## Academic Map: Mathematics, Pure Mathematics

| Department: | Mathematics |  | Degree: | BS |
| :---: | :---: | :---: | :---: | :---: |
| Program/Major: | Mathematics |  |  |  |
| Track/Emphasis: | Pure Ma |  |  |  |
| Does this program | Yes/No) | Yes |  |  |

## Important program information in the online Undergraduate Bulletin:

UCA Core Requirements: http://uca.edu/ubulletin/general-policies-information/uca-core/
LD UCA Core Check Sheet: http://uca.edu/academicbulletins/ld-uca-core/
UD UCA Core Course List: http://uca.edu/academicbulletins/ud-uca-core/
Degree Requirements:
Program Description:
http://uca.edu/ubulletin/general-policies-information/degree-requirements/
http://uca.edu/ubulletin/colleges-departments-programs/college-of-natural-sciences-and-mathematics/department-of-mathematics/

Course Descriptions: http://uca.edu/ubulletin/courses/

This degree program requires a total of $\underline{120}$ semester credit hours, including at least 40 upper-division credit hours.

Comparable courses in the Arkansas Course Transfer System (ACTS) are cross-referenced in the ACTS column of each semester block below; a core link (http://uca.edu/academicbulletins/ld-uca-core/) takes the user to the Undergraduate Bulletin's UCA Lower-Division Core check sheet, where LD UCA Core options and ACTS course numbers are listed in full; an acts link takes the user to the Undergraduate Bulletin's ACTS page (http://uca.edu/academicbulletins/acts/) for additional information and a UCA-ACTS crosswalk.

## Year 1

Fall - Semester 1 (credit hours: 16)

| SUBJ | NUM | TITLE | SCH | ACTS |
| :--- | :--- | :--- | :--- | :--- |
| MATH | 1496 | Calculus I | 4 | MATH2405 |
| WRTG | 1310 | Introduction to College Writing or <br> Approved alternative (LD UCA Core: Writing Foundation) |  |  |
|  |  | LD UCA Core ${ }^{1}$ | 3 | ENGL1013 <br> core link |
|  |  | LD UCA Core ${ }^{1}$ | 3 | core link |
|  |  | LD UCA Core ${ }^{1}$ | 3 | core link |
|  |  | 3 | core link |  |

Spring - Semester 2 (credit hours: 14)

| SUBJ | NUM | TITLE | SCH | ACTS |
| :--- | :--- | :--- | :---: | :--- |
| MATH | 1497 | Calculus II | 4 | MATH2505 |
| WRTG <br> ENGL | 1320 | 1320 | Academic Writing and Research or <br> Interdisciplinary Writing and Research or <br> Other approved alternative (LD UCA Core: Research/Writing) |  |
|  |  | LD UCA Core ${ }^{1}$ | 3 | ENGL1023 <br> ENGL1023 <br> core link |
|  |  | LD UCA Core (Natural Sciences) ${ }^{1}$ | 3 | core link |

## Year 2

Fall - Semester 3 (credit hours: 14)

| SUBJ | NUM | TITLE | SCH | ACTS |
| :--- | :--- | :--- | ---: | :--- |
| MATH | 2335 | Transition to Advanced Mathematics | 3 |  |
| MATH | 2471 | Calculus III $^{4}$ | 4 | MATH2603 |
|  |  | LD UCA Core ${ }^{1}$ | 3 | core link |
|  |  | LD UCA Core (Natural Sciences) $^{1}$ | 4 | core link |

Spring - Semester 4 (credit hours: 15)

| SUBJ | NUM | TITLE | SCH | ACTS |
| :--- | :--- | :--- | ---: | :--- |
| MATH | 3320 | Linear Algebra (UD UCA Core: I) | 3 |  |
| MATH | 3331 | Differential Equations (UD UCA Core: C) | 3 |  |
|  |  | LD UCA Core ${ }^{1}$ | 3 | core link |
|  |  | LD UCA Core ${ }^{1}$ | 3 | core link |
|  | Minor Field Course ${ }^{2,3}$ | 3 |  |  |

## Year 3

Fall - Semester 5 (credit hours: 15)

| SUBJ | NUM | TITLE | SCH | ACTS |
| :--- | :--- | :--- | :--- | :--- |
| MATH | 3360 | Introduction to Rings and Fields | 3 |  |
| MATH | 4371 | Introduction to Probability (UD UCA Core: R) | 3 |  |
| MATH |  | MATH Major Elective | 3 |  |
|  |  | General Elective ${ }^{3}$ | 3 |  |
|  |  | Minor Field 2,3 | 3 |  |

Spring - Semester 6 (credit hours: 15)

| SUBJ | NUM | TITLE | SCH | ACTS |
| :--- | :--- | :--- | ---: | ---: |
| MATH | 3362 | Introduction to Group Theory | 3 |  |
| MATH |  | MATH Major Elective | 3 |  |
|  |  | General Elective ${ }^{3}$ | 3 |  |
|  |  | Minor Field ${ }^{2,3}$ | 3 |  |
|  | Minor Field 2,3 | 3 |  |  |

## Year 4

Fall - Semester 7 (Credit hours: 16)

| SUBJ | NUM | TITLE | SCH | ACTS |
| :--- | :--- | :--- | ---: | ---: |
| MATH | 4362 | Advanced Calculus I (UD UCA Core: Z) | 3 |  |
|  |  | General Elective $^{3}$ | 3 |  |
|  |  | General Elective $^{3}$ | 4 |  |
|  | Minor Field |  |  |  |
|  |  | Minor Field |  |  |
|  |  | 2 | 3 | 3 |

## Spring - Semester 8 (Credit hours: 15)

| SUBJ | NUM | TITLE | SCH | ACTS |
| :--- | :--- | :--- | :--- | :--- |
|  |  | General Elective $^{3}$ | 3 |  |
|  |  | General Elective $^{3}$ | 3 |  |
|  | General Elective $^{3}$ | 3 |  |  |
|  | Minor Field 2,3 | 3 |  |  |
|  | Minor Field ${ }^{2,3}$ | 3 |  |  |

Signed - Department Chair

Signed - College Dean

DATE

DATE

To be completed by the advisor when an Eight-Semester plan is accepted by the student:
If applicable, has student selected a minor? Type " $x$ " as appropriate. $\qquad$ No $\qquad$ Yes If "yes," specify:

## Notes

${ }^{1}$ See appropriate choices, alternatives, or substitutions designated in the UCA Core Requirements and the lower-division (LD) UCA Core Check Sheet in the Undergraduate Bulletin. Prior to completion of 30 semester hours, a student must complete an LD UCA Core course designated as a First-Year Seminar (FYS) in Critical Inquiry, Diversity, or Responsible Living.
The student will also need to complete major, minor, or general elective courses designated as fulfilling the upper-division and capstone requirements of the UCA Core. See annotations in this Academic Map for courses in the major that fulfill these upper-division requirements; for others, consult the Undergraduate Bulletin and your academic advisor.
${ }^{2}$ This Academic Map includes 24 credit hours in the Minor field of study. Minor requirements range from 15 to 27 credit hours, so the student will need to adapt the number of general elective and minor elective credit hours in this plan as needed, depending upon the chosen minor field. Depending on a student's choice of minor and special degree requirements, the total number of credit-hours taken may exceed the total number of credit hours required to complete the program.
${ }^{3}$ The pure mathematics major requires 24 hours of upper-division courses. The additional 16 upper-division credit hours needed to complete the degree may be met by courses in the minor field and by additional math or general electives.

