## MATHEMATICS

## Associate of Science degree



## Program and Career Description:

The Mathematics emphasis is a two-year program for students planning to complete a bachelor's degree in Mathematics. Students pursuing careers in actuarial science, operations research, statistics, teaching, and national security should consider this degree.

## How is the Job Market?

Check out www.jobs4tn.gov website for information about job descriptions, education requirements and abilities, and supply and demand for these careers. For additional information from a national perspective, go to Bureau of Labor Statistics, U. S. Department of Labor website at www.bls.gov. Visit the Occupational Outlook Handbook on this website. Salaries are not guaranteed.

## Transfer Options

This program is a Tennessee Transfer Pathway (TTP) major. A student who completes the associates degree in this major is guaranteed that all required community college courses will be accepted in this major at the transfer institution. To see which four-year institutions offer this TTP major and guarantees a seamless transfer, visit the Tennessee Transfer Pathway website at www.tntransferpathway.org.

Transfer agreements exist between other private and non-TN public institutions. These agreements are available at www.columbiastate.edu/transfer-information.

Requirements for Graduation include:

- earning 25\% of total program credits in residence at Columbia State.
- earn a cumulative GPA of 2.0 or higher.
- taking the Exit Exam.

For more information contact: James Smith at jsmith@columbiastate.edu or 931.766.1481 or
Science, Technology and Math Division office at 931.540.2710 or stm@columbiastate.edu

## Mathematics, A.S.

Major in Tennessee Transfer Pathway with Emphasis in Mathematics (A.S.)

## Sample Academic Plan - Total Credit Hours: 61

Program Requirements - Students may be required to take additional Learning Support courses. Courses cannot be used more than once to satisfy program requirements. Students requiring MATH 1130 and MATH 1730 should take these courses prior to beginning the following pathway to ensure timely completion.

## First Year - Fall Semester - Total Credit Hours: 14

| Course Name | Credits: | Term Taken | Grade | Gen Ed |
| :---: | :---: | :---: | :---: | :---: |
| ENGL 1010 - English Composition I | Credits: 3 |  |  |  |
| MATH 1910 - Calculus I | Credits: 4 |  |  |  |
| ${ }^{1}$ General Education - History Requirement ${ }^{* * * * *}$ | Credits: 3 |  |  |  |
| ${ }^{2}$ General Education - Humanities/Fine Arts Requirement | Credits: 3 |  |  |  |
| COLS 101 - Columbia State College Success | Credits: 1 |  |  |  |
| First Year - Spring Semester - Credit Hours: 16-17 |  |  |  |  |
| Course Name | Credits: | Term Taken | Grade | Gen Ed |
| ENGL 1020 - English Composition II | Credits: 3 |  |  |  |
| MATH 1920 - Calculus II | Credits: 4 |  |  |  |
| CISP 1010 - Computer Science I ${ }^{* * *}$ | Credits: 4 |  |  |  |
| ${ }^{1}$ General Education - History Requirement ${ }^{* * * * *}$ | Credits: 3 |  |  |  |
| ${ }^{2}$ General Education - Humanities/Fine Arts Requirement | Credits: 3 |  |  |  |

## Second Year - Fall Semester - Credit Hours: 17

| Course Name | Credits: | Term Taken | Grade | Gen Ed |
| :---: | :---: | :---: | :---: | :---: |
| MATH 2110 - Calculus III | Credits: 4 |  |  |  |
| COMM 2025 - Fundamentals of Communication OR COMM 2055 Argumentation and Debate | Credits: 3 |  |  |  |
| ${ }^{2}$ General Education - Literature Requirement | Credits: 3 |  |  |  |
| 4 General Education - Natural Sciences Requirement ** | Credits: 4 |  |  |  |
| 5 General Education - Social/Behavioral Science Requirement * | Credits: 3 |  |  |  |

