Statistics, BS

Degree Requirements

Requirements for Students Matriculating in or before Academic Year 2020-2021. Learn more about University Academic Regulation 3.1 (http://catalog.okstate.edu/university-academic-regulations/#matriculation).

Minimum Overall Grade Point Average: 2.00
Total Hours: 120

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ENGL 1113</td>
<td>Composition I</td>
<td>3</td>
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<tr>
<td>or ENGL 1313</td>
<td>Critical Analysis and Writing I</td>
<td></td>
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<tr>
<td>Select one of the following:</td>
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<tr>
<td>ENGL 1213</td>
<td>Composition II</td>
<td></td>
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<tr>
<td>ENGL 1413</td>
<td>Critical Analysis and Writing II</td>
<td></td>
</tr>
<tr>
<td>ENGL 3323</td>
<td>Technical Writing</td>
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</tbody>
</table>

American History & Government

HIST 1103  Survey of American History  3
or HIST 1483  American History to 1865 (H)  3
or HIST 1493  American History Since 1865 (DH)  3
POLS 1113  American Government  3

Analytical & Quantitative Thought (A)

MATH 2144  Calculus I (A)  4
MATH 2153  Calculus II (A)  3

Humanities (H)

Courses designated (H)  6
Natural Sciences (N)

Must include one Laboratory Science (L) course
Courses designated (N)  6

Social & Behavioral Sciences (S)

SPCH 2713  Introduction to Speech Communication (S)  3

Additional General Education

Courses designated (A), (H), (N), or (S)  6

Hours Subtotal  40

Diversity (D) & International Dimension (I)

May be completed in any part of the degree plan
Select at least one Diversity (D) course
Select at least one International Dimension (I) course

College/Departmental Requirements

First Year Seminar
(Transfer students with 15 hours exempt)  1

Arts & Humanities

See note 2.a.  3

Natural & Mathematical Sciences

CS 1103  Computer Programming (A)  3
or CS 1113  Computer Science I (A)  3
CS 2133  Computer Science II  3

or MATH 2233  Differential Equations
CS 3513  Numerical Methods for Digital Computers  3
or CS 4513  Numerical Mathematics: Analysis

Foreign Language

See note 3
0-6 hours

Upper-Division General Education

Select 6 hours outside major department
See note 2.c.

Hours Subtotal  13

Major Requirements

Minimum GPA 2.50 with a minimum grade of “C” in each course

Statistics Core Courses

MATH 2163  Calculus III  3
MATH 3013  Linear Algebra (A)  3
STAT 4013  Statistical Methods I (A)  3
STAT 4023  Statistical Methods II  3
STAT 4043  Applied Regression Analysis  3
STAT 4193  SAS and R Programming  3
STAT 4203  Mathematical Statistics I  3
STAT 4213  Mathematical Statistics II  3
STAT 4981  Statistics Capstone I  1
or STAT 4991  Statistics Capstone II  1

Area of Application

Select 9 hours of the following:  9

CS 3353  Data Structures and Algorithm Analysis I
CS 3443  Computer Systems
CS 3653  Discrete Mathematics for Computer Science
ECON 3113  Intermediate Microeconomics
ECON 4213  Econometric Methods
ECON 4223  Business and Economic Forecasting
FIN 3113  Finance
FIN 4223  Investments
FIN 4333  Financial Management
FIN 4763  Financial Futures and Options Markets
IEM 3703  Probability and Statistics for Engineers II
IEM 4013  Operations Research
IEM 4103  Quality Control
IEM 4113  Industrial Experimentation
MATH 3613  Introduction to Abstract Algebra
MATH 4013  Calculus of Several Variables
MATH 4423  Geometry and Algorithms in Three-Dimensional Modeling
MATH 4453  Mathematical Interest Theory
MATH 4553  Introduction to Optimization
MATH 4663  Combinatorics
MSIS 3103  End User Database Systems Design and Management
MSIS 3223  Principles of Data Analytics
MSIS 3233  Management Science - Prescriptive Analytics
MSIS 3243  Descriptive Analytics
MSIS 3393  Advanced Spreadsheet Modeling and Programming
STAT 4463  Statistical Machine Learning with R
STAT 4980  Internship in Statistics ((max 3 hours))
STAT 5053  Time Series Analysis

Concentration
9 additional upper-division hours from Area of Application or
9 upper-division hours of one prefix from CS, ECON, FIN, IEM,
MATH, MSIS, MKTG, MGMT, STAT, or other upper-division courses
approved by the department

Hours Subtotal 43

Electives
Select 24 hours
May need to include 6 hours of a foreign language (see note 3)
May need to include 6 hours upper-division general education
outside major department (see note 2.c.)

Hours Subtotal 24

Total Hours 120

Other Requirements
• See the College of Arts and Sciences Requirements.
• Upper-Division Credit: Total hours must include at least 40 hours in
courses numbered 3000 or above.
• Hours in One Department: For B.A. and B.S. degrees, no more than 54
hours in one department may be applied to degree requirements.

College of Arts and Sciences
Requirements

1. General Education Requirements
No more than two courses (or eight hours) from the major
department (http://catalog.okstate.edu/college-arts-sciences-major-
departments/) may be used to meet General Education and College
and Departmental Requirements. The General Education required
English Composition, required U.S. History, required American
Government, one required MATH or STAT course, and required
foreign language for B.A. degrees do not count against the two-course
maximum.

