MAJOR MAP FOR BACHELOR OF SCIENCE IN MATHEMATICS STATISTICS CONCENTRATION (MATHBS-MATH3) 2016-17 THROUGH 2019-20 CATALOG YEARS

Last Updated: March 13, 2023

MATHBS-MATH3 Degree Snapshot

University Perspectives (0-1 hr)
_____ **UNIV 1001**, University Perspectives or exemption

State Core English Composition (0-6 hrs)
_____ **ENGL 1013**, Composition 1 or exemption
_____ **ENGL 1023**, Composition 2 or exemption

State Core US History or Government (3 hrs)
_____ **US HIST/PLSC** _____

State Core Mathematics (0 hrs)
Met with major requirements.

Natural Sciences w/ labs for MATHBS (8 hrs)
_____ **Science w/ lab** _____
_____ **Science w/ lab** _____

State Core Social Sciences (9 hrs)
_____ **Social Science** _____
_____ **Social Science** _____
_____ **Social Science** _____

State Core Fine Arts (3 hrs)
_____ **Fine Art** _____

State Core Humanities (3 hrs)
_____ **Humanities** _____

MATHBS Core (36-46 hrs)
_____ **MATH 1203,** College Algebra (or placement in to higher math)
_____ **MATH 1284c,** Pre-Calculus **OR MATH 1213**, Plane Trigonometry (or placement in to higher math)
_____ **MATH 2554c,** Calculus I
_____ **MATH 2564c,** Calculus II
_____ **MATH 2574,** Calculus III
_____ **MATH 2584,** Elementary Differential Equations
_____ **MATH 2803/2801L,** Transition to Advanced Mathematics
_____ **MATH 3093,** Abstract Linear Algebra
_____ **MATH 3113,** Introduction to Abstract Algebra I
_____ **MATH 4513,** Advanced Calculus 1
_____ **MATH 4933,** Mathematics Major Seminar
_____ **CSCE 2004,** Programming Foundations I

Statistics Concentration (19 hrs)
_____ **MATH 4353,** Numerical Linear Algebra
_____ **STAT 3013,** Introduction to Probability **OR MATH 4103**
_____ **STAT 3003**, Statistical Methods
_____ **STAT 3001L,** Statistics Methods Laboratory **OR STAT 4101L**, Introduction to R
_____ **STAT 4033** Nonparametric Statistical Methods
_____ **STAT or MATH 3000+ (or CSCE 4133*)**_____
_____ **STAT or MATH 3000+** _____

General Electives (23-40 hrs)
How you use these hours will depend on your educational and career goals. Early in your degree you might use this section to jot down ideas for how to plan. As you get closer to graduation, you might use this section to track which classes you've taken outside the above requirements.

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Graduation Plan

Use the following additional resources, in addition to this major map, to complete your graduation plan (Catalog, and your Degree Audit in UAconnect). Many students have more than one major, minor, or pre-professional goal that has additional required classes. This tool allows you to combine all your educational goals in to one plan.

High School credit	List all Advanced Placement, International Baccalaureate, Dual or Concurrent credit			
Year	**Fall**	**Spring**	**Summer**	**Total**
Year 1				**Total 1st year credit hours (aim for 30):**
Year 2				**Total 2nd year credit hours (aim for 60):**
Year 3				**Total 3rd year credit hours (aim for 90):**
Year 4				**Total 4th year credit hours (Must be at least 120):**

Graduation Checklist (does your plan include the following):

- ☐ Do you have at least a 2.0 GPA (this will be something you track each semester)
- ☐ All state minimum core requirements
- ☐ All Major(s)/Minor(s) requirements
- ☐ Writing requirement complete
- ☐ Have At least 50% of each major/minor taken from UofA
- ☐ 24 hours of 3000+ classes exclusively from Fulbright College of Arts and Sciences classes
- ☐ 30 hours of 3000+ classes exclusively from the University of Arkansas. This can include courses taken for the 24-hour rule.
- ☐ 40 hours of upper-level classes. (3000+ or 2000+ with a pre-requisite. Can include transfer credit.) This can include courses taken for the 24-hour and 30-hour rules.
- ☐ 120 total eligible credit hours (see below for a list of ineligible classes)

COURSES THAT DO NOT COUNT TOWARDS THE 120 HOURS REQUIRED FOR GRADUATION

- ENGL 0002
- MATH 0001L, MATH 0002L, MATH 0003, and MATH 0131L
- Duplicated/Repeated courses (i.e.: if the same course is taken more than once, the hours will only count once for graduation)

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The Applied Concentration is a program for the student who wishes to prepare for either applied work in mathematics or graduate work in some field other than mathematics or statistics.

