## REQUIREMENTS FOR THE BACHELOR OF SCIENCE/MASTER OF SCIENCE
### DODGE COLLEGE OF ARTS AND SCIENCES
### THE UNIVERSITY OF OKLAHOMA

**OU encourages students to complete at least 28 hours of applicable coursework each year to have the opportunity to graduate in 5 years.**

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>General Requirements</th>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer 2023 through Spring 2024</td>
<td>Minimum Total Credit Hours: 136</td>
<td>Mathematics &amp; Biostatistics</td>
</tr>
<tr>
<td></td>
<td>Minimum Upper-Division Hours: 57</td>
<td>A671</td>
</tr>
<tr>
<td></td>
<td>Overall GPA - Combined and OU: 3.00</td>
<td>Bachelor of Science/Master of Science</td>
</tr>
<tr>
<td></td>
<td>Major GPA - Combined and OU: 3.00</td>
<td></td>
</tr>
</tbody>
</table>

### Program Code: A671

## General Education and College Requirements

Courses for fulfillment of General Education and Dodge College of Arts & Sciences requirements must be from the approved General Education course list published in the Class Schedule or at [http://www.ou.edu/gened/courses](http://www.ou.edu/gened/courses). Courses graded P/NP will not apply.

### UNIVERSITY-WIDE GENERAL EDUCATION (MINIMUM 40 HOURS) AND COLLEGE REQUIREMENTS

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>ENGL 1113 Principles of English Composition</td>
</tr>
<tr>
<td>3</td>
<td>ENGL 1213 Principles of English Composition</td>
</tr>
<tr>
<td>3</td>
<td>or EXPO 1213 Expository Writing</td>
</tr>
</tbody>
</table>

**Language (0-13 hours in the same language)**

The college requirement cannot be met by high school coursework.

**Beginning Course**

- 0-5

**Beginning Course, continued**

- 0-5

**Intermediate Course (2000 level)**

- 0-3

**Mathematics (3 hours)**

Choose one course from the General Education Mathematics list

**Core Area II: Natural Science (7 hours, including one laboratory component)**

**Biological Science**

Choose an approved General Education Natural Science course with one of the following prefixes: BIOL, HES, MBIO, or PBIO

**Physical Science**

Choose an approved General Education Natural Science course with one of the following prefixes: AGSC, ASTR, CHEM, GEOG, GEOL, GPHY, METR, or PHYS

**Core Area III: Social Science (6 hours)**

- PSC 1113 American Federal Government

Choose one course from the General Education Social Science list

**Core Area IV: Arts and Humanities (18 hours)**

### Artistic Forms

Choose one course from the General Education Artistic Forms list

**Western Culture**

- HIST 1483 United States to 1865
- or HIST 1493 United States, 1865 to the Present

Choose one course from the General Education Western Culture list (excluding HIST 1483/1493)

**World Culture**

Choose one course from the General Education World Culture list

**Additional Core IV Upper-Division Arts & Humanities courses**

Choose one course from Artistic Forms, Western Culture, or World Culture

Choose one course from Artistic Forms, Western Culture, or World Culture

**Core Area V: First Year Experience (3 hours)**

Choose one course

**Total Credit Hours**

56

1. College of Arts and Sciences Requirements: college requirements are not automatically fulfilled by a previous degree.
2. One course at the intermediate level or demonstrated competency at that level
3. 6 upper-division hours, 2 courses, at the 3000-4000-level. **Must be outside the major.**

## Free Electives

Electives to bring total applicable hours to the minimum total required for the degree including 48 upper-division hours.
Major Requirements

- Some courses required for the major may also fulfill University General Education and/or Dodge College of Arts & Sciences Requirements.

### Code | Title | Credit Hours
--- | --- | ---
MATH 1823 | Calculus and Analytic Geometry I | 3
MATH 2423 | Calculus and Analytic Geometry II | 3
MATH 2433 | Calculus and Analytic Geometry III | 3
MATH 2443 | Calculus and Analytic Geometry IV | 3
MATH 2513 | Discrete Mathematical Structures | 3
MATH 3333 | Linear Algebra I | 3
MATH 4073 | Numerical Analysis I | 3
MATH 3113 | Introduction to Ordinary Differential Equations | 3
MATH 3413 | Physical Mathematics I | 3
MATH 4323 | Introduction to Abstract Algebra | 3
MATH 4383 | Applied Modern Algebra | 3
MATH 4433 | Introduction to Analysis | 3
MATH 4733 | Mathematical Theory of Probability | 3
MATH 4743 | Introduction to Mathematical Statistics | 3
MBIO 2815 | Introduction to Microbiology (lab) | 5
MBIO 2815 | Human Physiology | 5

**Total Credit Hours**: 39

### Major Electives

Choose two courses from the Undergraduate Major Electives course list (p, p, p, p).

### Graduate Electives

Choose two courses from the Graduate Electives course list (p, p, p, p, p, p).

**Total Credit Hours**: 37

---

**Graduate Electives**

Choose two courses from the Graduate Electives course list (p, p, p, p, p, p).

