# The Bachelor of Science (B.S.) in Mathematics
# For Catalog Year 2022

**(For the Math Education Emphasis see the specific 4-year plan.)**
**(For earlier catalogs, see a Math Advisor.)**

**THIS IS A SAMPLE PROGRAM. EACH STUDENT SHOULD CONSULT A DEPARTMENT ADVISOR TO PREPARE A PROGRAM THAT FITS THEIR INDIVIDUAL BACKGROUND AND ACADEMIC NEEDS.**

| Fall Semester | | Spring Semester | |
|---|---|---|---|
| **Freshman Year** | | | |
| MATH 122A & B | 5 | MATH 129 | 3 |
| ENGL 101 or 107 or 109H | 3 | CSC 110 or ISTA 130[1] | 4 |
| GE Core | 3 | ENGL 102 or 108 | 3 |
| GE Core | 3 | GE Core | 3 |
| MATH 195M[2] | 1 | GE Core | 3 |
| UNIV 101 | 1 | | |
| **Total** | **16** | **Total** | **16** |
| **Sophomore Year** | | | |
| MATH 223 | 4 | MATH 323 | 3 |
| MATH 313 | 3 | MATH 355 | 3 |
| Lab Science[3] | 4 | MATH 396L[4] | 1 |
| Second Language | 4 | Lab Science[3] | 4 |
| | | Second Language | 4 |
| **Total** | **15** | **Total** | **15** |
| **Junior Year** | | | |
| 400-level Math Course[5] | 3 | 400-level Math Course[5] | 3 |
| Minor Course[6] | 3 | Minor Courses[6] | 6 |
| GE Core | 3 | GE Core | 3 |
| GE Core | 3 | UNIV 301 | 1 |
| Elective Course | 3 | Mathematics Application Course[3] | 3 |
| **Total** | **15** | **Total** | **16** |
| **Senior Year** | | | |
| 400-level Math Course[5] | 3 | 400-level Math Course[5] | 3 |
| Minor Courses[6] | 6 | 400-level Math Course[5] | 3 |
| Elective Course | 3 | Minor Course[6] | 3 |
| 400-level Math Course[5] | | Elective Courses | 3 |
|   or Elective Course | 3 | | |
| **Total** | **15** | **Total** | **12** |

**This degree program requires at least 120 total units, including 42 upper division units (300-400 level)**

[1] CSC 110, ISTA 130, ECE 175, or CHEE 205 are recommended for most math majors. Other courses that can be used are: CSC 120, MIS 301, NSCS 311, and PHYS 305. These latter courses may have additional eligibility criteria.

[2] MATH 195M is an optional one-unit colloquium for new majors. Other programs, including Honors, ASEMS, and more, may require 1 unit colloquia in certain semesters.

[3] BS degree requirements for Mathematics Majors: 1. Laboratory Science: <u>Two</u> of the following lab science courses are required to satisfy requirements: CHEM 141&143, 142&144; CHEM 151, 152; CHEM 161&163, 162&164; MCB 181R&181L, ECOL 182R&182L; PHYS 141, 161H, 142, 241, 162H, 261H; GEOS 251, 302, 304, 308, 322; PSIO 201, 202. Note that for courses with separate registration for lecture and lab, BOTH components must be completed. 2. Application Course: students must complete at least 3 <u>units</u> of course work outside the Mathematics Department that require calculus (or a higher level math course) as a corequisite or prerequisite. See the current official catalog requirements for a list of available courses. This requirement does <u>not</u> apply to the <u>*Math Education emphasis*</u>. 3. Second Language: Second-semester proficiency in a second language is required for the BS degree.

[4] MATH 396L is a 1-unit supplement to 323 and is required for students earning a C or lower in 313. Students who earn a D in 313 must take another proof-based course before 323.

[5] See a Mathematics Faculty Advisor regarding the scheduling of these courses. Selection of 400-level math courses will depend on the emphasis chosen and course offerings. Contact the Undergraduate Math Center at mcenter@math.arizona.edu if you do not know who your faculty advisor is.

[6] To declare your minor, contact an advisor from the appropriate department.

See an academic advisor if you have questions regarding the Mid-Career Writing Assessment requirement.

# The Bachelor of Arts (B.A.) in Mathematics
# For Catalog Year 2022

**(For the Education Emphasis, see the specific 4-year plan)**
**(For Earlier Catalogs see a Math Advisor)**

**THIS IS A SAMPLE PROGRAM.  EACH STUDENT SHOULD CONSULT A DEPARTMENT ADVISOR TO PREPARE A PROGRAM THAT FITS THEIR INDIVIDUAL BACKGROUND AND ACADEMIC NEEDS.**

| Fall Semester | | | Spring Semester | | |
|---|---|---|---|---|---|
| **Freshman Year** | | | | | |
| MATH 122A & B | 5 | | MATH 129 | 3 | |
| ENGL 101 or 107 or 109H | 3 | | CSC 110 or ISTA 130[1] | 4 | |
| GE Core | 3 | | ENGL 102 or 108 | 3 | |
| GE Core | 3 | | GE Core | 3 | |
| UNIV 101 | 1 | | GE Core | 3 | |
| MATH 195M[2] | 1 | | | | |
| | **Total** | **16** | | **Total** | **16** |
| **Sophomore Year** | | | | | |
| MATH 223 | 4 | | MATH 323 | 3 | |
| MATH 313 | 3 | | MATH 355 | 3 | |
| Second Language | 4 | | MATH 396L[3] | 1 | |
| GE Core | 3 | | Second Language | 4 | |
| GE Core | 3 | | GE Core | 3 | |
| | **Total** | **17** | | **Total** | **14** |
| **Junior Year** | | | | | |
| 400-level Math Course[4] | 3 | | 400-level Math Course[4] | 3 | |
| 400-level Math Course[4] | 3 | | Minor Course[5] | 3 | |
| Minor Course[5] | 3 | | Second Language | 4 | |
| UNIV 301 | 1 | | Elective Courses | 6 | |
| Second Language | 4 | | | | |
| | **Total** | **14** | | **Total** | **16** |
| **Senior Year** | | | | | |
| 400-level Math Course[4] | 3 | | 400-level Math Course[4] | 3 | |
| Minor Courses[5] | 6 | | Minor Courses[5] | 6 | |
| Elective Courses | 6 | | 400-level Math Course[4] or Elective Course | 3 | |
| | **Total** | **15** | | **Total** | **12** |

**This degree program requires at least 120 total units, including 42 upper-division units (300-400 level)**

[1] CSC 110, ISTA 130, ECE 175, or CHEE 205 are recommended for most math majors.  Other courses that can be used are: CSC 120, MIS 301, NSCS 311, and PHYS 305.  These latter courses may have additional eligibility criteria.

[2] MATH 195M is an optional one-unit colloquium for new majors. Other programs, including Honors, ASEMS, and more, may require 1 unit colloquia in certain semesters.

[3] MATH 396L is a 1-unit supplement to 323 and is required for students earning a C or lower in 313. Students who earn a D in 313 must take another proof-based course before 323.

[4] See a Mathematics Faculty Advisor regarding the scheduling of these courses.  Selection of 400-level courses will depend on the emphasis chosen and course offerings.  Contact the Math Center at mcenter@math.arizona.edu if you do not know who your faculty advisor is.

[5] To declare your minor, contact an advisor from the appropriate department.

NOTES:  Fourth-semester proficiency in a second language is required for the BA degree.
See an academic advisor if you have questions regarding the Mid-Career Writing Assessment requirement.