Faculty who have exception/substitution authority: Matthew Clay

Transfer Coursework Restriction: At least 50% of a student's Arts and Sciences (ARSC) major or minor must be taken at the University of Arkansas.

GPA (Grade Point Average): Every student must have at least a 2.00 cumulative grade point average to be eligible to graduate from the University of Arkansas. **A 2.00 cumulative grade-point average on all work completed in the department of mathematical sciences will be required for graduation with a B.A. or B.S. degree.**

Please visit https://catalog.uark.edu/undergraduatecatalog for an extensive list of core, major, graduation, and pre-requisite requirements. To read more about individual classes, visit the courses of instruction page for course descriptions.

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Degree Requirement Breakdown by Category

The following information is designed to help you navigate your experience in your degree and answer common questions that may come up for each requirement.

Category	Degree Requirements	Curriculum Notes
UNIVERSITY PERSPECTIVES **0-1 hr**	• **UNIV 1001**, University Perspectives	Or equivalent from another University of Arkansas college. (AFLS 1023H, ARSC 1201, GNEG 1111, HIST 1003(H), PLSC 1003, WCOB 1111) **Note**: students who transfer to the University of Arkansas with at least 24 credit hours will have this requirement waived.
STATE CORE COMPOSITION **0-6 hrs**	• **ENGL 1013,** Composition 1 or SAT/ACT exemption • **ENGL 1023**, Composition 2 or SAT/ACT exemption	See Catalog for information about placement and/or exemption.
STATE CORE US HISTORY or GOVERNMENT **3 hrs**	**Choose 1: *** • HIST 2003, History of the American People to 1877 • HIST 2013, History of the American People 1877 to Present • PLSC 2003, American National Government	*Some courses may appear as options in multiple areas of the State Core. You can only count each course 1 time in the State Core and will need unique courses in each of the content areas below.
STATE CORE MATHEMATICS **3 hrs**	**Choose 1:** • MATH 1203, College Algebra • MATH 1313, Quantitative Reasoning • MATH 1514, Calculus with Algebra and Trigonometry • STAT 2303, Principles of Statistics • Any higher-level mathematics course with MATH 1203 as a pre-requisite	Based on ACT/SAT or other math placement scores, students may need to enroll in additional remediation related courses. See catalog or math placement website for additional information.
NATURAL SCIENCES FOR MATHBS **8 hrs**	**Choose 1 sequence of 2 classes from the same department:** **Biology:** • BIOL 1543/1541L, Principles of Biology Then choose 1 from below: • BIOL 1603/1601L, Principles of Zoology • BIOL 1613/1611L, Plant Biology • BIOL 2013/2011L, General Microbiology* **OR** **Chemistry:** • CHEM 1103/1101L; University Chemistry I • CHEM 1123/1121L, University Chemistry II **OR** **Geosciences:** • GEOS 1113/1111L, Physical Geology • GEOS 1133/1131L, Earth Science **OR** **Physics:** • PHYS 2054, University Physics I • PHYS 2074, University Physics II	Some of these classes will have pre-requisites. *If students take BIOL 2013/2011L, they will also have to take an additional natural science class from the university core list.
STATE CORE SOCIAL SCIENCES **9 hrs**	**Choose 3: *** • AGEC 1103, Principles of Agriculture Microeconomics • AGEC 2103, Principles of Agriculture Macroeconomics • ANTH 1023, Intro to Cultural Anthropology • COMM 1023, Communication in a Diverse World	Students must take classes from at least two departments in the Social Sciences category.