## Second Year - Spring Semester - Credit Hours: 13

| Course Name | Credits: | Term Taken | Grade | Gen Ed |
| :---: | :---: | :---: | :---: | :---: |
| MATH 2010 - Introduction to Linear Algebra | Credits: 3 |  |  |  |
| MATH 2120 - Differential Equations | Credits: 3 |  |  |  |
| ${ }^{4}$ General Education - Natural Sciences Requirement ** | Credits: 4 |  |  |  |
| ${ }^{5}$ General Education-Social/Behavioral Science Requirement * | Credits: 3 |  |  |  |

## General Education Requirements (Only When Option Noted Above)

${ }^{1}$ History Requirement - Select from HIST 2010, HIST 2020, HIST 2030, HIST 2310, HIST 2320.
${ }^{2}$ Humanities/Fine Arts Requirement - Select from ART 1035, ART 2000, ART 2020, ENGL 2160, ENGL 2860, HUM 1010, HUM 1020, MUS 1030, PHIL 1030, PHIL 1040, PHIL 2200, THEA 1030. Literature Options: ENGL 2055, ENGL 2130, ENGL 2235, ENGL 2310, ENGL 2320.
${ }^{3}$ Mathematics Requirement - Select from MATH 1010, MATH 1130, MATH 1530, MATH 1630, MATH 1710, MATH 1720, MATH 1730, MATH 1830 , MATH 1910 .
${ }^{4}$ Natural Sciences Requirement - Select from ASTR 1030, BIOL 1010, BIOL 1020, BIOL 1080 (must pair with non-biology course except for BIOL 2010 or BIOL 2020 ), BIOL 1110, BIOL 1120, BIOL 2010, BIOL 2020, CHEM 1110, CHEM 1120, ESCI 1010, ESCI 1020, PHYS 2010, PHYS 2020, PHYS 2110, PHYS 2120 , PSCI 1030.
${ }^{5}$ Social/Behavioral Science Requirement - Select from ANTH 1230, ANTH 1430, COMM 1010, ECON 2100, ECON 2200, GEOG 2010, PHED 2120, POLS 1010, POLS 1030, POLS 2025, POLS 2035, PSYC 1030, PSYC 2130, SOCI 1010, SOCI 1040, SOCI 2010.

## Note(s):

*NOTE: Students who wish to pursue a concentration in actuarial science available at UT Chattanooga; MTSU or TSU should complete ECON 2100 and ECON 2200 to fulfill the requirement in social/behavioral sciences.
${ }^{* *}$ NOTE: TSU requires Calculus-based Physics sequence; Industrial Track of the Professional Mathematics Concentration at MTSU requires Calculus-Based Physics sequence; University of Memphis requires either Calculus-Based Physics sequence or CHEM 1110/CHEM 1120 sequence. TTU requires a two-semester science lab sequence but not including PHYS 2010/PHYS 2020 as an option.
*** NOTE: A programming language course is not required at UT Martin or at ETSU.
****NOTE: Students who transfer to ETSU will be required to complete COMM 2055.
*****NOTE: Students transferring to UT Knoxville must complete a non-U.S. history sequence.
NOTE: Students transferring to the following institutions must earn a "C" or better in all listed MATH courses: MTSU, TSU, TTU, University of Memphis, UT Martin. "C" or better required in all MATH 2000 level courses at UT Knoxville. A "C" grade or better is required in Programming class at University of Memphis.
NOTE: Students transferring to UT Knoxville will also have to meet the foreign language requirement either prior to or when they attend UT Knoxville. This can be met prior to attending UT Knoxville, by completing 2000-level competency in a foreign language, by completing FREN 2020, GERM 2020 or SPAN 2020.
NOTE: For students who transfer to ETSU: "GPA of 3.0 in all major courses with no more than one course with grade below "C" (2.0), including any course that has been repeated."
Check www.tntransferpathway.org to see which four-year institutions offer this TTP major. Students should meet with their assigned advisor to determine courses required for the university chosen.
Students and advisors should run a degree audit from myChargerNet each semester to confirm classes are applicable to the program of study.
For more information contact:
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