# Graduation Requirements

<table>
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<tr>
<th>Academic Level</th>
<th>Required GPA</th>
<th>Actual GPA</th>
<th>GPA Status</th>
<th>Requirement Term</th>
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**Unit Requirements**

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<tr>
<th>Requirement</th>
<th>Units Required for this Degree</th>
<th>Total Units *</th>
<th>In Progress Units</th>
<th>Unit Status</th>
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<td>Units Required for this Degree</td>
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*Total Units and Requirement Status include In Progress Units. In Progress Units are comprised of all ungraded coursework, including future enrollments. Credit from repeated courses is excluded from the In Progress and Total Units unless the student has filed a Grade Replacement Opportunity (GRO) request. If a GRO request has been filed the GRO units will be excluded when the course is graded. Credit from developmental courses (e.g. MATH/SAS 100AX) is only temporarily included in the In Progress and Total Units and will also be excluded when graded. Note: Credit for a course can only be given once, unless otherwise specified in the course catalog.

**Credit Type** – EN=Enrollment at UA, IP=In Progress, TR=Transfer Credit, TE=Test Credit

**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.

**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.

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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</table>

Courses Available

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

Undergraduate General Education and Foundation Requirements

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

**Not Satisfied:** Complete 3 courses. Complete ENGL 106 AND ENGL 101/107 AND ENGL 102/108.

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

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**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

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**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

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**Courses Available**

ENGL 109H

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Foundation Second Language - Second 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 as pass/fail. Third semester or higher courses used to fulfill this requirement may also be used to fulfill other requirements. A grade of C or higher is required in the course that satisfies the second language requirement.

Demonstrate second semester proficiency in a second language by completing a sequence of courses through a second semester or higher level or by passing a language proficiency examination at the second semester level or higher.

**Second Semester Language Course**
Not Satisfied: Complete 1 course with a grade of C or better.


- Courses: 1.00 required, 0.00 completed, 1.00 needed

### Courses Available

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</table>

General Education Tier I

Not Satisfied: Complete each of the following areas.

Tier I Individuals & Societies/150s

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

### Courses Available

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</table>

Tier I Traditions & Cultures/160s

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

### Courses Available

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</table>
Courses Available


General Education Tier II

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

Courses Available


Courses Available

AFAS 200, AFAS 222, AFAS 224, AFAS 230, AFAS 245, AFAS 249, AFAS 255, AFAS 310, AFAS 314, AFAS 320, AFAS 325, AFAS 342, AFAS 365, AFAS 374, AFAS 377, AFAS 381, AIS 212, AIS 281, ANTH 222, ANTH 300, ANTH 349, ARC 220, ARC 303, ARH 300, ARH 329, ART 329, ART 360, CHN 241, CHN 245, CHN 345, CLAS 220, CLAS 221, CLAS 222, CLAS 260, CLAS 300, CLAS 312, CLAS 329, CLAS 335, CLAS 342, CLAS 346, CLAS 349, CLAS 351, CLAS 352, CLAS 353, CLAS 355, EAS 201, EAS 358, EAS 359, ENGL 220A, ENGL 220B, ENGL 228, ENGL 229, ENGL 230, ENGL 231, ENGL 245, ENGL 248B, ENGL 260, ENGL 264, ENGL 265, ENGL 266, ENGL 267, ENGL 280, ENGL 342, ENGL 360, ENGL 375, ENGL 377, ENGV 360, FA 200, FREN 245, FREN 249, FREN 280...
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

### Courses Available

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<tr>
<th>Term</th>
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</table>

**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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<th>Term</th>
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</table>
Courses used to fulfill this requirement may also be used to fulfill other requirements. Physiology, or Geosciences.

BS students must complete a two-semester sequence in a laboratory science: choose from Chemistry, Physics, Biology, Physiology, or Geosciences.

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

Not Satisfied:
Mathematics Supporting Laboratory Science Sequence

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

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

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.

BS in Mathematics
Not Satisfied: Will appear fully satisfied when student satisfies Mathematics Supporting Laboratory Science Sequence, Mathematics Application Courses, Mathematics 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.

The Bachelor of Science in Mathematics requires the same Core Mathematics courses as the BA; BS students must satisfy specialized supporting laboratory science and application course requirements instead of general education courses in Natural Science.

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

Mathematics Supporting Laboratory Science Sequence
Not Satisfied: Will appear fully satisfied when student has satisfied one of the approved sequences of laboratory science courses.

BS students must complete a two-semester sequence in a laboratory science: choose from Chemistry, Physics, Biology, Physiology, or Geosciences.