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	• ECON 2013, Principles of Macroeconomics • ECON 2023, Principles of Microeconomics • ECON 2143, Basic Economics: Theory and Practice • EDST 2003, Introduction to Educational Studies • GEOS 1123, Human Geography • GEOS 2003, World Regional Geography • HDFS 1403, Life Span Development • HDFS 2413, Family Relations • HDFS 2603, Rural Families & Communities • HIST 1113, Institutions and Ideas of World Civilizations I • HIST 1123, Institutions and Ideas of World Civilizations II • HIST 2003, History of the American People to 1877 • HIST 2013, History of the American People 1877 to Present • HIST 2093, Animals in World History • HUMN 1114H, Honors Roots of Culture to 500 C.E. (Honors only) • HUMN 2114H, Honors Birth of Modern Culture, 1600-1900 (honors only) • INST/PLSC 2813, Intro to International Relations & Global Studies • PLSC 2003, American National Government • PLSC 2013, Intro to Comparative Politics • PLSC 2203, State and Local Government • PSYC 2003, General Psychology • RESM 2853, Leisure and Society • SOCI 2013, General Sociology • SOCI 2033, Social Problems • STEM 2003, The Art of STEM Communication	*Some courses may appear as options in multiple areas of the State Core. You can only count each course 1 time in the State Core and will need unique courses in each of the content areas below.
STATE CORE FINE ARTS **3 hrs**	**Choose 1:** • ARCH 1003, Architecture Lecture • ARHS 1003, Art Lecture • COMM 1003, Film Lecture • DANC 1003, Movement and Dance • ENGL 2023, Creative Writing 1 • HUMN 2114H, Honors Birth of Modern Culture 1600-1900 (honors only) • LARC 1003, The American Landscape • MLIT 1003, Experiencing Music • MLIT 1013, Music and Society (music majors only) • MLIT 1333, Popular Music • THTR 1003, Theatre Appreciation • THTR 1013, Musical Theatre Appreciation • THTR 1883, Acting 1 for Theatre majors	Classes taken in this category may not overlap in any other core category
STATE CORE HUMANITIES **3 hrs**	**Choose 1: *** • AAST 2023, The African American Experience • ANTH 1033, Introduction to Archeology • ARCH 1013, Diversity and Design • CLST 1003, Introduction to Classical Studies: Greece • CLST 1013, Introduction to Classical Studies: Rome • COMM 1233, Media, Community and Citizenship • DANC 1003, Dance Appreciation • ENGL 1213, Introduction to Literature	*Some courses may appear as options in multiple areas of the State Core. You can only count each course 1 time in the State Core and will need unique courses in each of the content areas below.

