



College of Natural Sciences and Mathematics

DEPARTMENT OF MATHEMATICS

# MATHEMATICS BACHELOR OF ARTS

CLASS OF 2027

CONCENTRATION IN PURE MATHEMATICS

Mathematics B.A.

TERM 1	TERM 2	TERM 3	TERM 4	TERM 5	TERM 6	TERM 7	TERM 8
MATH 150A (GE B.4) 4 units	MATH 106 4 units	MATH 250A 4 units	MATH 280 4 units	MATH 302 4 units	MATH 350 4 units	MATH 412 3 units	MATH 407 4 units
MATH 180 4 units	MATH 107 4 units	MATH 207 4 units	MATH 380 (Upper Division Writing) 3 units	MATH 307 4 units	MATH 406 4 units	MATH 306/ 414/425/471 3-4 units	MATH 450 4 units
MATH 151A 1 unit	MATH 151B 1 unit	MATH 251A 1 unit	GE C.2 3 units	GE C.1 3 units	MATH 430 3 units	GE C.1 or C.2 3 units	GE F 3 units
GE A.1 3 units	GE A.2 3 units	GE B.1 3 units	GE D.1 3 units	GE B.3 1 unit	Upper Division GE D.3 3 units	Upper Division GE B.5 3 units	Upper Division GE C.3 3 units
GE A.3 CNSM 101 3 units	GE B.2 3 units	GE E 3 units	GE D.2 3 units	American Government 3 units		1-3 units of electives to complete 120 units	2 units of electives to complete 120 units
15 units	15 units	15 units	16 units	15 units	14 units	15 units	16 units

37	GE lower division
9	GE upper division
50	Mathematics Required Courses
3	Mathematics Supporting Courses
13-15	Pick 4 of 7 Courses
3-5	Electives
3	University Requirement
<b>120</b>	<b>TOTAL UNITS</b>

## INSTRUCTIONS FOR COMPLETING THE MATHEMATICS BACHELOR OF ARTS

1. Meet with your assigned faculty advisor each semester to plan and review your academic progress.
2. Visit your College of Natural Sciences and Mathematics Student Success Team in MH 488 to review GE and graduation requirements.
3. Complete GE courses in areas A1, A2, and A3 with a C- or higher. Complete a total of 12 units in GE Area B. One GE Course in B, C, D, or E must double-count as a Z course. Check your Titan Degree Audit for courses that appear in both categories.
4. All Mathematics courses must be completed with a grade of C or higher.
5. Apply for Graduation through your Student Center at the start of Term 7.

**MATHEMATICS BACHELOR OF ARTS  
PURE MATHEMATICS Concentration**

The Math Major is for students who are preparing to (1) enter a graduate study in mathematics, (2) seek math-related careers in business, industry or government, or (3) pursue a career in teaching.

**MATHEMATICS CORE AND SUPPORTING COURSES**

- Complete the courses listed below (42 units total)

Course	Course Title
MATH 180	Strategies of Problem Solving (4)
MATH 150A	Calculus I (4)
MATH 151A	Calculus I Workshop (1)
MATH 106	Integral Calculus and Differential Equations (4)
MATH 107	Intro Computational Linear Algebra (4)
MATH 151B	Calculus II Workshop (1)
MATH 250A	Calculus III (4)
MATH 251A	Calculus III Workshop (1)
MATH 207	Intro Differential Equations and Linear Algebra (4)
MATH 280	Strategies of Proof (4)
MATH 307	Linear Algebra (4)
MATH 350	Advanced Calculus I (4)
MATH 380	History of Mathematics (3)

- Pure Mathematics Concentration Requirements (23-26 units total)

*Pure Mathematics Required Courses (11 units)*

MATH 302	Modern Algebra (4)
MATH 407	Abstract Algebra (4)
MATH 412	Complex Analysis (3)

*Pure Mathematics Elective Courses – choose four (13-15 units); one must be MATH 414 or MATH 450*

MATH 306	Vector and Tensor Analysis (3)
MATH 406	Intro Partial Differential Equations (4)
MATH 414	Topology (4)
MATH 425	Differential Geometry (3)
MATH 430	Number Theory (3)
MATH 450	Advanced Calculus II (4)
MATH 471	Combinatorics (3)

**GENERAL EDUCATION REQUIREMENTS**

- **Area A Core Competencies** – Complete one course in each subarea for a total of 9 units of lower division.

Subarea	Title
A1	Oral Communications
A2	Written Communication
A3	Critical Thinking (CNSM 101)

- **Area B Scientific and Quantitative Reasoning** – Complete one course in each subarea; the course in B3 must be associated with the course taken to satisfy B1 or B2. Area B courses must include 9 lower division and 3 upper division units (\*).

Subarea	Title
B1	Physical Science
B2	Life Science
B3	Laboratory Experience
B4	Mathematics/Quantitative Reasoning
B5 (*)	Implications/Explorations in Math and Natural Sciences

- **Area C Arts and Humanities** – Complete 3 units from C.1; 3 units from C.2; 3 units from C.3; and 3 units from either C.1 or C.2 for a total of 9 lower division and 3 upper division units (\*).

Subarea	Title
C1	Introduction to the Arts
C2	Introduction to the Humanities
C3 (*)	Explorations in the Arts/Humanities

- **Area D Social Sciences** – Complete 9 lower and 3 upper division units (\*).

Area	Title
D1	Introduction to the Social Sciences
D2	American History, Institutions, and Values
D3 (*)	Explorations in the Social Sciences

- **Area E Lifelong Learning and Self Development** – Complete 3 units.

- **Area F Ethnic Studies** – Complete 3 lower division or upper division units.

Area	Title
F	Ethnic Studies

- **Area Z Cultural Diversity.** (3 units). One GE Course in B, C, D, or E must double-count as a Z course (check TDA or CSUF website for courses that appear in both categories).

- **Graduation Requirement** – An American Government course is required for students in this catalog year. Please look at your TDA.