Academic Advisement Report
UGRD.USCNC.MATHBA.COMPREH
Undergraduate Career
College of Science Program
Mathematics Major (BA)
Comprehensive Emphasis
Requirement Term: Fall 2018

MAIN Campus at TUCSON Location

The comprehensive emphasis is the “classical” math major; its emphasis is on theoretical courses that prepare a student to understand contemporary work in mathematics. Comprehensive emphasis courses are largely theoretical and proof-intensive, providing students with background, tools, and techniques they will need to pursue advanced study in mathematics. In particular, this emphasis prepares students for graduate study in mathematics, applied mathematics, and most scientific fields.

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 his/her 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

Final Units in Residence

A minimum of 18 of the final 30 units taken toward degree requirements must be in residence at The University of Arizona. Consult with your academic advisor if you plan to use transfer credits to fulfill your degree requirements.

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.

Community College Limit
Not Satisfied: A maximum of 64 units of community college course work may apply toward graduation. A minimum of 56 units of course work must be completed at a 4-year institution, military institution, or as test credit.

· 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.

Foundation Mathematics
Not Satisfied: 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

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Courses Available
Undergraduate General Education and Foundation Requirements

Overall Requirement Not Satisfied: Undergraduate General Education and Foundation Requirements

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

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**Courses Available**

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

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**Courses Available**

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

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ENGL 109H
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

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Courses Available


OR Option 2: Arabic Language

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

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

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Courses Available

ARB 401

AND Option 2: Additional Arabic Courses

Not Satisfied: Complete one additional course with a grade of C or better from ARB 424B, 427B, 439B.

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

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Courses Available


General Education Tier I

Overall Requirement Not Satisfied: Complete each of the following areas.

Tier I Individuals & Societies

Not Satisfied: Complete 2 courses, 6 units total. Transfer students with quarter system credits may satisfy Tier One requirements with 2 courses and 5.34 units.

- Units: 5.34 required, 0.00 completed, 5.34 needed
- Courses: 2.00 required, 0.00 completed, 2.00 needed

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Courses Available

(***) (###), AFAS 150B1, ANTH 150B1, ART 150B1, ART 150B2, EDP 150B1, ENGL 150B1, ESOC 150B1, FREN 150B1, FSHD 150B1, FTV 150B1, GEOG 150B1, GEOG 150B2, GER 150B1, GWS 150B1, GWS 150B2, GWS 150B3, GWS 150B5, HNRS 150B1, HNRS 150B2, HUMS 150B1, ITAL 150B1, LAR 150B1, LAS 150B1, MAS 150B1, MAS 150B2, MIS 150B1, PA 150B1, PHIL 150B1, POL 150B1, RCSC 150B1, RCSC 150B2, RELI 150B1, Rsss 150B1, RSSS 150B2, SOC 150B1, SOC 150B1, SOQ 150B1, SPAN 150B1, SPAN 150B2, TLS 150B1, AED 150A1, ANTH 150A1, ART 150A1, GER 150A1, HWSR 150A1, LING 150A1, MIS 150A1, PAH 150A1, PHIL 150A1, POL 150A1, PSY 150A1, AED 150C1, AREC 150C1, AREC 150C2, AREC 150C3, ECON 150C1, ECON 150C2, HIST 150C1, HIST 150C2, HIST 150C3, HIST 150C4, HIST 150C5, HIST 150C6, HNRS 150C1, HPS 150C1, JOUR 150C1, MAS 150C1, MENA 150C1, NSC 150C1, PHIL 150C1, PLP 150C1, POL 150C1, POL 150C2, POL 150C2, RNR 150C1, SOC 150C1, SOC 150C2, TLE 150C1

Tier I Natural Sciences

Not Satisfied: Complete 2 courses, 6 units total. Transfer students with quarter system credits may satisfy Tier One requirements with 2 courses and 5.34 units.

- Units: 5.34 required, 0.00 completed, 5.34 needed
- Courses: 2.00 required, 0.00 completed, 2.00 needed

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Courses Available


Tier I Traditions & Cultures

Not Satisfied: Complete 2 courses, 6 units total. Transfer students with quarter system credits may satisfy Tier One requirements with 2 courses and 5.34 units.
- **Units:** 5.34 required, 0.00 completed, 5.34 needed
- **Courses:** 2.00 required, 0.00 completed, 2.00 needed

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**Courses Available**


**General Education Tier II**

Overall Requirement Not Satisfied: Complete each of the following areas.

**Tier II Arts**

Not Satisfied: Complete 1 course, 3 units total. Transfer students with quarter system credits may satisfy Tier Two requirements with 2.67 units.

