

## ASSOCIATE IN SCIENCE IN MATHEMATICS FOR TRANSFER

Mathematics is the language of science and is used to describe the real world as well as abstract concepts. It is the basis for all modern technological advances. The Associate in Science in Mathematics for Transfer is designed to prepare students for a seamless transfer into the CSU system to complete a baccalaureate degree in Mathematics or similar major. Priority admission with junior status to the CSU system will be granted. Students completing this degree are exempt from Mendocino College Institutional Requirements.

<b>Required Courses – Major:</b>		<b>Units</b>
MTH 210	Calculus and Analytic Geometry I	5
MTH 211	Calculus and Analytic Geometry II	5
MTH 212	Calculus and Analytic Geometry III	5
<b>Choose a minimum of 7 units from below with at least 3 units from Group A.</b>		
<b>Group A</b>		<b>Units</b>
MTH 214	Linear Algebra	4
MTH 215	Differential Equations	3
<b>Choose remaining units (if needed) from Group B.</b>		
<b>Group B</b>		<b>Units</b>
MTH 220	Statistics	4
PHY 220	Physics for Scientists and Engineers I	4
<b>Total Major Units</b>		<b>22 - 23</b>
<b>Total Degree Units</b>		<b>60</b>

### *Program Level Student Learning Outcomes:*

1. Distinguish and execute the rules of differentiation of functions of one or more independent variables.
2. Distinguish functions by type and successfully integrate them with one or more appropriate integration techniques.
3. Select appropriate order and limits of double and triple integrals in various coordinate systems.
4. Calculate and analyze the characteristic equation of a matrix to determine eigenvalues and eigenvectors, or distinguish and utilize various techniques to solve differential equations and systems of differential equations.
5. Model and solve application problems such as related rates, centers of mass, calculations of work along a curve, long-term behavior of difference equations, or analysis of spring-mass systems.

### *Career Opportunities in MATHEMATICS*

Completing the baccalaureate degree or graduate level work can lead to a variety of opportunities including teaching, computer science, engineering, institutional research, accounting, encryption, and actuarial science.

### *Associate Degree for Transfer requirements pursuant to SB 1440:*

- 60 semester or 90 quarter CSU-transferable units.
- the California State University-General Education-Breadth pattern (CSU GE-Breadth); OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- a minimum of 18 semester or 27 quarter units in the major or area of emphasis as determined by the community college district.
- obtainment of a minimum grade point average (GPA) of 2.0.
- earn a grade of C or better in all courses required for the major or area of emphasis.