Academic Advisement Report
UGRD.USCNC.MATHBA.MATHTEACH
Undergraduate Career
College of Science Program
Mathematics Major (BA)
Education Emphasis
Requirement Term: Fall 2023

MAIN Campus at TUCSON Location
This emphasis prepares students who aspire to teach math in middle school or high school. Mathematics is a cornerstone to any education. Students seeking a Bachelor of Science or Bachelor of Arts in Mathematics with an Education emphasis study core math courses as well as pedagogy to equip them to teach at the secondary level. Graduates can earn certification by the Arizona Department of Education to teach mathematics in grades 6-12 and are eligible for earning certifications in other states. Undergraduates gain expert knowledge through an inquiry-based approach. Plus, they garner hands-on teaching experience in subjects like algebra, geometry and calculus through student teaching roles at partner schools.

LEARNING OUTCOMES
- Apply computational methods; Math majors should be able to apply computational methods and mathematical concepts to analyze scientific problems
- Apply mathematical models to current problems; Math majors should be able to critically evaluate and extend selected mathematical models in the current scientific literature.
- Create valid proofs; Students should be able to identify an appropriate proof strategy and almost always able to create a correct proof using multiple strategies as appropriate.
- Define Terms Precisely; Precision is essential in mathematics, and a crucial skill for math majors is to learn to define mathematical terms precisely.
- Effective communication of results; Math majors should be able to effectively communicate results to non-specialized audiences in written and verbal form.
- Recognize valid arguments; Logical rigor is a critical component of mathematical argumentation. We expect math majors to develop the ability to recognize when arguments are valid, and identify logical gaps and flaws.

Undergraduate Graduation Requirements
All course work and requirements for this degree must be completed prior to the date the degree is awarded. The University of Arizona requirements to follow in this audit are required for graduation and awarding of the degree.

Curriculum:
1. The University of Arizona and the Arizona Board of Regents have sole discretion over all curricula changes.
2. Courses, programs & requirements may be suspended, deleted, restricted, or changed in any manner, at any time.
3. Students must remain currently informed about all policies & other info that bears on completing a degree.

Required Units:
Additional units will be required to complete this degree if a student:
A) is admitted to the UA with deficiencies;
B) changes their academic plan(s);
C) fails to meet minimum course/plan requirements;
D) ineffectively plans or fails to execute a course of study that leads directly to degree completion; or
E) Candidates for a second bachelor's degree at The University of Arizona with a different award date than the first must earn no fewer than 30 units of University Credit in addition to the units required for the first degree, and must meet all requirements for the second degree.

The following requirements must be met for graduation.

Units Required and Cumulative GPA
120 units are required at a 2.0 GPA. View the pdf report grid for units earned toward this degree and cumulative GPA.

Completing a second bachelor's degree at The University of Arizona requires no fewer than 30 units in addition to the units required for the first degree, and all requirements for the second degree must be met.

Upper Division Units
Not Satisfied: A minimum of 42 units of upper-division credit are required for this degree.
- Units: 42.00 required, 0.00 completed, 42.00 needed
Units in Residence

Not Satisfied: A minimum of 30 units in residence at The University of Arizona (excluding correspondence credit and credit by exam) is required.

- Units: 30.00 required, 0.00 completed, 30.00 needed

Upper Division Units in Residence

Not Satisfied: A minimum of 18 units of upper division credit in residence at the University of Arizona (excluding correspondence credit and credit by exam) is required.

- Units: 18.00 required, 0.00 completed, 18.00 needed

Correspondence and/or Exam Credit Limit

Satisfied: A maximum of 60 units of Correspondence Credit and/or Exam Credit may apply toward graduation.

- Units: 0.00 completed

Non Degree Seeking Limit

A maximum of 15 units completed as a non-degree seeking student may be used for fulfilling undergraduate degree requirements. Units exceeding this limit (shown below) must be subtracted from the units required towards the degree and graduation requirements.

Non-Community College Units

Not Satisfied: Non-Community College Units: While there is no limit to the total number of units of course work that may be transferred from an accredited community college to The University of Arizona, no more than 64 units from a 2-year institution may be applied toward the requirements for a bachelor's degree. Therefore, to reach the required 120 units for a bachelor's degree, a minimum of 56 units must be completed from 1) coursework at a 4-year institution, 2) approved credit by examination (refer to UA Catalog for approved examinations and scores), or 3) any combination thereof.

