

**REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN  
 MATHEMATICS/MASTER OF SCIENCE IN BIOSTATISTICS  
 GRADUATE COLLEGE  
 THE UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER**

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| For Students Entering the<br>Oklahoma State System<br>For Higher Education:<br><br><b>Summer 2025 through<br/>                 Spring 2026</b> | <b>Minimum Credit Hours and Grade Point Averages<br/>                 Required</b>                             | <b>BACHELOR OF SCIENCE<br/>                 IN MATHEMATICS /<br/>                 MASTER OF SCIENCE IN<br/>                 BIOSTATISTICS</b><br><br>1226D |
|  | Total Hours for Degree – <b>136</b><br>Major Hours – 37  |  |
|  | <b>Grade Point Averages:</b><br>Overall: Combined OUHSC/Transfer – 3.0<br>Major: Combined OUHSC/Transfer - 3.0 |  |

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| <p style="text-align: center;"><b>PREREQUISITE REQUIREMENTS</b></p> <p>The requirements for admission to the program are the same as those for admission to the College of Arts and Sciences. These requirements are listed in the Bulletin and class schedule of the University of Oklahoma. Students may apply for admission to the Graduate Program provided they have completed (1) at least 45 credit hours of coursework; (2) at least nine of these credit hours are in upper division courses; and (3) the overall GPA and the GPA in all upper division coursework are both 3.00 or better. International students must also submit a TOEFL score of at least 570 paper-based or 88 IBT. Students who have been granted admission to the Graduate Program may begin taking the graduate coursework. All students, regardless of admission status, are required to maintain a GPA of 3.00 or greater in all coursework completed. The 136 credit hours submitted to satisfy the requirements of the program may not include more than eight credit hours with a grade of C. Moreover, the 136 credit hours submitted to satisfy the requirements of this program may not include any credit hours in courses numbered 4000 or above for which a grade lower than a C was given.</p> | <p style="text-align: center;"><b>MS – BIOSTATISTICS / BS MATH - CURRICULUM<br/>                 REQUIREMENTS</b></p> <p>Major Requirements in Mathematics 39 hours (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 a C may be applied to the program.)</p> <p>MATH 1823 Calculus/Analytic Geometry I<br/>                 MATH 2423 Calculus/Analytic Geometry II<br/>                 MATH 2433 Calculus/Analytic Geometry III<br/>                 MATH 2443 Calculus/Analytic Geometry IV<br/>                 MATH 2513 Discrete Mathematical Structures<br/>                 MATH 3333 Linear Algebra I<br/>                 MATH 4073 Numerical Analysis I<br/>                 MATH 3113 Introduction to Ordinary Differential Equations <u><b>OR</b></u><br/>                 MATH 3413 Physical Mathematics I</p> <p>Choose <u><b>one</b></u> of the following courses:</p> <p style="padding-left: 40px;">MATH 4323 Introduction to Abstract Algebra I<br/>                 MATH 4383 Applied Modern Algebra<br/>                 MATH 4433 Introduction to Analysis I</p> <p>MATH 4733 Mathematical Theory of Probability <u><b>OR</b></u><br/>                 BSE 5703 Theory of Probability</p> <p>MATH 4743 Introduction to Mathematical Statistics <u><b>OR</b></u><br/>                 BSE 5733 Principles of Mathematical Statistics I</p> |
| <p><b><u>Undergraduate Courses Counted Toward the BS Degree</u></b></p> <p>General Education Requirement (Students in the program must meet all the general education requirements. The Capstone requirement for the BSE degree is satisfied by the thesis required for the MS degree).</p> <p><b>Core Area I</b> Symbolic and Oral Communication 9 – 22 hrs<br/> <b>Core Area II</b> Natural Science 7 hours<br/> <b>Core Area III</b> Social Sciences 6 hours<br/> <b>Core Area IV</b> Humanities 18 hours</p>  |  |

**MS – BIOSTATISTICS / BS MATH - CURRICULUM  
REQUIREMENTS - CONTINUED**

**Major Electives (6 hours)**

MATH 4093 Applied Numerical Methods  
MATH 4193 Introduction to Mathematics Modeling  
MATH 4323 Introduction to Abstract Algebra I  
MATH 4333 Introduction to Abstract Algebra II  
MATH 4373 Abstract Linear Algebra  
MATH 4433 Introduction to Analysis I  
MATH 4443 Introduction to Analysis II  
MATH 4773 Regression Analysis or  
BSE 6643 Survival Data Analysis  
MATH 4853 Introduction to Topology  
MATH 4793 Advanced Applied Statistics or  
BSE 6663 Analysis of Multivariate Data  
BSE 5653 Nonparametric Methods

**Major Support Requirements (4-5 hours)**

MBIO 2815 Introduction to Microbiology (lab) or  
BIOL 2124 Human Physiology

**Unrestricted Elective Courses (20-30 hours)**

Must be approved by Advisory Committee

**BS & MS REQUIREMENTS (22 hours)**

**Required Courses in Biostatistics and Epidemiology**

BSE 5001 Problems in Biostatistics and Epidemiology  
BSE 5113 Principles of Epidemiology  
BSE 5163 Biostatistics Methods I  
BSE 5173 Biostatistics Methods II  
BSE 5193 Intermediate Epidemiologic Methods  
BSE 5980 Research for Master's Thesis (3 credit hours)  
Elective – Select 3 credits from the following:  
HAP 5113 Health Organization and Administration  
HPS 5213 Social and Behavioral Sciences in Public Health  
OEH 5013 Environmental Health  
Elective – Choose any BSE course (3 hours) that has not  
been taken to fulfill other requirements excluding BSE  
5103, BSE 5950, BSE 6950

**Math/Biostatistics Courses (6 hours)**

MATH 5783 Topics in Mathematical Statistics  
MATH 5793 Advanced Applied Statistics  
BSE 5653 Nonparametric Methods  
BSE 5663 Analysis of Frequency Data  
BSE 6643 Survival Data Analysis  
BSE 6663 Analysis of Multivariate Data

**MS – BIOSTATISTICS / BS MATH - CURRICULUM  
REQUIREMENTS - CONTINUED**

**Graduate Elective Courses (6 hours)**

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

MATH 4093 Applied Numerical Methods  
MATH 4193 Introduction to Mathematics Modeling  
MATH 4323 Introduction to Abstract Algebra I  
MATH 4333 Introduction to Abstract Algebra II  
MATH 4373 Abstract Linear Algebra  
MATH 4433 Introduction to Analysis I  
MATH 4443 Introduction to Analysis II  
MATH 4853 Introduction to Topology  
MATH 5773 Applied Regression Analysis  
BSE 5603 Sampling Theory and Methods  
BSE 5763 Applied Bayesian Statistics  
BSE 6563 Longitudinal Data Analysis

**Additional Graduate Epidemiology Requirements (3 hours)**

BSE 5303 Epidemiology of Infectious Disease  
BSE 5363 Epidemiology of Prevention of Chronic Disease  
BSE 5633 Public Health Strategies for Tobacco Control  
BSE 6363 Cancer Epidemiology and Prevention

Note: The thesis also satisfies the Senior Capstone  
Requirement. It may be necessary to enroll in more than 3  
credit hours of BSE 5980; however, only 3 credit hours may  
apply to the minimum 136 credit hours required for the  
dual degree program.