT F653 Stat Elective (F600 let Elective Elective	Credits Regression and Analysis of Variance nce/Humanities) Credits Scientific Sampling Statistical Theory I Credits Statistical Consulting Seminar Statistical Theory III: Linear Models vel) Credits	15 4 3 3 3 3 16 3 3 4 3 3 16 1 1 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Spring STAT F401 GER (Art/Social Scient Ethics Course Elective Elective Fourth Year Fall STAT F402 STAT F651 GER (Lab Science II) Elective Elective Spring STAT F454 STAT F454 STAT F653 Stat Elective (F600 le Elective Elective	Credits Regression and Analysis of Variance nce/Humanities) Credits Scientific Sampling Statistical Theory I Credits Statistical Consulting Seminar Statistical Theory III: Linear Models vel) Credits Credits	15 4 3 3 3 3 16 3 3 4 3 3 3 16 1 1 3 3 3 3 3 3 3 3 3 3 3 3 3
Spring STAT F401 GER (Art/Social Scient Ethics Course Elective Elective Fourth Year Fall STAT F402 STAT F651 GER (Lab Science II) Elective Elective Spring STAT F454 STAT F454 STAT F653 Stat Elective (F600 let Elective Elective Elective	Credits Regression and Analysis of Variance nce/Humanities) Credits Scientific Sampling Statistical Theory I Credits Statistical Consulting Seminar Statistical Theory III: Linear Models vel) Credits Credits	15 4 3 3 3 3 16 3 3 4 3 3 16 1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3

Stat Elective (F600 level)		3
Stat Elective (F600 level)		3
	Credits	9
Spring		
STAT F652	Statistical Theory II	3
STAT F654	Statistical Consulting Seminar	1
STAT F698	Non-thesis Research/Project	3
Stat Elective (F600 level)		3
	Credits	10
	Total Credits	141