- Units: 56.00 required, 0.00 completed, 56.00 needed

Success Course Limit

Satisfied: No more than 3 units will apply toward a student's graduation requirements. All Success courses taken can be seen below. Success Course units exceeding the 3 unit maximum must be subtracted from the total units, residency requirements and cumulative grade point average.

PE Activity Course Limit

Satisfied: No more than 3 units will apply toward a student's graduation requirements. All PE activity courses taken can be seen below. PE Activity units exceeding the 3 unit maximum must be subtracted from the total units, residency requirements and cumulative grade point average.
General Education Entry Course  
Not Satisfied: General Education Entry Course

Introduction to General Education course  
Not Satisfied: Introduces students admitted to the university as First-Year students to General Education, reflecting on learning, and developing an ePortfolio. (1 unit)

- Units: 1.00 required, 0.00 completed, 1.00 needed

<table>
<thead>
<tr>
<th>Term</th>
<th>Subject</th>
<th>Catalog Nbr</th>
<th>Course Title</th>
<th>Grade</th>
<th>Units</th>
<th>RptCd</th>
<th>RqDes</th>
<th>Type</th>
</tr>
</thead>
</table>

Courses Available

UNIV 101

General Education Foundation Mathematics
Not Satisfied: General Education Foundation Mathematics

GE Substantial Math Strand
Not Satisfied: Complete 1 course.

GE Substantial Math Strand
Not Satisfied: Complete 1 course.

- Units: 2.67 required, 0.00 completed, 2.67 needed

<table>
<thead>
<tr>
<th>Term</th>
<th>Subject</th>
<th>Catalog Nbr</th>
<th>Course Title</th>
<th>Grade</th>
<th>Units</th>
<th>RptCd</th>
<th>RqDes</th>
<th>Type</th>
</tr>
</thead>
</table>

Courses Available

MATH 122B, MATH 125, MATH 129, MATH 215, MATH 223, MATH 254, MATH 313

General Education Foundation Composition & Second Language
Overall Requirement Not Satisfied: Undergraduate General Education Foundation Composition & Second Language

Foundation Composition
Not Satisfied: Complete 1 of the following 4 Foundation Composition options:
1. 3 Course Foundation Composition Sequence
2. 2 Course Foundation Composition Sequence
3. Honors Composition with grade of C or higher
4. Honors Composition with a grade of D and Second Semester Composition.

Please note: Students who earn a grade of D in Honors Composition may choose to repeat the course in order to earn a higher grade to satisfy the requirement. Please consult with your major advisor.

Mid-Career Writing Assessment - Complete 2nd semester English Composition with a B grade or higher. Students who do not earn a grade of B or better in 2nd semester English Composition must also satisfy a college or department writing requirement. Consult your major advisor if you do not earn a grade of B in 2nd semester English Composition.

Option 1: Foundation Composition - 3 Course Sequence
- **Courses**: 3.00 required, 0.00 completed, 3.00 needed

<table>
<thead>
<tr>
<th>Term</th>
<th>Subject</th>
<th>Catalog Nbr</th>
<th>Course Title</th>
<th>Grade</th>
<th>Units</th>
<th>RptCd</th>
<th>RqDes</th>
<th>Type</th>
</tr>
</thead>
</table>

**Courses Available**

**ENGL 1EIB, ENGL 101, ENGL 101A, ENGL 107, ENGL 107A, (***) (###), ENGL 102, ENGL 108, ENGL 106**

**OR Option 2: Foundation Composition - 2 Course Sequence**

**Not Satisfied**: Complete 2 courses. Complete ENGL 101/107 AND ENGL 102/108

- **Courses**: 2.00 required, 0.00 completed, 2.00 needed

<table>
<thead>
<tr>
<th>Term</th>
<th>Subject</th>
<th>Catalog Nbr</th>
<th>Course Title</th>
<th>Grade</th>
<th>Units</th>
<th>RptCd</th>
<th>RqDes</th>
<th>Type</th>
</tr>
</thead>
</table>

**Courses Available**

**ENGL 1EIB, ENGL 101, ENGL 101A, ENGL 107, ENGL 107A, (***) (###), ENGL 102, ENGL 108**

**OR Option 3: Honors Composition**

**Not Satisfied**: Complete 1 course with a C or better.

- **Courses**: 1.00 required, 0.00 completed, 1.00 needed

<table>
<thead>
<tr>
<th>Term</th>
<th>Subject</th>
<th>Catalog Nbr</th>
<th>Course Title</th>
<th>Grade</th>
<th>Units</th>
<th>RptCd</th>
<th>RqDes</th>
<th>Type</th>
</tr>
</thead>
</table>

**Courses Available**

**ENGL 109H**

**Foundation Second Language - Fourth Semester Proficiency**

**Not Satisfied**: Credit will not be given for a course at an equivalent or lower level than prior language credit earned. Course must be taken for a grade, not for pass/fail.

