

REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN MATHEMATICS
COLLEGE OF ARTS AND SCIENCES
 THE UNIVERSITY OF OKLAHOMA

For Students Entering the Oklahoma State System for Higher Education:

Summer 2018 through Spring 2019

Minimum Credit Hours and Grade Point Averages Required			
Total Hours —	120	Upper-Division Within Total	48
Major Hours —	39		
Grade Point Averages:			
Overall & Major: Combined OU/Transfer - 2.00 OU - 2.00			
48 Upper-Division Hours REQUIRED			

Mathematics
(Professional Option)

B671
Bachelor of Science in Mathematics

OU encourages students to complete at least 30 hours of applicable coursework each year to have the opportunity to graduate in four years.

GENERAL EDUCATION AND COLLEGE REQUIREMENTS Courses graded P/NP will not apply.	Some courses required for the major may also fulfill University General Education and/or College of Arts & Sciences Requirements	
Courses for fulfillment of General Education and 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/enrollment/home/	MAJOR REQUIREMENTS	Free Electives
<p style="text-align: center;">University-Wide General Education (minimum 40 hours) and College of Arts and Sciences Requirements</p> <p>Core Area I: Symbolic and Oral Communication (9-22 hours, 3-6 courses)</p> <p>a. English Composition (6 hours, 2 courses)</p> <ol style="list-style-type: none"> 1. English 1113, Principles of English Composition 2. English 1213, Principles of English Composition, or EXPO 1213, Expository Writing <p>b. Foreign Language (0-13 hours in the same language) The College of Arts and Sciences requirement <i>cannot be met by high school coursework</i>.</p> <ol style="list-style-type: none"> 1. Beginning Course (0-5 hours) _____ 2. Beginning Course, continued (0-5 hours) _____ <p>♦ 3. Intermediate Course (2000 level, 0-3 hours). _____ One course at the intermediate level or demonstrated competency at that level.</p> <p>c. Mathematics (3 hours, 1 course). _____</p> <p>Core Area II: Natural Science (7 hours, 2 courses) including one laboratory component.</p> <p>♦ 1. Biological Science _____ Chosen from the following approved General Education designators: BIOL, HES, MBIO, or PBIO.</p> <p>♦ 2. Physical Science _____ Chosen from the following approved General Education designators: AGSC, ASTR, CHEM, GEOG, GEOL, GPHY, METR, or PHYS.</p> <p>Core Area III: Social Science (6 hours, 2 courses)</p> <ol style="list-style-type: none"> 1. Political Science 1113, American Federal Government 2. _____ <p>Core Area IV: Humanities (18 hours, 6 courses)</p> <p>a. Understanding Artistic Forms (3 hours, 1 course) _____</p> <p>b. Western Civilization and Culture (6 hours, 2 courses)</p> <ol style="list-style-type: none"> 1. History 1483, U.S., 1492-1865, or History 1493, U.S., 1865-Present, 2. _____ (excluding HIST 1483 and 1493) <p>c. Non-Western Culture (3 hours, 1 course): _____</p> <p>d. Additional Core IV Humanities courses (6 upper-division hours, 2 courses at the 3000- 4000-level). Must be outside the major and selected from Understanding Artistic Forms, Western Civilization and Culture, or Non-Western Culture.</p> <ol style="list-style-type: none"> ♦ 1. _____ ♦ 2. _____ <p>Core Area V: Senior Capstone Experience (3 hours, 1 course): _____</p> <p>♦ College of Arts and Sciences Requirements: College requirements are not automatically fulfilled by a previous degree.</p>	<p style="text-align: center;">Students must earn a grade of C or better in all MATH courses at the 3000-level or higher.</p> <p>MATH</p> <p>One of the following two sequences:</p> <p>1823 Calculus & Analytic Geometry I 2423 Calculus & Analytic Geometry II 2433 Calculus & Analytic Geometry III 2443 Calculus & Analytic Geometry IV or 1914 Differential & Integral Calculus I 2924 Differential & Integral Calculus II 2934 Differential & Integral Calculus III</p> <p>_____ 3-4 _____ 3-4 _____ 3-4 _____ 0-3</p> <p>2513 Discrete Mathematical Structures 3 3333 Linear Algebra I 3 4323 Introduction to Abstract Algebra I 3 4373 Abstract Linear Algebra 3 4433 Intro. to Analysis I 3 4853 Intro. to Topology 3</p> <p>Only one of the following*: 3113 Introduction to Ordinary Differential Equations, or 3413 Physical Mathematics I</p> <p>_____ 3</p> <p>One of the following: 4333 Introduction to Abstract Algebra II, or 4443 Introduction to Analysis II</p> <p>_____ 3</p> <p>4513 Senior Mathematics Seminar (Capstone) 3</p> <p>* 3113 & 3413 overlap by 2 hours. Students who take both will only earn 4 hours of credit.</p>	<p>Electives to bring total applicable hours to 120 including 48 upper-division hours.</p>

INFORMATION CONCERNING GENERAL RULES, REGULATIONS AND MINIMUM REQUIREMENTS

TOTAL HOURS: A minimum of 120 semester hours acceptable toward graduation must be completed.

