MATHEMATICS

PROGRAM

- **Associate in Science for Transfer (A.S.-T)**

HARTNELL COLLEGE

DESCRIPTION

The Associate in Science in Mathematics for Transfer offers course work in all levels of mathematics from arithmetic through differential equations and linear algebra. Students seeking improvement in their basic mathematical skills and those desiring development of advanced mathematical methods can all find meaningful activities in the Associate in Science in Mathematics for Transfer. While there are job opportunities in pure mathematics, there are even more in applied mathematics, statistics, engineering, and other technical fields relying heavily on mathematics. Positions for which four-year graduates in mathematics are qualified can be found in the fields of business, computers, teaching, and research.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Actuary
- Applications Program Manager
- Commodity Manager
- Cost Estimator/Analyst
- Database Manager
- Estate Planner
- Financial Consultant
- Investment Banker
- Mathematician
- Network Programmer
- Research Analyst
- Statistician
- Teacher
- Technical Writer
- Weight Analyst

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html

MATHEMATICS (AST.MAT)

ASSOCIATE IN SCIENCE FOR TRANSFER

Program Outcomes: Upon successful completion of this program a student will be able to:

- demonstrate proficiency in solving mathematical problems involving major concepts, theories, and principles including, but not limited to
  - applying derivatives and integrals
  - solving 2nd order differential equations
  - constructing basic mathematical proofs
- analyze data using appropriate technology to enhance mathematical understanding.

Required Major Courses (12 units)

☐ MAT-3A – Analytic Geometry and Calculus I	4.0
☐ MAT-3B – Analytic Geometry and Calculus II	4.0
☐ MAT-3C – Analytic Geometry and Calculus III	4.0

Major Electives A (Complete 3 units)

☐ MAT-4 – Linear Algebra	3.0
☐ MAT-5 – Differential Equations	3.0

Major Electives B (Complete one additional 3-4 units)

☐ MAT-4 – Linear Algebra	3.0
☐ MAT-5 – Differential Equations	3.0
☐ MAT-7 – Discrete Mathematics	4.0
☐ MAT-13 – Elementary Statistics	4.0
☐ CSS-2A – Object Oriented Programming	4.0
☐ PHY-4A – General Physics I/Mechanics	4.0

SUBTOTAL: 18-19 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

CSU-GE *(see page 72)* **39 units**

IGETC *(see page 74)* **37 units**

Students can double-count required courses and courses for General Education

■ ***Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.***

TOTAL: 60 UNITS

ADegreeWithAGuarantee.com℠
Associate Degree for Transfer

In order to earn this degree, students must complete the Associate Degree for Transfer Requirements:

1. Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:
   a. The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University GE – Breadth Requirements (CSU GE-Breadth).
   b. A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.
2. Obtainment of a minimum grade point average of 2.0

ADTs include (AA-T) and (AS-T) degrees. The law authorizing these degrees also requires that students must earn a "C" or better in all courses required for the major or area of emphasis. A "P" (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.