

MATHEMATICS, ASSOCIATE IN SCIENCE DEGREE FOR TRANSFER

Banner Code: 2_AST_MATH

Control Number: 30641

Financial Aid Eligible

The Mathematics Associate in Science for Transfer (AS-T) is designed for students planning to transfer into a mathematics major. By completing this degree students will gain a strong foundation in the mathematical field. This knowledge will be grounded in quantitative and analytical reasoning and students will gain a practical and theoretical understanding for future studies in mathematics.

Program Level Learning Outcomes

Upon completion of this program, students will be able to:

1. State the definition of derivatives and compute the derivatives of basic and transcendental functions of one or more variables.
2. Apply concepts of differential and integral calculus of one or more variables to solve problems involving rates, area, volume, and lengths of arcs.
3. State the definition of integrals and calculate definite and indefinite integrals involving basic and transcendental functions.
4. Graph equations in the rectangular, polar, cylindrical, and spherical coordinate systems, curves defined parametrically, conic sections, vectors, and vector-valued functions.
5. Solve first-order differential equations and compute partial derivatives.
6. Perform matrix operations, eigenvalue and eigenvector computations, and applications.

Associate Degree for Transfer Graduation Requirements

Associate Degrees for Transfer require students to meet the following requirements:

- Completion of 60 semester units or 90 quarter units of degree-applicable courses,
- Minimum overall grade point average of 2.0,
- Minimum grade of "C" (or "P") for each course in the major, and
- Completion of Cal-GETC.

Students should consult a GWC counselor in order to select the best pathway to meet their educational goals. For students who intend to transfer, the choice of general education will be specific to both their major and transfer institution.

Course	Title	Units
<i>Select one of the following:</i>		5
MATH G285	Introduction to Linear Algebra and Differential Equations	5
List B		
<i>Select one of the following:</i>		3-6
Any course from List A not used		
PHYS G185	Calculus Based Physics: Mechanics	4
CS G175	C++ Programming 1	3
MATH G287	Introduction to Abstract Mathematics	4
STAT C1000	Introduction to Statistics	3-6
or STAT C1000E	Introduction to Statistics	
or ECON G160	Statistics for Business and Economics	
or SOC G125	Introduction to Statistics in Sociology	
or PSYC G140	Statistics for the Behavioral Sciences	
Major Total		20-23
GE Pattern (Cal-GETC)		34
Transferable Electives (as needed to reach 60 units)		
Total Units		60

Course	Title	Units
Required Courses		
MATH G180	Calculus 1	4
MATH G185	Calculus 2	4
MATH G280	Calculus 3	4
List A		