Demonstrate fourth semester proficiency in a second language by completing one of the following:

1. Complete a Fourth Semester Language Course with a grade of C or higher.
2. Complete Arabic 401 and 1 course with a grade of C of higher from Arabic 424B, 427B or 430B.
3. Pass a language proficiency examination at the fourth semester level

**Option 1: Fourth Semester Language Course**

**Not Satisfied**: Complete 1 course with a grade of C or better.


Courses used to fulfill this requirement may also be used to fulfill other requirements.

- **Courses**: 1.00 required, 0.00 completed, 1.00 needed
## Courses Available

<table>
<thead>
<tr>
<th>Subject</th>
<th>Catalog Nbr</th>
<th>Course Title</th>
</tr>
</thead>
</table>

**OR Option 2: Arabic Language**

**Not Satisfied:** Complete ARB 401, Intermediate Arabic, plus one additional course from ARB 424B, 427B, 439B, 484B.

- **Courses:** 1.00 required, 0.00 completed, 1.00 needed

## General Education Core Requirements

**Overall Requirement Not Satisfied:** General Education Core Requirements

### GE Exploring Perspectives

**Overall Requirement Not Satisfied:** Choose one course from each category.

### Artist Courses

**Not Satisfied:** Complete 1 course, 3 units total. Transfer students with quarter system credits may satisfy requirement with 1 course and 2.67 units.

- **Units:** 2.67 required, 0.00 completed, 2.67 needed
- **Courses:** 1.00 required, 0.00 completed, 1.00 needed
### Courses Available

<table>
<thead>
<tr>
<th>Term</th>
<th>Subject</th>
<th>Catalog Nbr</th>
<th>Course Title</th>
<th>Grade</th>
<th>Units</th>
<th>RptCd</th>
<th>RqDes</th>
<th>Type</th>
</tr>
</thead>
</table>

**Humanist Courses**

*Not Satisfied:* Complete 1 course, 3 units total. Transfer students with quarter system credits may satisfy requirement with 1 course and 2.67 units.

- **Units:** 2.67 required, 0.00 completed, 2.67 needed
- **Courses:** 1.00 required, 0.00 completed, 1.00 needed

**Natural Scientist Courses**

*Not Satisfied:* Complete 1 course, 3 units total. Transfer students with quarter system credits may satisfy requirement with 1 course and 2.67 units.

- **Units:** 2.67 required, 0.00 completed, 2.67 needed
- **Courses:** 1.00 required, 0.00 completed, 1.00 needed

**Social Scientist Courses**

*Not Satisfied:* Complete 1 course, 3 units total. Transfer students with quarter system credits may satisfy requirement with 1 course and 2.67 units.

- **Units:** 2.67 required, 0.00 completed, 2.67 needed
- **Courses**: 1.00 required, 0.00 completed, 1.00 needed

### Courses Available

<table>
<thead>
<tr>
<th>Term</th>
<th>Subject</th>
<th>Catalog Nbr</th>
<th>Course Title</th>
<th>Grade</th>
<th>Units</th>
<th>RptCd</th>
<th>RqDes</th>
<th>Type</th>
</tr>
</thead>
</table>

**GE Building Connections**

*Not Satisfied:* Building Connections brings together knowledge and modes of thinking from two or more disciplines and/or perspectives. Choose three courses (9 units minimum).

**Building Connections Courses**

*Not Satisfied:* Complete 3 courses, 9 units total. Transfer students with quarter system credits may satisfy requirements with 3 courses and 8.01 units.