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

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**Courses Available**

AFAS 218, AFAS 318, AFAS 371, ANTH 318, ARC 304, ARC 325, ARE 130, ARH 201, ARH 202, ARH 203, ARH 312, ARH 314, ARH 315, ARH 316A, ARH 316B, ARH 319, ARH 320, ARH 321, ARH 322, ARH 324, ARH 325, ARH 329, ART 203, ART 242, ART 329, ART 358, CLAS 310, CLAS 329, DNC 100, DNC 101, DNC 112A, DNC 112B, DNC 112C, DNC 143, DNC 144A, DNC 144B, DNC 144C, DNC 152A, DNC 152B, DNC 152C, DNC 175, DNC 176A, DNC 176B, DNC 177C, DNC 177D, DNC 200, DNC 276A, ENGL 201, ENGL 209, ENGL 210, ENGL 300, ENGV 300, FTV 252, FTV 375, HRNS 203H, HRNS 216, HRNS 218, HRNS 220, HRNS 222, ISTA 301, JPN 245, LAS 322, LAS 337, MAS 337, MUS 100, MUS 101A, MUS 107, MUS 108, MUS 109, MUS 206, MUS 231, MUS 328, MUS 334, MUS 337, MUS 344, MUS 360, RELI 227, RELI 345, TAR 100, TAR 103, (***) (**##**)

**Tier II Humanities**

Not Satisfied: Complete 1 course, 3 units total. Transfer students with quarter system credits may satisfy Tier Two requirements with 2.67 units. Prerequisite course work in Tier 1 Traditions and Cultures (TRAD) must be completed prior to taking. If LAT 201 or 202 are used to fulfill Foundation Second Language Proficiency, they cannot be used to fulfill Tier II Humanities.

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

| Term | Subject | Catalog Nbr | Course Title | Grade | Units | RptCd | RqDes | Type |
Courses Available


Tier II Individual & Societies  
Not Satisfied: Complete 1 course, 3 units total. Transfer students with quarter system credits may satisfy Tier Two requirements with 2.67 units. Prerequisite course work in Tier 1 Individuals and Societies (INDV) must be completed prior to taking.

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

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Courses Available


Tier II Natural Sciences  
Not Satisfied: Complete 1 course, 3 units total. Transfer students with quarter system credits may satisfy Tier Two requirements with 2.67 units. Prerequisite course work in Tier 1 (NATS) must be completed prior to taking.

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

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## Diversity Emphasis Course

**Not Satisfied:** One course must be taken that focuses on: Gender, Race, Class, Ethnicity, Sexual Orientation or Non-Western Area Studies.

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

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## 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**

**Satisfied:** Will appear fully satisfied when student satisfies Computer Science requirements.

**Computer Science**

**Not Satisfied:** Complete 1 course. Consult your advisor for a list of alternative programming courses.

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

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

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**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

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**Courses Available**

- CSC 110, ISTA 130

**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

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Courses Available

MATH 129, MATH 223, MATH 313, MATH 323, MATH 355, MATV 313, MATV 323, MATV 355

Emphasis in Comprehensive Mathematics


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

Comprehensive Emphasis Requirements

Overall Requirement Not Satisfied: Will appear fully satisfied when student satisfies Comprehensive Required Courses and either the sequence in Abstract Algebra or Differential Equations.

Comprehensive Required Courses

Not Satisfied: Complete 4 courses

- Courses: 4.00 required, 0.00 completed, 4.00 needed

Courses Available

MATH 413, MATH 424, MATH 425A, MATH 425B

Option 1. Abstract Algebra

Not Satisfied: Complete MATH 415A and MATH 415B

- Courses: 2.00 required, 0.00 completed, 2.00 needed

Courses Available

MATH 415A, MATH 415B

OR Option 2: Differential Equations

Not Satisfied: OR Complete MATH 454 and MATH 456

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

MATH 454, MATH 456

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

Comprehensive Math Emphasis Graduation Requirements

Overall Requirement Not Satisfied: Will appear fully satisfied when student satisfies Mid Career Writing Assessment, Major GPA, Residency requirement, and Major Upper Division unit requirement.

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.

- GPA: 2.000 required, 0.000 completed

Major Units

Not Satisfied: A minimum of 37 units must be completed in the major.

- Units: 37.00 required, 0.00 completed, 37.00 needed
### 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

### Major Upper Division

**Not Satisfied:** A minimum of 21 units of upper-division major coursework must be completed for the Comprehensive emphasis.

- **Units:** 21.00 required, 0.00 completed, 21.00 needed

### Minor Required

**Not Satisfied:** A minor outside of the Mathematics Department is required for this major. Consult with your advisor to select a minor or discuss other options such as selecting a second major.