

MATHEMATICS, ASSOCIATE OF SCIENCE



A Foundation in Math Opens Many Doors

Mathematics is fundamental to many fields of study and professions – everything from auto repair to astrophysics uses mathematics. Whether you are planning a career in engineering, one of the sciences, information technology, business, finance, medicine, industry, or education, a strong mathematics foundation can be your ladder to success.

At San Jacinto College, we have small classes taught by experienced professors who are dedicated to our students' mastery of mathematics. Upon graduation, you will be ready for entry into a wide variety of four-year degree mathematics programs or for immediate entry into one of many technical fields.

Career Opportunities

Students pursuing a bachelor's degree pathway in mathematics will be prepared for careers as:

- Accountants \$85,959¹
- Actuaries \$107,877¹
- Cost estimators \$79,179¹
- Financial Managers \$156,899¹
- Insurance Underwriters \$65,569¹
- Operations Research Analysts \$89,547¹
- Real Estate Appraisers \$64,242¹
- Secondary teachers \$60,566¹
- Statistician \$83,463¹
- Survey Researchers \$63,658¹

¹ Source: www.texaswages.com, 2018 annual median salaries for Gulf Coast region

The Associate of Science (AS) degree is designed for students who plan to transfer to a four-year or upper-level college or university and major in mathematics, one of the sciences (biology, chemistry, geology, physics, biotechnology, or related field), engineering, or computer science. For more information, students may refer to the Core Curriculum (<https://publications.sanjac.edu/general-information/educational-programs/basics-core-curriculum-general-education-outcomes/>) and Field of Study (<https://publications.sanjac.edu/general-information/educational-programs/field-study/>) sections of the catalog. The AS degree differs from an Associate of Arts (AA) degree in the amount or

level of mathematics and science required for degree completion. The College requires a minimum of 12 hours of mathematics, 12 hours in science, or 12 hours in computer sciences beyond the core requirement for the degree. Please note the Field of Study AS degree options contain state-required courses recommended for the degree.

Students seeking an AS degree should take science courses designed for majors rather than courses for non-majors. Science courses designed for allied health students are not intended for academic transfer toward a science major.

Students choosing to pursue an AS degree should select from the following areas of study: life science, physical science, computer science, engineering, or mathematics. Courses designed for non-majors (BIOL 1308 Biology for Non-Science Majors I (lecture)/BIOL 1108 Biology for Non-Science Majors I (lab), BIOL 1309 Biology for Non-Science Majors II (lecture)/BIOL 1109 Biology for Non-Science Majors II (lab), CHEM 1305 Introductory Chemistry I (lecture)/CHEM 1105 Introductory Chemistry I (lab), and GEOL 1301 Earth Sciences for Non-Science Majors I (lecture)/GEOL 1101 Earth Sciences for Non-Science Majors I (lab) do not apply to an AS degree. The College recommends these courses for the AA degrees.

All Campuses 2MATH

Code	Title	Credits
Transfer Path		
12 Semester Credit Hours of the following:		12
MATH 2318	Linear Algebra	
MATH 2320	Differential Equations	
MATH 2413	Calculus I	
MATH 2414	Calculus II	
MATH 2415	Calculus III	
Total Credits		12

Code	Title	Credits
Institutional Option		
Select one of the following:		3
EDUC 1300	Learning Framework	
PSYC 1300	Learning Framework	
Academic elective (if successfully completed GUST 0305)		
Select one of the following:		3
BCIS 1305	Business Computer Applications	
ITSC 1309	Integrated Software Applications I	
Academic elective (if student passes the computer literacy exam)		

Code	Title	Credits
Communications		
Select two of the following:		6
ENGL 1301	Composition I (required)	
ENGL 1302	Composition II	
ENGL 2311	Technical and Business Writing	

Code	Title	Credits
Mathematics		
Select one of the following:		3
MATH 1314	College Algebra	
MATH 1316	Plane Trigonometry	
MATH 1324	Mathematics for Business and Social Sciences ¹	
MATH 1325	Calculus for Business and Social Sciences ¹	

MATH 1332	Contemporary Mathematics (Quantitative Reasoning) ¹
MATH 1342	Elementary Statistical Methods (Statistics)
MATH 2318	Linear Algebra
MATH 2320	Differential Equations
MATH 2412	Pre-Calculus Math
MATH 2413	Calculus I
MATH 2414	Calculus II

