Mathematics Major Requirements

A minimum of 68 hours (at least 29.5 upper-division hours)

➤ *Required Core Courses (46 hours):*

MATH 131+132	Calculus I,II	4+4
MATH 265	Elementary Linear Algebra	4
MATH 267	Multivariable Calculus	5
MATH 269	Elementary Differential Equations	4
MATH 275	Logic and Sets	4
MATH 290	Sophomore Seminar	.5
MATH 331	Theory of Probability and Statistics	4
MATH 351	Introduction to Abstract Algebra I	4
MATH 385	Mathematical Modeling	4
MATH 390	Junior Seminar	.5
MATH 421	Elementary Real Analysis I	4
MATH 490	Senior Seminar	1

At least one of the following courses: 3

MATH 352	Introduction to Abstract Algebra II (3)	
MATH 422	Elementary Real Analysis II (3)	

➤ *Required Core Electives (15 hours):*

At least 9 hours from the following: 9
Additional upper-division MATH courses

At least 6 hours from the following: 6
Additional MATH courses

➤ *Required Cognate Courses (7-9 hours):*

INFS 115	Introduction to Programming	4

At least one of the following courses: 3-5

CHEM 451	Physical Chemistry (3)
PHYS 216	Circuit Analysis (4)
FIN 341	Finance (5)
INFS 470	Business Analytics (4)
PHYS 211	Physics with Calculus I (4)
STAT 322	Statistical Methods (3)

PUC Campus Requirements

Religion (9 hours)

PUC is a Seventh-day Adventist Christian institution and religion coursework is a foundational part of the curriculum. ADT students must complete 3 religion courses **at PUC** as follows:

➤ RELG 105   Biblical Foundations (3 hours)
Note: Students who demonstrate biblical knowledge (by passing a waiver exam or presenting religion coursework from high school) may substitute an elective religion course in place of RELG 105.

➤ One approved "Studying Scripture" course that explores and critically analyzes biblical texts and themes. (3 hours)

➤ One approved "Exploring SDA Life and Thought" course that explores and critically analyzes Seventh-day Adventist beliefs and values. (3 hours)

Health & Fitness, Practical & Applied Arts (6 hours)

PUC expects graduates to demonstrate the knowledge, skills, and inclination necessary to sustain a healthy, well-balanced life. Therefore all baccalaureate graduates must complete the following requirements. These courses may be taken at PUC or may be transferred.

➤ One theory course in the area of nutrition or health education. Minimum 2 quarter hours total.

➤ Two exercise science activity courses. One must include a significant aerobic activity component. Minimum 2 quarter hours total.

➤ Two practical and applied arts courses, each from a different area. Minimum 2 quarter hours total. Areas include:
A. Interpersonal Skills
B. Management of Information & Finance
C. Outdoor & Survival Skills
D. Visual and Performing Arts

Mathematics at PUC

The Pacific Union College Department of Mathematics and Physics prepares students to earn their credentials in secondary school mathematics; to receive actuarial certification and work in the insurance and investment industry; or to pursue graduate studies in mathematics and related areas, followed by careers in university teaching and research, medicine, government, business, and industry.

Students majoring in mathematics will have experience with mathematical modeling, abstraction, generalization, logical analysis, and mathematical technology. Small class sizes promote communication and teamwork opportunities among students and faculty. A common goal of each course is that each student will develop problem-solving skills based on mathematical reasoning and understanding, not merely rote memorization. The department provides a warm and friendly environment; students benefit from small classes and personalized attention from their professors.

Graduation Requirements

- [ ] A total of 192 quarter hours
- [ ] A total of 60 UD quarter hours
- [ ] Minimum GPA of 2.0

Taken at Community College
- [ ] AS-T in Mathematics
- [ ] Lower-division GE requirements (met by the AS-T)

May be taken at Community College or at PUC
- [ ] Health requirement (1 course)
- [ ] Fitness requirement (2 courses)
- [ ] Practical & Applied Arts requirement (2 courses)

Taken at PUC
- [ ] All remaining requirements for the Mathematics major
- [ ] Religion requirement (9 hours)
- [ ] GNST 401: Senior Assessment Seminar (0.2 quarter hours)
- [ ] Electives as needed for 192 hours/60 UD hours total

Note: Students are STRONGLY recommended to complete a sophomore-level proof course as part of their AS-T curriculum, as this is prerequisite to many PUC upper-division Mathematics courses. Students who enter PUC without a background in proof will need to confer with their advisor regarding course sequencing.

How to Construct Your Own Program

1. Counsel with your advisor.
2. Consider your aptitudes, interests, and available courses.
3. Schedule major courses and cognates first.
4. Fill the rest of your schedule with G.E. requirements and electives.
5. Choose a variety of upper-division coursework (300-level and 400-level courses) to achieve 60 total units.

About PUC

Pacific Union College is a fully accredited Christian liberal arts college located in California's Napa Valley. Affiliated with the Seventh-day Adventist Church, PUC offers a broad range of academic programs in a caring Christian environment. PUC is noted for excellence in education, incredible beauty, and student diversity.

PUC Enrollment
Enrollment Services
Phone: 1-800-862-7080
Email: enroll@puc.edu
Website: http://www.puc.edu/admissions

Mathematics Department
Phone: 707-965-7269
Website: www.puc.edu/mathematics

Sample Program

This program is designed for students who have completed an AS-T in Mathematics at a California Community College prior to transfer to PUC.

AS-T Mathematics Major Coursework
A minimum of 27 units of major coursework is completed as part of the AS-T in Mathematics. These transfer courses typically apply to meet the following PUC major requirements.
~ Calculus I, II and Multivariable Calculus (4, 4, 5)
~ Lower-Division Math Elective Credit (6)
~ Two of the following:
  * *Elementary Linear Algebra (4)*
  * *Elementary Differential Equations (4)*
  * *Logic and Sets (4)*
  * *Introduction to Programming (4)*
  * *Physics with Calculus (4)*
Exact equivalencies may vary depending on the options chosen for the AS-T degree. A minimum grade of C- is required for any course that is applied to the major.

PUC Coursework
This sample curriculum is designed to show you how a two-year program may be constructed in order to complete the BS in Mathematics at PUC. The order of the courses may vary, and your list of required courses may be adjusted depending on the transfer courses you completed. Your advisor will help you design a personalized program of studies.

Prior to Start of Junior Year
Logic and Sets (4)

Junior Year	F	W	S
Intro to Abstract Algebra I (odd)	4	-	-
Introduction to Programming (*if needed*)	-	-	4
Sophomore Seminar	-	.5	-
Elem. Differential Equations (*if needed*)	-	4	-
Theory of Probability and Statistics (odd)	4	-	-
Junior Seminar	-	-	.5
Elementary Linear Algebra (*if needed*)	-	-	4
Upper-Division Electives	4	4	4
General Education/Electives	5	9	5
	17	17.5	17.5

Senior Year	F	W	S
Elementary Real Analysis I (even)	4	-	-
Cognate Course	4	-	-
Mathematical Modeling (even)	-	-	4
Senior Seminar	-	-	1
Senior Assessment Seminar	-	-	.2
Upper-Division Math Electives	3	6	4
Upper-Division Electives	6	6	6
General Education/Electives	-	5	2
	17	17	17.2

* *Courses marked (even) or (odd) are taught in alternate years only. 2018-2019 is odd, 2019-2020 is even.*