

# RCTC PROGRAM PLAN

## MATHEMATICS TRANSFER PATHWAY

Associate of Arts

- I. MINNESOTA TRANSFER CURRICULUM (MnTC)/**  
**GENERAL EDUCATION REQUIREMENTS..... 40 CREDITS**
- GOAL 1: WRITTEN AND ORAL COMMUNICATION..... 11 CR**  
COMM 1114, Fundamentals of Public Speaking, 3 cr **OR**  
COMM 1130, Interpersonal Communication, 3 cr  
ENGL 1117, Reading and Writing Critically I, 4 cr  
ENGL 1118, Reading and Writing Critically II, 4 cr
- GOAL 2: Is fulfilled when all other MnTC goals for this plan are completed.**
- GOAL 3: NATURAL SCIENCES..... minimum of 6 CR**  
A minimum of two courses with a lab from two different areas that meet MnTC Goal 3
- GOAL 4: MATH ..... 5 CR**  
MATH 1127, Calculus I, 5 cr
- GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES..... minimum of 9 CR**  
A minimum of two credits from each of three different areas that meet MnTC Goal 5
- GOAL 6: THE HUMANITIES AND FINE ARTS..... minimum of 9 CR**  
A minimum of two credits from each of three different areas that meet MnTC Goal 6
- GOAL 7, 8, 9, 10: Two credits from each of the following areas:**  
(Many courses from Goals 1 – 6 also meet Goals 7 – 10.)  
**GOAL 7: HUMAN DIVERSITY**  
**GOAL 8: GLOBAL PERSPECTIVE**  
**GOAL 9: ETHICAL & CIVIC RESPONSIBILITY**  
**GOAL 10: PEOPLE & THE ENVIRONMENT**
- II. PROGRAM CORE REQUIREMENTS..... 15 CREDITS**  
MATH 1128, Calculus II, 5 cr  
MATH 2237, Multivariable and Vector Calculus, 5 cr  
MATH 2238, Differential Equations and Linear Algebra, 5 cr
- III. PROGRAM ELECTIVE COURSES ..... 5 CREDITS**  
COMP 2243, Programming and Problem Solving, 4 cr  
MATH 2218, Discrete Mathematics, 4 cr  
MATH 2350, Introduction to Mathematical Statistics, 4 cr  
FYEX 1000, College Success Strategies, 1cr  
PHYS 1128, Classical Physics II, 5 cr
- TOTAL ..... 60 CREDITS**

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## PROGRAM OUTCOMES:

Upon completion of the Mathematics Transfer Pathway program at RCTC, students will achieve the following outcomes:

- Demonstrate both a conceptual and operational understanding of single and multivariable Calculus.
- Select an appropriate mathematical method to solve complex problems and provide appropriate justification for their reasoning.
- Demonstrate proficiency in utilizing multiple approaches for solving problems that include analytical, numerical, and graphical solution methods.

## ADDITIONAL NOTES:

The Mathematics Transfer Pathway AA offers students a powerful option: the opportunity to complete an Associate of Arts degree with course credits that directly transfer to designated Mathematics bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities\* enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

\*Universities within the Minnesota State system include the universities listed below.

Students should consult with their advisor to select the appropriate program electives based off the university they plan to attend. The following are elective recommendations for the given universities:

Bemidji State University:

Students are encouraged to take and transfer in Differential Equations.

Metropolitan State University:

Students are encouraged to take and transfer in Introduction to Mathematical Statistics, Physics I with Calculus, or Computer Programming I.

Minnesota State University, Mankato:

A minor is required. Students are encouraged to take at least one course that will apply to their intended minor. A list of minors and their requirements are listed in the Minnesota State University's Mankato's catalog. Any minor may be chosen.

Minnesota State University, Moorhead:

A Computer Programming course is required

Southwest Minnesota State University:

No Recommendations

St. Cloud State University:

A computer programming course and a minor in specific area are required. A list of acceptable minors can be found in the University Catalog. Students are encouraged to take at least one course that applies to their intended minor.

Winona State University

Students are encouraged to take and transfer in the following courses: Linear Algebra, Discrete Mathematics, and an Introduction to Mathematical Statistics. A minor is required so progress towards the minor should begin at the college level.