

ADT IN MATHEMATICS

The purpose of this program is to prepare students for a career in mathematics. The problem solving skills taught in mathematics prepare students for a great number of job opportunities. A four-year degree could lead to employment in academics, a government agency, or an insurance agency. This major can also serve as a basis for careers in engineering, science, data processing, actuarial science, and as dispensing opticians. The degree prepares students for transfer into the junior year of a baccalaureate degree program in mathematics or related areas such as statistical or actuarial fields.

Students who complete this degree will be guaranteed admission with junior status to the California State University system, though not to a specific campus or major, and will be given priority admission to our local CSU campus.

Learning Outcomes

A.S.-Transfer Degree Level Student Learning Outcomes

Students completing the Mathematics A.S.-Transfer Degree will:

1. Develop an understanding of how to use proper vocabulary and notation when describing mathematical concepts, including the ability to read books and documents and extract quantitative information.
2. Develop appropriate computational skills including numeric calculation, evaluation of expressions, analysis of data, and application of concepts.
3. Develop an understanding of the physical world, which will include the formulation of analytical skills that will aid in the process of devising questions and proposing quantitative solutions.
4. Demonstrate computational skills and an understanding of mathematical reasoning that will increase self-esteem and set each student on the path of lifelong learning.
5. Demonstrate an understanding of how to use instructional software found by navigating the Web and found in the Windows' environment.
6. Demonstrate competency at levels appropriate to a particular course, which will prepare students for the workforce, subsequent courses, and transfer to other educational institutions.

Requirements

Students receiving this transfer degree must meet the following 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) (<http://catalog.citruscollege.edu/programs-study/graduation-requirements-associate-degree/general-education-requirements-transfer-csu-uc-igetc-option-iii/>) or the California State University General Education - Breadth Requirements (<http://catalog.citruscollege.edu/programs-study/graduation-requirements-associate-degree/general-education-requirements-transfer-csu-csuge-option-ii/>).

- 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 also require that students must earn a "C" (or "P") or better in all courses required for the major or area of emphasis.

Code	Title	Units
Required courses:		
MATH 190	Calculus with Analytic Geometry I	5
MATH 191	Calculus with Analytic Geometry II	5
MATH 210	Calculus with Analytic Geometry III	5
Select two (2) of the following courses:		
MATH 211	Differential Equations	5
MATH 212	Introduction to Linear Algebra	4
PHYS 201	Physics A: Mechanics	5
Total Units		24-25

Curriculum Map

2-3-Year Curriculum Map Examples

These maps represent two possible pathways through the program and are only for reference.

*It is highly recommended that you make an appointment (<https://www.citruscollege.edu/stdntsrvcounsel/Pages/ApptSchedule.aspx>) to create a customized education plan that fits your needs.

Note: Co-requisite MATH course (2 units) and/or substitute ENGL 101E (5 units) may be needed based on placement.

2-Year Map:

Course	Title	Units
Fall Term 1		
COUN 206	Pathways to Careers in STEM	3
MATH 190	Calculus with Analytic Geometry I	5
ENGL 101 or ENGL 101H	Reading and Composition or Reading and Composition - Honors	4
ARCH 250 or ARCH 251 or ART 100 or ART 105 or ART 108 or ART 110 or ART 199 or ART 199H or DANC 102 or MUSE 113 or THEA 101 or THEA 101H	History of Architecture: Prehistory to Mannerism or History of Architecture: Baroque to the Present Day or Art History - Fundamentals of Global Art History or Art History - Topics in Contemporary Art or History of Photography or Introduction to the Visual Arts or Motion Picture Appreciation or Motion Picture Appreciation - Honors or History of Dance or History of Rock and Roll or Introduction to Theatre Arts or Introduction to Theatre Arts - Honors	3
Units		15