2. A&S College/Departmental Requirements
a. Arts and Humanities are defined as any course carrying an
(H) designation or courses from AMST, ART, DANC, ENGL
(except ENGL 3323 Technical Writing) HIST, MUSI, PHIL (except
PHIL 1313 Logic and Critical Thinking (A), PHIL 3003 Symbolic
Logic (A) and PHIL 4003 Mathematical Logic and Computability),
REL, TH, and foreign languages.

b. Natural and Mathematical Sciences are defined as any course
from the following prefixes: ASTR, BIOL, BIOL, CHEM, CS (except
CS 4883 Social Issues in Computing), GEOL, MATH, MICR, PBIO,
PHYS, and STAT; or courses from other departments that carry an
(A) or (N) general education designation.

c. The required six hours of upper-division General Education may
not include courses from the student’s major department. This
requirement may be satisfied by courses also used to satisfy any
part of a student’s degree program (i.e., in General Education,
College Departmental Requirements, Major Requirements or Electives).

d. Non-Western Studies Requirement for B.A. and B.F.A.; One 3-hour
course in Non-Western Studies (N.W.). This requirement may be
satisfied by courses also used to satisfy any part of a student’s
degree program (i.e., in General Education, College Departmental
Requirements, Major Requirements or Electives).

e. The College of Arts & Sciences requires a minimum 2.0 GPA in all
major requirements and a minimum 2.0 GPA in all major-prefix
courses applied to the degree.

3. Foreign Language Proficiency
a. The foreign language requirement for the B.A. may be satisfied by
9 hours college credit in the same language, which must include
3 hours at the 2000-level, or equivalent proficiency (e.g., passing
an advanced standing examination; TOEFL exam; presenting
a high school transcript which demonstrates the high school
was primarily conducted in a language other than English; etc.).

Computer Science courses may not be used to satisfy this
requirement. Currently Arabic and Mvskoke are not offered at the
2000-level at OSU.

b. The foreign language requirement for the B.S., B.M. and B.F.A.
may be satisfied by presenting a high school transcript which
demonstrates two years of study of a single foreign language
(passing grades at second-year level of study). It may also
be satisfied by 6 hours college credit in the same language,
which must include language courses 1713 and 1813, or
equivalent proficiency (e.g., passing an advanced standing
examination; TOEFL exam; presenting a high school transcript
which demonstrates the high school was primarily conducted in
a language other than English; etc.). Computer Science courses
may not be used to satisfy this requirement.

c. In addition to a. and b., students pursuing teacher certification
must meet novice-high foreign language proficiency by
presenting a high school transcript which demonstrates two
years of study of a single foreign language with no grade below
B. Or, students may complete 3 hours college credit in a single
language with no grade below C (or pass an advanced standing
examination, College Level Examination Program (CLEP) exam,
or Oral Proficiency Interview developed by the American Council
on the Teaching of Foreign Languages, equivalent to 3 hours of
college credit.) Or, students may meet the requirement by transfer
of documentation of meeting the foreign language competency
from one of the teacher education programs in the State of
Oklahoma approved by the Oklahoma State Regents for Higher
Education.

4. Exclusions
a. Courses used to satisfy the General Education English
Composition, U.S. History, American Government, and
Mathematics or Statistics requirements will not count toward the
54-hour maximum allowed from one department.

b. Courses with ATHL or LEIS prefixes and leisure activity courses
may not be used for degree credit.

5. Teacher Certification
Students can satisfy the requirements for secondary schools
teaching certification while earning a B.A. or B.S. in the College of
Arts & Sciences. Those interested should see their Arts and Sciences
advisor and the OSU Professional Education Unit in room 325 Willard.

Additional State/OSU Requirements
• At least: 60 hours at a four-year institution; 30 hours completed at
OSU; 15 of the final 30 or 50% of the upper-division hours in the major
field completed at OSU.
• Limit of: one-half of major course requirements as transfer work; one-fourth of hours earned by correspondence; 8 transfer correspondence hours.
• Students will be held responsible for degree requirements in effect at the time of matriculation and any changes that are made, so long as these changes do not result in semester credit hours being added or do not delay graduation.
• Degrees that follow this plan must be completed by the end of Summer 2026.

Example Plan of Study

Finish in Four Plan of Study

The plan below is an example of how students can successfully complete degree requirements in four years. This suggested class schedule plan may be used as a guide and can be adjusted based on individual needs. Students are required to meet with an academic advisor prior to enrollment each semester to plan their class schedule, and students are ultimately responsible for completing all degree requirements.

<table>
<thead>
<tr>
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<th>Hours</th>
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<tr>
<td>Fall</td>
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<tr>
<td>MATH 2144</td>
<td>Calculus I (A)</td>
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<td>MATH 2153</td>
<td>Calculus II (A)</td>
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<td>Sophomore</td>
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<td>MATH 2163</td>
<td>Calculus III</td>
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<td>STAT 4013</td>
<td>Statistical Methods I (A)</td>
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<td>CS 1113</td>
<td>Computer Science I (A)</td>
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<td>STAT 4023</td>
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<td>Junior</td>
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<td>MATH 3013</td>
<td>Linear Algebra (A)</td>
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<tr>
<td>Hours</td>
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<tr>
<td>Spring</td>
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<td>STAT 4193</td>
<td>SAS and R Programming</td>
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<td>Major, College, and Elective courses</td>
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<tr>
<td>Hours</td>
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1 Speak with academic advisor about saving General Education electives and Humanities (H) for Upper-division courses with International (I) and Diversity (D) dimensions.