Life and Physical Sciences (Natural Science)Select two of the following:² 6

BIOL 1306	Biology for Science Majors I (lecture)
BIOL 1307	Biology for Science Majors II (lecture)
CHEM 1311	General Chemistry I (lecture)
CHEM 1312	General Chemistry II (lecture)
GEOL 1304	Historical Geology (lecture)
GEOL 1305	Environmental Science (lecture)
PHYS 1301	College Physics I (lecture)
PHYS 1302	College Physics II (lecture)
PHYS 2325	University Physics I (lecture)
PHYS 2326	University Physics II (lecture)

Language, Philosophy, and Culture (Humanities)

Select one of the following: 3

ENGL 2322	British Literature I
ENGL 2323	British Literature II
ENGL 2327	American Literature I
ENGL 2328	American Literature II
ENGL 2332	World Literature I
ENGL 2333	World Literature II
ENGL 2341	Forms of Literature: Literature and Film
ENGL 2351	Mexican American Literature
GEOG 1302	Human Geography
HIST 2321	World Civilization I
HIST 2322	World Civilization II
HUMA 1301	Introduction to the Humanities I
PHIL 1301	Introduction to Philosophy
PHIL 2306	Introduction to Ethics

Creative Arts (Fine Arts)

Select one of the following: 3

ARTS 1301	Art Appreciation
ARTS 1303	Art History I (Prehistoric to the 14th century)
ARTS 1304	Art History II (14th century to the present)
DANC 2303	Dance Appreciation
DRAM 1310	Theater Appreciation
DRAM 2366	Film Appreciation
MUSI 1306	Music Appreciation
MUSI 1307	Music Literature
MUSI 1310	American Music

American History

Select two of the following: 6

HIST 1301	United States History I
HIST 1302	United States History II
HIST 2301	Texas History

HIST 2327	Mexican American History I
HIST 2328	Mexican American History II

Government/Political Science

Select two of the following: 6

GOVT 2305	Federal Government (Federal Constitution and Topics) ³
GOVT 2306	Texas Government (Texas Constitution and Topics) ³

Social and Behavioral Sciences

Select one of the following: 3

ANTH 2302	Introduction to Archaeology
ANTH 2346	General Anthropology
ANTH 2351	Cultural Anthropology
ECON 2301	Principles of Macroeconomics
ECON 2302	Principles of Microeconomics
GEOG 1303	World Regional Geography
GOVT 2304	Introduction to Political Science
HIST 2311	Western Civilization I
HIST 2312	Western Civilization II
PSYC 2301	General Psychology
SOCI 1301	Introduction to Sociology
SOCI 2319	Minority Studies

Component Area OptionSelect two of the following:⁴ 6

SPCH 1311	Introduction to Speech Communication
SPCH 1315	Public Speaking
SPCH 1318	Interpersonal Communication
SPCH 1321	Business and Professional Speech
PHED 1164	Introduction to Physical Fitness and Wellness
CHIN 1411	Beginning Chinese I
CHIN 1412	Beginning Chinese II
FREN 1411	Beginning French I
FREN 1412	Beginning French II
GERM 1411	Beginning German I
GERM 1412	Beginning German II
SGNL 1401	Beginning American Sign Language I
SGNL 1402	Beginning American Sign Language II
SPAN 1411	Beginning Spanish I
SPAN 1412	Beginning Spanish II

Total Credits 48

¹ MATH 1324 Mathematics for Business and Social Sciences, MATH 1325 Calculus for Business and Social Sciences, and MATH 1332 Contemporary Mathematics (Quantitative Reasoning) are not recommended for students pursuing mathematics or science.

² Students must be simultaneously co-enrolled in the co-requisite science lab.

³ Students who have taken GOVT 2301 or GOVT 2302, but not both, should check with an educational planner on how to complete the 6 SCH.

⁴ 2 SCH in this option include the labs for science courses.

Other courses that may be used in this component may include any Core Curriculum course that has not been used to fulfill a previous component.

If a student successfully completes San Jacinto College's 42-hour Core Curriculum, that block of courses must be substituted for the receiving institution's core curriculum. The receiving institution may not require a student to take additional Core Curriculum courses to meet the requirements of the core. Students who transfer without completing the Core Curriculum shall receive academic credit in the core curriculum of the receiving institution for each of the courses the student has successfully completed in the San Jacinto College Core Curriculum.

Students should plan Core Curriculum courses that would meet baccalaureate degree requirements at the four-year institution.