Course	Title	Units
Winter Term 1		
ARCH 250	History of Architecture: Prehistory to Mannerism	3
or ARCH 251	or History of Architecture: Baroque to the Present Day	
or ART 100	or Art History - Fundamentals of Global Art History	
or ART 105	or Art History - Topics in Contemporary Art	
or ART 108	or History of Photography	
or ART 110	or Introduction to the Visual Arts	
or ART 199	or Motion Picture Appreciation	
or ART 199H	or Motion Picture Appreciation - Honors	
or DANC 102	or History of Dance	
or ENGL 290	or Ethnic Voices in Film	
or ENGL 293	or Children's Literature	
or ENGL 293H	or Children's Literature - Honors	
or ENGL 298	or Literature of the Bible	
or KIN 166	or American Food And Culture: Global Origins, History, and Current Impacts	
or MUSE 113	or History of Rock and Roll	
or PHIL 101	or Great Religions of the World	
or SOC 130	or Introduction to LGBTQ Studies	
or THEA 101	or Introduction to Theatre Arts	
or THEA 101H	or Introduction to Theatre Arts - Honors	
Units		3
Spring Term 1		
MATH 191	Calculus with Analytic Geometry II	5
CS 111	Introduction to Programming Concepts and Design	4
ENGL 104	Argumentative Writing and Critical Thinking	3
or ENGL 104H	or Argumentative Writing and Critical Thinking - Honors	
ENGL 290	Ethnic Voices in Film	3
or ENGL 293	or Children's Literature	
or ENGL 293H	or Children's Literature - Honors	
or ENGL 298	or Literature of the Bible	
or KIN 166	or American Food And Culture: Global Origins, History, and Current Impacts	
or PHIL 101	or Great Religions of the World	
or SOC 130	or Introduction to LGBTQ Studies	
Units		15
Summer Term 1		
SPCH 100	Interpersonal Communication	3
or SPCH 100H	or Interpersonal Communication - Honors	
or SPCH 101	or Public Address	
or SPCH 101H	or Public Address - Honors	
or SPCH 106	or Small Group Communication	
Units		3
Fall Term 2		
MATH 210	Calculus with Analytic Geometry III	5
CS 225	Object Oriented Programming	3
PHYS 201	Physics A: Mechanics	5
or PHYS 201H	or Physics A: Mechanics - Honors	
ETHN 101	Introduction to Ethnic Studies	3
or ETHN 116	or Introduction to Chicano/Latino Studies	
Units		16
Winter Term 2		
ANTH 212	Introduction to Physical Anthropology	3
or BIOL 102	or Human Genetics	
or BIOL 104	or Biology: Contemporary Topics	
or BIOL 108	or Biology of Cancer	
or BIOL 145	or Environmental Science	
POLI 103	American Government and Politics	3
or POLI 103H	or American Government and Politics - Honors	
Units		6
Spring Term 2		
HIST 107	History of the United States before 1877	3
or HIST 107H	or History of the United States before 1877 - Honors	
or HIST 108	or History of the United States since 1877	
or HIST 108H	or History of the United States since 1877 - Honors	
or HIST 111	or History of the African-Americans to 1876	
or HIST 112	or History of the African-Americans since 1876	
or HIST 160	or History of Women in the United States	

Course	Title	Units
PHYS 202	Physics B: Thermodynamics and Electromagnetism	5
or PHYS 203	or Physics C: Waves, Optics & Modern Physics	
MATH 211	Differential Equations	4
or MATH 212	or Introduction to Linear Algebra	
Units		12
Total Units		70

Note: Course selections may affect total unit value.

