Area of Study: **Science and Engineering**
Pathway: **Mathematics**
Degree type: **Associate in Science**
Curriculum Code: **MAT.MAT.AS (U230A27)**

(Total Program Credits: 60)

The study of mathematical sciences involves ideas and techniques that are essential for the natural and social sciences and increasingly important in all areas of society. A math degree focuses on various math–related subjects, and depending on degree level, prepares you for careers in a variety of fields including education, statistics, engineering, accounting, and more.

PROGRAM LEARNING OUTCOMES:

At the successful completion of the Associate in Science Degree (Mathematics) emphasis, the graduate will be able to:

• construct an appropriate mathematical or statistical model such as a formula, function, graph, table or schematic to solve a real world problem;
• solve equations involving linear, polynomial, rational, exponential, logarithmic, or trigonometric functions;
• apply the techniques of both differential calculus and integral calculus to solve problems;
• utilize appropriate mathematical technology to analyze a mathematical problem;
• prove or disprove conjectures by making a mathematical argument; and
• interpret graphs to accurately convey mathematical concepts.

The following courses all are articulated and intended to transfer under the Illinois Articulation Initiative.

They may be used to fulfill **General Education Core requirements.**

Course	Title	Credits
MAT 101 ◊#	Quantitative Literacy	3
MAT 102 ◊#	Liberal Arts Mathematics	3
MAT 117 ◊#	Math for Elementary School Teachers II	3
MAT 124 ◊#	Finite Mathematics	3
MAT 131 ◊#	Calculus & Analytic Geometry I	5
MAT 133 ◊#	Calculus & Analytic Geometry II	5
MAT 134 ◊#	Introduction to Calculus for Business and Social Science	5
MAT 170 ◊#	Elementary Statistics	4
MAT 224 ◊#	Linear Algebra	3
MAT 235 ◊#	Calculus & Analytic Geometry III	5

MAT 224◊: usually offered as independent study

Students who select a major in Mathematics or a related field should plan their selections with the transfer college requirements in mind. In all cases, it is strongly recommended that the calculus sequence be completed at Triton

College, as many transfer schools will not accept single courses as evidence of meeting requirements.

Some students will be required to take courses, which transfer as electives and are not applied to the General Education Core, but do constitute a prerequisite toward the calculus sequence and Finite Math.

They are:

MAT 110 ◊#	College Algebra	3
MAT 111 ◊#	Pre-Calculus	5
MAT 114 ◊#	Plane Trigonometry	3

Anyone intending to pursue Calculus (MAT 131◊) can qualify by completing both MAT 110◊ and MAT 111◊. Credit for MAT 110◊ or MAT 114◊ will not be given if credit for MAT 111◊ previously has been earned.

Occupational fields open to students who complete college Mathematics curricula include analysis in industry or government, teaching, actuarial work, computer programming, data analysis and other statistical work, and mathematical aspects of business and finance.

Suggested Program:

Placement Measures MAT, RHT, and COL sequence placement will be determined by an Academic Advisor. Contact your Academic Advisor before registering for courses.
Developmental education courses do not transfer. They assist students in the path towards college credit.

Program Map for Full-Time Students

Semester One: Fall	Category	Next Steps
		Meet with your Academic Advisor to create an academic plan.
Physical Science General Education Course (3-5)	*Physical Science*	
MAT 131 Calculus & Analytic Geometry I (5)	*Mathematics*	Explore transfer institutions and admissions requirements by attending transfer events.
RHT 101 Freshman Rhetoric & Composition I (3)	*Communication*	
Social and Behavioral Science General Education Course (3)	*Social and Behavioral Science*	

14-16 Credit Hours

Note: Grade of "C" or higher is an IAI requirement for RHT 101 and RHT 102.

Semester Two: Spring	Category	Next Steps
		Meet with your Academic Advisor to update your academic and transfer plan.
Physical Science General Education Course (3-5)	*Physical Science*	
MAT 133 Calculus & Analytic Geometry II (5)	*Mathematics*	Create a Transferology account to explore how coursework transfers. Attend a Transfer 101 Workshop.
RHT 102 Freshman Rhetoric & Composition II (3)	*Communication*	
Social and Behavioral Science General Education Course (3)	*Social and Behavioral Science*	

14-16 Credit Hours

Note: Grade of "C" or higher is an IAI requirement for RHT 101 and RHT 102.

Semester Three: Fall	Category	Next Steps

		Meet with your [Academic Advisor](#) to update your academic and transfer plan.
SPE 101 Principles of Effective Speaking (3)	*Communication*	
Life Science General Education Course (3-4)	*Life Science*	
MAT 235 Calculus & Analytic Geometry III (5)	*Program Elective*	Attend a [Ready to Apply Workshop](#).
Fine Arts General Education Course (3)	*Fine Arts*	

14-16 Credit Hours

Semester Four: Spring	Category	Next Steps
		Meet with your [Academic Advisor](#) to finalize your transfer plan.
Humanities General Education Course (3)	*Humanities*	
MAT 224 Linear Algebra (3)	*Elective*	Submit graduation petition by deadline (check for the specific date in catalog or syllabi.)
MAT 341 Differential Equations (3)	*Elective*	
Program Elective (3)	*Elective*	
Program Elective (6)	*Elective*	Apply to your transfer institution(s).

12-18 Credit Hours

Program Elective (6): A student may need to take an extra program elective in semester four to meet the degree requirement of 60 total credit hours.

Note: Take one additional Humanities or Fine Arts and one additional Social and Behavioral Science course, to be eligible for the General Education Core Curriculum (GECC) Credential.

Program Electives (3-6)
Mathematics Electives MAT 235 Calculus & Analytic Geometry III (5) MAT 224 Linear Algebra (3) MAT 341 Differential Equations (3) **Secondary Education Electives** MAT 101 Quantitative Literacy (3) MAT 102 Liberal Arts Mathematics (3) MAT 117 Math for Elementary School Teachers II (3) MAT 124 Finite Mathematics (3) MAT 134 Introduction to Calculus for Business and Social Science (5) MAT 170 Elementary Statistics (4) MAT 224 Linear Algebra (3) MAT 235 Calculus & Analytic Geometry III (5) **STEM Electives** *Many of these course fulfill the general education physical science requirement* CHM 140 General Chemistry I (5) CHM 141 General Chemistry II (5) CIS 121 Introduction to Programming (3) PHY 106 General Physics (Mechanics) (4) PHY 107 General Physics (Electricity, Magnetism, and Thermodynamics) (4)

(Select courses that meet the BS requirements of your transfer college.)

Graduation requirements:

AS degree   **Subtotal: 37-41**

Mathematics courses or other electives for AS degree   **Subtotal: 19-23**

General Education requirements:
- **Communications:** Three courses (nine semester hours).
- **Humanities and Fine Arts:** Two courses (six semester hours), with at least one course selected from Humanities and at least one course from the Fine Arts;
- **Social and Behavioral Science:** two courses (six semester credits), with courses selected from at least two disciplines.

  Graduation from an Illinois college or university requires satisfactory completion of one or more courses incorporating Human Diversity, which may be taken as a Humanities and Fine Arts or Social and Behavioral Science course.

- **Mathematics:** Two courses *(six to nine semester hours)*.
- **Physical and Life Science:** Three courses (10-11 semester hours), with at least one course selected from the Life Sciences and one course from the Physical Sciences and including at least one laboratory course.
- **Foreign Language encouraged if transferring to a four-year institution.**

See MAT course descriptions.

Co-Chairpersons: Beth Dunn and Christyn Senese, Ext. 3345