Courses used to fulfill this requirement may also be used to fulfill other requirements.
Option 1: Chemistry I

Not Satisfied: Complete 4 units from Chemistry 141 & 143, 151, 161 & 163

- **Units:** 4.00 required, 0.00 completed, 4.00 needed

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Courses Available

CHEM 141, CHEM 143, CHEM 151, CHEM 161, CHEM 163, Approved Transfer Course

AND Option 1: Chemistry II

Not Satisfied: Complete 4 units from Chemistry 142 & 144, 152, 162 & 164

- **Units:** 4.00 required, 0.00 completed, 4.00 needed

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Courses Available

CHEM 142, CHEM 144, CHEM 152, CHEM 162, CHEM 164, Approved Transfer Course

OR Option 2: Geosciences

Not Satisfied: Complete 1 course

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

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Courses Available

GEOS 251

AND Option 2: Geosciences

Not Satisfied: Complete 1 course

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

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Courses Available

GEOS 255, GEOS 302, GEOS 304, GEOS 308, GEOS 322

OR Option 3: Biology

Not Satisfied: OR Complete 8 units

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Page 8 of 14
- **Units**: 8.00 required, 0.00 completed, 8.00 needed

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**Courses Available**

MCB 181L, MCB 181R, Approved Transfer Course, MCB 184, ECOL 182L, ECOL 182R

**OR Option 4: Physiology**

*Not Satisfied*: Complete 2 courses

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

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**Courses Available**

PSIO 201, PSIO 202

**OR Option 5: Introductory Mechanics**

*Not Satisfied*: OR Complete one course from Physics 141, 161H.

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

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<th>Term</th>
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**Courses Available**

PHYS 141, PHYS 161H

**AND Option 5: Intro Thermodynamics & Optics or Electricity & Magnetism**

*Not Satisfied*: AND Complete 1 course from Physics 142, 241, 162H, 261H.

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

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<th>Term</th>
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**Courses Available**

PHYS 142, PHYS 162H, PHYS 241, PHYS 261H

**Mathematics Application Courses**

*Not Satisfied*: Will appear fully satisfied when student has satisfied 6 units of non-math coursework with a prerequisite or corequisite of at least Calculus I (MATH 122B or higher).
Courses used to fulfill this requirement may also be used to fulfill other requirements.

This requirement does not apply to the Mathematics Education Emphasis.

**Courses with Calculus Prerequisite.** *(R1217/L10)*

Not Satisfied: Consult with the advisor to discuss approved courses. Up to 3 units of internship credit (MATH 493) may apply to the application course requirement.

- **Units:** 6.00 required, 0.00 completed, 6.00 needed

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### Mathematics Supporting Computer Science *(R15810)*

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

**Computer Science** *(R15810/L10)*

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

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


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### Math Major Core Requirements *(R1173)*

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

**Calculus I** *(R1173/L10)*

Not Satisfied: Complete 1 course

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

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### Courses Available

- CSC 110, CSC 120, CSC 250, ISTA 130
**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

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**Courses Available**

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

**Emphasis in Applied Mathematics**

*Not Satisfied:* Will appear fully satisfied when student satisfies Applied Emphasis course requirements, Graduation Requirements, and declares a minor.

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

**Applied Emphasis Options**

*Not Satisfied:* Will appear fully satisfied when student satisfies Option 1, 2, OR 3.

**Option 1: Differential Equations**

*Not Satisfied:* Complete Math 454 and 456

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

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**Courses Available**

MATH 454, MATH 456

OR **Option 2: Probability and Statistics**

*Not Satisfied:* OR Complete Math 464 and 466

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

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Courses Available

MATH 464, MATH 466

**OR Option 3: Numerical Analysis**

*Not Satisfied:* OR Complete Math 475A and one course from the list below

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

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Courses Available

MATH 475A

**AND Option 3: Courses to Pair With Numerical Analysis**

*Not Satisfied:* Complete MATH 475A and one course from MATH 413, 424, 443, 445, 447, 454, 456, 464, 475B

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

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Courses Available

MATH 413, MATH 424, MATH 443, MATH 445, MATH 447, MATH 454, MATH 456, MATH 464, MATH 475B

**Applied Emphasis Requirements**

*Not Satisfied:* Will appear fully satisfied when student satisfies the Required Applied Modeling course, the Applied required courses, and one advisor approved course.

**Required Applied Math Modeling Course**

*Not Satisfied:* Complete 1 course.

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

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Courses Available

MATH 481, MATH 485

**Applied Required Course**

*Not Satisfied:* Complete 1 course.

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

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## Courses Available

**MATH 422**

### Additional Course

**Not Satisfied:** Complete one 400-level MATH course in consultation with your math faculty advisor. You may choose from the pre-approved list. If you prefer to select another course, you may do so ONLY if approved by your math faculty advisor.

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

### Courses Available

**DATA 468, MATH 413, MATH 424, MATH 454, MATH 456, MATH 464, MATH 468, MATH 475A, MATH 488**

**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

### Applied Emphasis Graduation Requirements

**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 34 units must be completed in the major.

- **Units:** 34.00 required, 0.00 completed, 34.00 needed
Major Residency

Not Satisfied: A minimum of 18 units in the 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 18 units of upper-division major coursework must be completed.

- Units: 18.00 required, 0.00 completed, 18.00 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.