3-Year Map:

Course	Title	Units
Fall Term 1		
COUN 206	Pathways to Careers in STEM	3
MATH 175	Pre-Calculus	6
ENGL 101	Reading and Composition	4
or ENGL 101H	or Reading and Composition - Honors	
Units		13
Winter Term 1		
ARCH 250	History of Architecture: Prehistory to Mannerism	3
or ARCH 251	or History of Architecture: Baroque to the Present Day	
or ART 100	or Art History - Fundamentals of Global Art History	
or ART 105	or Art History - Topics in Contemporary Art	
or ART 108	or History of Photography	
or ART 110	or Introduction to the Visual Arts	
or ART 199	or Motion Picture Appreciation	
or ART 199H	or Motion Picture Appreciation - Honors	
or DANC 102	or History of Dance	
or MUSE 113	or History of Rock and Roll	
or THEA 101	or Introduction to Theatre Arts	
or THEA 101H	or Introduction to Theatre Arts - Honors	
Units		3
Spring Term 1		
CS 111	Introduction to Programming Concepts and Design	4
MATH 190	Calculus with Analytic Geometry I	5
ENGL 104	Argumentative Writing and Critical Thinking	3
or ENGL 104H	or Argumentative Writing and Critical Thinking - Honors	
Units		12
Summer Term 1		
ECON 101	Principles of Macroeconomics	3
or ECON 101H	or Principles of Macroeconomics - Honors	
Units		3
Fall Term 2		
MATH 191	Calculus with Analytic Geometry II	5
CS 225	Object Oriented Programming	3
PHYS 201	Physics A: Mechanics	5
or PHYS 201H	or Physics A: Mechanics - Honors	
Units		13
Winter Term 2		
MATH 165	Introductory Statistics	4
or MATH 165H	or Introductory Statistics - Honors	
Units		4
Spring Term 2		
MATH 210	Calculus with Analytic Geometry III	5
PHYS 202	Physics B: Thermodynamics and Electromagnetism	5
ETHN 101	Introduction to Ethnic Studies	3
or ETHN 116	or Introduction to Chicano/Latino Studies	
Units		13
Summer Term 2		
SPCH 100	Interpersonal Communication	3
or SPCH 100H	or Interpersonal Communication - Honors	
or SPCH 101	or Public Address	
or SPCH 101H	or Public Address - Honors	
or SPCH 106	or Small Group Communication	
Units		3

Course	Title	Units
Fall Term 3		
MATH 211	Differential Equations	5
PHYS 203	Physics C: Waves, Optics & Modern Physics	5
HIST 107	History of the United States before 1877	3
or HIST 107H	or History of the United States before 1877 - Honors	
or HIST 108	or History of the United States since 1877	
or HIST 108H	or History of the United States since 1877 - Honors	
or HIST 160	or History of Women in the United States	
Units		13
Winter Term 3		
ARCH 250	History of Architecture: Prehistory to Mannerism	3
or ARCH 251	or History of Architecture: Baroque to the Present Day	
or ART 100	or Art History - Fundamentals of Global Art History	
or ART 105	or Art History - Topics in Contemporary Art	
or ART 108	or History of Photography	
or ART 110	or Introduction to the Visual Arts	
or ART 199	or Motion Picture Appreciation	
or ART 199H	or Motion Picture Appreciation - Honors	
or DANC 102	or History of Dance	
or ENGL 290	or Ethnic Voices in Film	
or ENGL 293	or Children's Literature	
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or KIN 166	or American Food And Culture: Global Origins, History, and Current Impacts	
or MUSE 113	or History of Rock and Roll	
or PHIL 101	or Great Religions of the World	
or SOC 130	or Introduction to LGBTQ Studies	
or THEA 101	or Introduction to Theatre Arts	
or THEA 101H	or Introduction to Theatre Arts - Honors	
Units		3
Spring Term 3		
MATH 212	Introduction to Linear Algebra	4
BIOL 104	Biology: Contemporary Topics	3
POLI 103	American Government and Politics	3
or POLI 103H	or American Government and Politics - Honors	
Units		10
Total Units		90

Career Information

Career Opportunities

There are a variety of careers you can do with this major.

To explore more about this major, schedule an appointment (<https://www.citruscollege.edu/stdntsrv/ctcenter/Pages/ApptSchedule.aspx>) with a career counselor.