Statistics

Statistics Major

The Department of Statistics offers a major leading to a B.S., B.A., M.S., or Ph.D. degree, as well as minors in Statistics for both undergraduate and graduate students. The program is flexible enough to be individually planned around prior experience and in accord with professional goals. The program emphasis is on applied statistics, consulting, and computational methods.

Statistics Minors

Two different tracks within the Statistics minor are offered. A Department of Statistics (Morrill 221 (https://www.ndsu.edu/alphaindex/buildings/Building::382)) adviser for minors must approve the program.

Major Requirements

Major: Statistics

Degree Type: B.A. or B.S.
Minimum Degree Credits to Graduate: 122

General Education Requirements for Baccalaureate Degree

- A dynamic list of approved general education courses offered by term is available on the NDSU General Education Requirements (https://www.ndsu.edu/registrar/academics/gened) website.
- General education courses may be used to satisfy requirements for both general education and the major, minor, and program emphases, where applicable. Students should carefully review the major, minor, and program emphases requirements for minimum grade restrictions, if applicable.

Code	Title	Credits
First Year Experience (F)		1
UNIV 189	Skills For Academic Success (Also offered with the following prefixes: ABEN, AGRI, BUSN, HD&E, ME, NURS, PHRM)	
Communication (C)		12
ENGL 110	College Composition I	
ENGL 120	College Composition II	
COMM 110	Fundamentals of Public Speaking	
Upper Division Writing [†]		
Quantitative Reasoning (R) [†]		3
Science and Technology (S) [†]		10
Humanities and Fine Arts (A) [†]		6
Social and Behavioral Sciences (B) [†]		6
Wellness (W) [†]		2
Cultural Diversity (D) [*†]		
Global Perspectives (G) [*†]		
Total Credits		**40**

[*]   May be satisfied by completing courses in another General Education category.

[†]   May be satisfied with courses required in the major. Review major requirements to determine if a specific upper division writing course is required.

College Requirements

Code	Title	Credits
Bachelor of Arts (BA) Degree – An additional 12 credits Humanities and Social Sciences and proficiency at the second year level in a modern foreign language. [*]		12
Bachelor of Science (BS) Degree – An additional 6 credits in Humanities or Social Sciences [*]		6

*   Humanities and Social Sciences may be fulfilled by any course having the following prefix: ADHM, ANTH, ARCH, ART, CJ, CLAS, COMM, ECON, ENGL, FREN, GEOG, GERM, HDFS, HIST, LA, LANG, MUSC, PHIL, POLS, PSYC, RELS, SOC, SPAN, THEA, WGS, or any course from the approved list of general education courses in humanities and social sciences (general education categories A and B). These credits must come from outside the department of the student's major.

Major Requirements

A grade of 'C' or better is required in ALL courses used toward the major.

Code	Title	Credits
Statistics Major Requirements		
CSCI 160	Computer Science I	4
CSCI 222	Discrete Mathematics	3
or MATH 270	Introduction to Abstract Mathematics	
MATH 129	Basic Linear Algebra	3
MATH 165	Calculus I (May satisfy general education category R)	4
MATH 166	Calculus II	4
MATH 265	Calculus III	4
STAT 367	Probability	3
STAT 368	Statistics	3
STAT 461	Applied Regression Models	3
STAT 462	Introduction to Experimental Design (Capstone)	3
Electives: Select 15 credits from the following (can choose only one CSCI course):		15
CSCI 161	Computer Science II	
CSCI 418	Simulation Models	
MATH 429	Linear Algebra	
STAT 460	Applied Survey Sampling	
STAT 463	Nonparametric Statistics	
STAT 464	Discrete Data Analysis	
STAT 467	Probability and Mathematical Statistics I	
STAT 468	Probability and Mathematical Statistics II	
STAT 469	Introduction to Biostatistics	
STAT 470	Statistical SAS Programming	
STAT 471	Introduction to the R Language	
STAT 472	Time Series	
Minor Requirement		16
A minor is required in one of the following disciplines: Social Science, Physical Science, Biological Science, Business, Mathematics, or Computer Science.		
Total Credits		**65**

Program Notes

- Except for courses offered only as pass/fail grading, no course may be taken Pass/Fail.

Two tracks are available:

- **Statistical (Standard) Track**
- **Applied Statistics Track**

Minor Requirements

Statistics (Standard) Track

Required Credits: 22

Code	Title	Credits
Required Courses		
MATH 165	Calculus I	4

MATH 166	Calculus II	4
STAT 331	Regression Analysis	2
or STAT 461	Applied Regression Models	
STAT 367	Probability	3
STAT 368	Statistics	3
STAT 462	Introduction to Experimental Design	3
STAT Elective	400 Level	3
Total Credits		**22**

Minor Requirements

Applied Statistics Track

Required Credits: 17

Code	Title	Credits
Required Courses		
STAT 330	Introductory Statistics	3
STAT 331	Regression Analysis	2
STAT Electives	Select 4 department approved 400-level, 3 credit statistics courses.	12
Total Credits		**17**

Minor Requirements and Notes

- A minimum of 8 credits must be taken at NDSU.
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