- **Units**: 8.01 required, 0.00 completed, 8.01 needed
- **Courses**: 3.00 required, 0.00 completed, 3.00 needed

### Courses Available

<table>
<thead>
<tr>
<th>Term</th>
<th>Subject</th>
<th>Catalog Nbr</th>
<th>Course Title</th>
<th>Grade</th>
<th>Units</th>
<th>RptCd</th>
<th>RqDes</th>
<th>Type</th>
</tr>
</thead>
</table>

**GE 32 unit check**

*Not Satisfied:* Students must complete 32 units in General Education coursework while satisfying the requirements.
Check for 32 units of GE.

**Not Satisfied:** Students must complete 32 units in General Education coursework while satisfying the requirements.

- **Units:** 32.00 required, 0.00 completed, 32.00 needed

<table>
<thead>
<tr>
<th>Term</th>
<th>Subject</th>
<th>Catalog Nbr</th>
<th>Course Title</th>
<th>Grade</th>
<th>Units</th>
<th>RptCd</th>
<th>RqDes</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**General Education Portfolio**

**Not Satisfied:** General Education Portfolio (Exit Course)

**General Education Portfolio - Exit Course**

**Not Satisfied:** Students admitted to the university as First-Year students reflect on their General Education experience and complete their ePortfolio in the GE Capstone course. (1 unit)

- **Units:** 1.00 required, 0.00 completed, 1.00 needed

<table>
<thead>
<tr>
<th>Term</th>
<th>Subject</th>
<th>Catalog Nbr</th>
<th>Course Title</th>
<th>Grade</th>
<th>Units</th>
<th>RptCd</th>
<th>RqDes</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Courses Available**

UNIV 301

**Additional Coursework**

Courses listed in this section may include general elective credits, UA courses and transferable courses from other institutions. Consult with your advisor to determine if courses listed in this section may be used to fulfill a requirement or sub-requirement in your degree program.

Courses taken for Pass/Fail option can only count as elective credit. They cannot fulfill any General Education, Major, or Minor requirements.

**BA in Mathematics**

**Overall Requirement Not Satisfied:** Will appear fully satisfied when student satisfies Mathematics Supporting Computer Science, Math Major Core Requirements, and selects an emphasis. All emphases require a minimum of 15 units of 400-level coursework in the major.

Equivalent MATV courses may be available through UA South. For approved courses consult with your advisor.
Mathematics Supporting Computer Science

Not Satisfied: Will appear fully satisfied when student satisfies Computer Science requirements.

Computer Science

Not Satisfied: Complete 1 course. One of the following courses is recommended for most students: CSC 110, ISTA 130, ECE 175, or CHEE 205; other options may require additional prerequisites and/or a major or minor declared in another subject.

Courses used to fulfill this requirement may be used to fulfill other requirements.

- **Courses:** 1.00 required, 0.00 completed, 1.00 needed

<table>
<thead>
<tr>
<th>Term</th>
<th>Subject</th>
<th>Catalog Nbr</th>
<th>Course Title</th>
<th>Grade</th>
<th>Units</th>
<th>RptCd</th>
<th>RqDes</th>
<th>Type</th>
</tr>
</thead>
</table>

Courses Available

BME 225, CHEE 205, CSC 110, CSC 120, CSC 250, ECE 175, GEOS 280, ISTA 130, MIS 301, NROS 311, PHYS 305

Math Major Core Requirements

Overall Requirement Not Satisfied: Will appear fully satisfied when student satisfies Calculus I and Core Courses.

Calculus I

Not Satisfied: Complete 1 course

- **Courses:** 1.00 required, 0.00 completed, 1.00 needed

<table>
<thead>
<tr>
<th>Term</th>
<th>Subject</th>
<th>Catalog Nbr</th>
<th>Course Title</th>
<th>Grade</th>
<th>Units</th>
<th>RptCd</th>
<th>RqDes</th>
<th>Type</th>
</tr>
</thead>
</table>

Courses Available

MATH 122B, MATH 125

Core Courses

Not Satisfied: Complete 5 courses. Credit allowed for only one course in each pair: MATH 313 or MATV 313, MATH 323 or MATV 323, MATH 355 or MATV 355. MATV courses are only available to UA South students.

- **Courses:** 5.00 required, 0.00 completed, 5.00 needed

<table>
<thead>
<tr>
<th>Term</th>
<th>Subject</th>
<th>Catalog Nbr</th>
<th>Course Title</th>
<th>Grade</th>
<th>Units</th>
<th>RptCd</th>
<th>RqDes</th>
<th>Type</th>
</tr>
</thead>
</table>

Courses Available

MATH 129, MATH 223, MATH 313, MATH 323, MATH 355, MATV 313, MATV 323, MATV 355
Emphasis in Mathematics Education


Equivalent MATV courses may be available through UA South. For approved courses consult with your advisor.