UPPER-DIVISION HOURS: A minimum of 48 upper-division semester hours acceptable toward graduation must be completed. OU courses numbered 3000 or above are upper-division. Transfer work is counted as lower-division or upper-division credit depending on the level at which it was offered at the institution where it was earned. Two-year college work is accepted only as lower-division credit.

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.

MAJOR WORK: A minimum of 30 semester hours must be earned in the major, including a minimum of 15 credit hours at the upper-division level.

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.
- Credits earned via examination are neither resident nor nonresident credit.

GRADEPOINT AVERAGES: Students must earn a minimum overall 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.

SPECIAL DEGREES: Students may qualify for an Honors degree (cum Laude, Magna cum Laude, or Summa cum Laude) by completing specific requirements of the Honors College. A degree will be earned with Distinction if the student completes at least 60 semester hours at OU with at least a 3.60 combined retention GPA and OU retention GPA. A degree will be earned with Special Distinction if the student completes at least 60 semester hours at OU with at least a 3.90 combined retention GPA and OU retention GPA.

APPLICATION FOR GRADUATION: Students must apply for graduation during the term in which they complete their degree requirements in order to graduate in that term. The graduation application is available on line on your Ozone site. Deadlines for the OU Graduation Application are: **March 1** for Spring certification and the University of Oklahoma Commencement book; **July 1** for Summer graduation certification; and, **October 1** for Fall graduation certification.

Refer to the OU General Catalog for more complete information.

Suggested Semester Plan of Study — Mathematics (Professional Option) - B671

This plan shows one possible grouping of courses that would allow students to graduate in four years. Please refer to the front of the degree checksheet for official requirements. Students must consult with College of Arts and Sciences and/or Department of Mathematics academic advisers to verify that courses selected each semester fulfill the recommended plan and satisfy university, College of Arts and Sciences, and Mathematics major requirements.

Year	FIRST SEMESTER	Hours	SECOND SEMESTER	Hours
FRESHMAN	ENGL 1113, Principles of English Composition (Core I) MATH 1823, Calculus & Analytic Geometry I (Core I), or MATH 1914, Differential & Integral Calculus I P SC 1113, American Federal Government (Core III) Beginning Foreign Language (Core I) Free Elective, lower-division (e.g., UCOL 1002, HES 2212)	3 3-4 3 5 2	ENGL 1213, Principles of English Composition (Core I), or EXPO 1213, Expository Writing (Core I) HIST 1483, United States 1492-1865, or 1493, United States 1865-Present (Core IV) MATH 2423, Calculus & Analytic Geometry II, or MATH 2924, Differential & Integral Calculus II Beginning Foreign Language continued (Core I)	3 3 3-4 5
	TOTAL CREDIT HOURS		TOTAL CREDIT HOURS	
	16-17		14-15	
SOPHOMORE	MATH 2433, Calculus & Analytic Geometry III, or MATH 2934, Differential & Integral Calculus III MATH 2513, Discrete Mathematical Structures Intermediate Foreign Language Natural Science without lab (Core II) Western Civilization & Culture (Core IV)	3-4 3 3 3 3	MATH 2443, Calculus & Analytic Geometry IV, or Free Elective, lower- or upper-division§ MATH 3333, Linear Algebra I Natural Science with lab (Core II) Social Science (Core III) Understanding Artistic Forms (Core IV)	3 3 4 3 3
	TOTAL CREDIT HOURS		TOTAL CREDIT HOURS	
	15-16		16	
JUNIOR	MATH 4323, Introduction to Abstract Algebra I MATH 4433, Introduction to Analysis I Free Elective, lower- or upper-division Free Elective, upper-division (3000-4000-level) Free Elective, upper-division (3000-4000-level)	3 3 3 3 3	MATH 3113, Introduction to Ordinary Differential Equations, or 3413, Physical Mathematics I MATH 4333, Introduction to Abstract Algebra II, or 4443, Introduction to Analysis II Humanities, upper-division, outside major (Gen. Ed.) Non-Western Culture (Core IV) Free Elective, upper-division (3000-4000-level)	3 3 3 3 3 3
	TOTAL CREDIT HOURS		TOTAL CREDIT HOURS	
	15		15	
SENIOR	MATH 4373, Abstract Linear Algebra Humanities, upper-division, outside major (Gen. Ed.) Free Elective, lower- or upper-division Free Elective, upper-division (3000-4000-level) Free Elective, upper-division (3000-4000-level), MATH is recommended	3 3 3 3 3	MATH 4513, Senior Mathematics Seminar (Capstone) MATH 4853, Introduction to Topology Free Elective, lower- or upper-division Free Elective, upper-division (3000-4000-level) Free Elective, upper-division (3000-4000-level)	3 3 3 3 3
	TOTAL CREDIT HOURS		TOTAL CREDIT HOURS	
	15		15	

§ Free Elective is chosen only if MATH 1914, 2924, and 2934 have been completed.

Bachelor's degrees require a minimum of 48 hours of upper-division (3000-4000) coursework.
This plan of study should not be used in lieu of academic advisement.

Students who transfer from other institutions (particularly community colleges) must verify credit hour and course requirements with their college academic counselor, ELLH 124, 325-4411, <http://ou.edu/cas>. Please make an appointment for a degree check with your college academic counselor once you have earned 90 hours. Appointments may be scheduled at <https://iadvice.ou.edu/>.