**Total Credit Hours**: 37

---

**No more than 8 hours applied to this program may carry a grade lower than B. No course at the 4000-level or higher with a grade lower than C may be applied to the program.**

**Bachelor of Science/Master of Science Requirements**

**Code** | **Title** | **Credit Hours**
--- | --- | ---
BSE 5001 | Problems in Biostatistics & Epidemiology-OUHSC | 1
BSE 5113 | Principles of Epidemiology-OUHSC | 3
BSE 5163 | Biostatistical Methods I-OUHSC | 3
BSE 5173 | Biostatistical Methods II-OUHSC | 3
BSE 5193 | Intermediate Epidemiologic Methods-OUHSC | 3
BSE 5980 | Research for Master’s Thesis-OUHSC | 3

### BS and MS Requirements

**Code** | **Title** | **Credit Hours**
--- | --- | ---
HAP 5113 | Health Organization & Administration-OUHSC | 3
HPS 5213 | Social & Behavioral Sciences in Public Health-OUHSC | 3
OEH 5013 | Environmental Health-OUHSC | 3

---

**Additional Graduate Requirements**

### Epidemiology Elective

Choose one of the following:

- BSE 5303 Epidemiology of Infectious Disease-OUHSC
- BSE 5363 Epidemiology & Prevention of Chronic Disease-OUHSC
- BSE 6363 Cancer Epidemiology & Prevention-OUHSC

**Total Credit Hours**: 37

---

**Math/Biostatistics Courses**

Choose any BSE course that has not been taken to fulfill other requirements (p, p, p).

**Total Credit Hours**: 37

---

1**Note:** No more than three hours earned of BSE 5980 Research for Master’s Thesis may be applied toward the dual degree program.

2These courses may not duplicate the six hours of math electives for the undergraduate major requirements and when offered on a slash-listed basis must be the graduate-level course.

3Excluding BSE 5103, BSE 5950 Field Work in Biostatistics and Epidemiology, and BSE 6950 Research in Biostatistics and Epidemiology.

---

**Information Concerning General Rules, Regulations and Minimum Requirements**

**Arts and Sciences Hours:** At least 80 semester hours of liberal arts and sciences courses are required for a BA degree. At least 55 semester hours of liberal arts and sciences courses are required for a BS degree.

**Pass/No Pass Enrollment:** A maximum of 16 semester hours of free elective credit may be attempted under this option.

**Individual Studies (e.g., courses titled “Independent Study”):** A maximum of 12 total semester hours may be counted toward graduation, excluding Honors Reading and Honors Research.

---

P.E. Courses: No physical education activity courses will be counted toward the 120 semester hours of acceptable credit for graduation.

Senior Institution Hours: A minimum of 60 semester hours applied toward graduation must be earned at senior (4-year) institutions.

Residency:

- At least 15 of the final 30 hours applied toward the degree or at least 50 percent of the hours required by the institution in the major field must be satisfactorily completed at the awarding institution.
- At least 15 semester hours of upper-division major work must be completed in residence at OU.
- OU correspondence courses are not considered resident credit.

Grade Point Averages: Students must earn a minimum over all 2.00 for each of the following: Combined Retention GPA (all college grades), OU Retention GPA, GPA for all major courses, and GPA for all major courses taken at OU. Some schools and departments of the College have higher minimum grade point averages required for their students.
### Undergraduate Major Electives

Six additional hours of math chosen in consultation with adviser from the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 4093</td>
<td>Applied Numerical Methods</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4193</td>
<td>Introductory Mathematical Modeling</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4323</td>
<td>Introduction to Abstract Algebra I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4333</td>
<td>Introduction to Abstract Algebra II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4373</td>
<td>Abstract Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4433</td>
<td>Introduction to Analysis I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4443</td>
<td>Introduction to Analysis II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4753</td>
<td>Applied Statistical Methods</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4773</td>
<td>Applied Regression Analysis</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>or BSE 6643 SURVIVAL DATA ANALYSIS-OUHSC</td>
<td></td>
</tr>
<tr>
<td>MATH 4853</td>
<td>Introduction to Topology</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4793</td>
<td>Advanced Applied Statistics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>or BSE 6663 ANALYSIS OF MULTIVARIATE DATA-OUHSC</td>
<td></td>
</tr>
<tr>
<td>BSE 5653</td>
<td>Nonparametric Methods-OUHSC</td>
<td>3</td>
</tr>
</tbody>
</table>

### Graduate Electives

Six additional hours of math chosen in consultation with adviser from the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 4093</td>
<td>Applied Numerical Methods</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4193</td>
<td>Introductory Mathematical Modeling</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4323</td>
<td>Introduction to Abstract Algebra I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4333</td>
<td>Introduction to Abstract Algebra II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4373</td>
<td>Abstract Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4433</td>
<td>Introduction to Analysis I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4443</td>
<td>Introduction to Analysis II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4853</td>
<td>Introduction to Topology</td>
<td>3</td>
</tr>
<tr>
<td>MATH 5773</td>
<td>Applied Regression Analysis</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>or BSE 6643 SURVIVAL DATA ANALYSIS-OUHSC</td>
<td></td>
</tr>
<tr>
<td>MATH 5793</td>
<td>Advanced Applied Statistics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>or BSE 6663 ANALYSIS OF MULTIVARIATE DATA-OUHSC</td>
<td></td>
</tr>
<tr>
<td>BSE 5653</td>
<td>Nonparametric Methods-OUHSC</td>
<td>3</td>
</tr>
</tbody>
</table>