Education Emphasis Requirements

Overall Requirement Not Satisfied: Will appear satisfied when student has satisfied Education Math courses and Professional Education course requirements.

Education Emphasis Required Courses

Not Satisfied: Complete 5 courses

• Courses: 5.00 required, 0.00 completed, 5.00 needed

<table>
<thead>
<tr>
<th>Term</th>
<th>Subject</th>
<th>Catalog Nbr</th>
<th>Course Title</th>
<th>Grade</th>
<th>Units</th>
<th>RptCd</th>
<th>RqDes</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Courses Available

DATA 361, MATH 315, MATH 330, MATH 361, MATH 404, MATH 407

Professional Education Requirements

Not Satisfied: Complete 7 courses

• Courses: 7.00 required, 0.00 completed, 7.00 needed

<table>
<thead>
<tr>
<th>Term</th>
<th>Subject</th>
<th>Catalog Nbr</th>
<th>Course Title</th>
<th>Grade</th>
<th>Units</th>
<th>RptCd</th>
<th>RqDes</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDP</td>
<td>301</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH</td>
<td>205</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH</td>
<td>406A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH</td>
<td>406B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH</td>
<td>494C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SERP</td>
<td>400</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TLS</td>
<td>435</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Courses Available

EDP 301, MATH 205, MATH 406A, MATH 406B, MATH 494C, SERP 400, TLS 435

Structured English Immersion Requirement

Not Satisfied: Complete 1 course

• Courses: 1.00 required, 0.00 completed, 1.00 needed
Courses Available
LCEV 408, TLS 416

Major 400-level Upper Division
Not Satisfied: A minimum of 15 units of 400-level upper-division major coursework must be completed.

- Units: 15.00 required, 0.00 completed, 15.00 needed

Constitution Requirement

Satisfied: Will appear completely satisfied when student has satisfied POL 210. Students who pass the AEPA constitutions exam may have this requirement waived; speak to your advisor for details.

Not Satisfied: Complete POL 210

- Courses: 1.00 required, 0.00 completed, 1.00 needed

Courses Available
POL 210

Education Emphasis Graduation Requirements

Overall Requirement Not Satisfied: Will appear completely satisfied when student has satisfied Mid Career Writing Assessment, minimum Major GPA, Major Residency, and a minimum number of units of Major Upper Division course work.

Mid Career Writing Assessment
Not Satisfied: Complete 2nd semester English Composition with a B grade or higher. Students who do not earn a grade of B or higher in 2nd semester English Composition must also satisfy a college or department writing requirement. Consult your major advisor if you do not earn a grade of B or higher in 2nd semester English Composition.

- Courses: 1.00 required, 0.00 completed, 1.00 needed

Major GPA
Satisfied: A minimum 2.0 GPA is required in the major coursework.

- **Units**: 0.00 completed
- **GPA**: 2.000 required, 0.000 completed

Major Units

Not Satisfied: A minimum of 72 units must be completed in the major.

- **Units**: 72.00 required, 0.00 completed, 72.00 needed

<table>
<thead>
<tr>
<th>Term</th>
<th>Subject</th>
<th>Catalog Nbr</th>
<th>Course Title</th>
<th>Grade</th>
<th>Units</th>
<th>RptCd</th>
<th>RqDes</th>
<th>Type</th>
</tr>
</thead>
</table>

Major Residency

Not Satisfied: A minimum of 18 units in the pre-major, supporting coursework, professional core, and/or major must be taken at the University of Arizona.

- **Units**: 18.00 required, 0.00 completed, 18.00 needed

<table>
<thead>
<tr>
<th>Term</th>
<th>Subject</th>
<th>Catalog Nbr</th>
<th>Course Title</th>
<th>Grade</th>
<th>Units</th>
<th>RptCd</th>
<th>RqDes</th>
<th>Type</th>
</tr>
</thead>
</table>
### Major Upper Division

**Not Satisfied:** The Education emphasis requires 53 units of upper-division major coursework.

- **Units:** 53.00 required, 0.00 completed, 53.00 needed

### Minor Optional

**Satisfied:** A minor is optional for this major. Consult with your advisor to select a minor or discuss other options such as selecting a second major.