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	• ENGL 2023, Creative Writing I • GNST 2003, Introduction to Gender Studies • HIST 1113, Institutions and Ideas of World Civilizations I • HIST 1123, Institutions and Ideas of World Civilizations II • HIST 2003, History of the American People to 1877 • HIST 2013, History of the American People 1877 to Present • HUMN 1124H*, Honors Equilibrium of Cultures 500-1600 (Honors only) • HUMN 2213, Introduction to World Religions • LALS 2013, Introduction to Latin American and Latino Studies • MRST 2013, Introduction to Medieval and Renaissance Studies • MUSY 2003, Music in World Cultures • PHIL 2003, Introduction to Philosophy • PHIL 2103, Introduction to Ethics • PHIL 2203, Logic • PHIL 2303, Human Nature and the Meaning of Life • PHIL 3103, Ethics and the Professions • THTR 1003, Theatre Appreciation • THTR 1013, Musical Theatre Appreciation • WLIT 1113, World Literature: Beginnings to 1650 CE • WLIT 1123, World Literature: 1650 CE to Present • Any Intermediate level foreign language numbered at the 2000 level	
MATHBS CORE **36-46 hrs**	• **MATH 1203,** College Algebra (may not be required based on math placement) • **MATH 1284c,** Pre-Calculus **OR MATH 1213**, Plane Trigonometry (may not be required based on math placement) • **MATH 2554c,** Calculus I (pre-req: MATH 1284c, 1213, or math placement)* • **MATH 2564c,** Calculus II (pre-req: MATH 2554c) • **MATH 2574,** Calculus III (pre-req MATH 2564c) • **MATH 2584,** Elementary Differential Equations (pre-req: MATH 2564c) • **MATH 2803/2801:,** Transition to Advanced Mathematics (co- OR pre-req: MATH 2554c)** • **MATH 3093,** Abstract Linear Algebra (pre-req: MATH 2803. co- or pre-req: MATH 2564c)*** • **MATH 3113,** Introduction to Abstract Algebra I (pre-req: MATH 2803 and either MATH 3093 or 3083) • **MATH 4513,** Advanced Calculus 1 (pre-req: MATH 2574c, MATH 2803, and either MATH 3093 or 3083)**** • **MATH 4933,** Mathematics Major Seminar (Spring only, pre-req: senior standing and mathematics major) • **CSCE 2004,** Programming Foundations I (pre-req: MATH 2554c)	The students first math course also meets university core requirements. **Students must earn a C or higher to use a class as a pre-requisite.** See catalog for additional pre-requisite information for individual classes. *MATH 2445, Calculus I with review, can also be taken here. **MATH 2803 should be taken as early as possible. While not listed in the major as a requirement, MATH 2801L is a co-requisite class that needs to be taken along with MATH 2803. **Students may not receive credit for both MATH 3093 and MATH 3083 ***Students may not receive credit for both MATH 3513 and 4513 in the major.
STATISTICS CONCENTRATION **19 hrs**	• **MATH 4353,** Numerical Linear Algebra (pre-req: MATH 3093 or 3083) • **STAT 3013,** Introduction to Probability (pre-req: MATH 2564C) **OR MATH 4103** (pre-req: department consent)	* Students who take CSCE 4133 and would like to count it for the 24 hour rule may request this using the General College Petition.

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	• **STAT 3003**, Statistical Methods (pre-req: MATH 2554c. Listed in older Catalogs at STAT 4003) • **STAT 3001L,** Statistics Methods Laboratory (co- pre-req: STAT 3003 encouraged but not required) **OR STAT 4101L**, Introduction to R • **STAT 4033** Nonparametric Statistical Methods (pre-req: STAT 2823 or STAT 3003) • **6 hrs STAT or MATH 3000+ (or CSCE 4133*)**	Honors MATH requirements can count in math electives category. See below for more details. MATH or STAT 399T or 499T courses may count in the MATH/STAT 3000+ requirement as students still meet the 50% rule. Not all 99T classes pull into the degree audit automatically, so students may need to request classes be moved into the minor by their academic advisor.
UPPER-LEVEL COURSE REQUIREMENT **0 hrs ***	Completion of **8 additional hours at the 3000**-level or higher not in Mathematics or Statistics chosen with department approval.*	***This requirement is not enforced.** The department has reviewed the requirement and is in the process of removing it from a future catalog. Students still need 120 total hours in their degree but may take any general electives they would like in lieu of this requirement. ***For this reason, this requirement is not listed in the degree snapshot on page 1.***
GENERAL ELECTIVES **23-40 hrs**	Hours will vary depending on math placement and whether a student is exempt from ENGL 1013 and 1023.	Some general electives may need to be upper level to meet college and university residency requirements. See Graduation Checklist on page 2 for more information.
WRITING REQUIREMENT	The college writing requirement may be satisfied in one of two ways: • Upon completion of MATH 4933 • Successful honors thesis defense	
HONORS	**Minimum Requirements for Honors:** • Maintain cumulative grade point average of 3.5 in all coursework (as well as a 3.5 GPA in all CSCE and MATH/STAT courses) • Students may not remain in the honors program if they earn a D or F in any MATH/STAT course. • Complete a minimum of 12 hours of honors courses from the UofA (including at least 2 hrs of MATH 498V taken at least one semester before graduation). • Complete and defend Honors Thesis See Catalog for full description of requirements.	**Honors Thesis Timeline:** Honors students should consistently check the honors thesis timeline to stay on track to complete your honors thesis. **College Honors:** Students who also are following the College Honors Core for Bachelor of Science programs need to also complete those additional requirements