Course Title: Calculus II  
Semester Course Prefix and Number: MATH 1542  
Old Quarter Course Prefix and Number:  
Submitted By: S. Jurgens  
Approval Date:  
Revision Date: 3/2016

Number of Credits: 4  
Number of Lecture Credits: 4  
Number of Lab Credits:  
Number of Lab Hours:  
Number of Studio/Demonstration/Internship Credits:  
Class Size: 35  
Negotiated by AASC on: (date)

Course Purpose Code:
- 0 – Developmental Courses
- 1 – Non-transferable
- 2 – Technical course related to career programs
- 3 – College course which has the primary goal of applying certain concepts (e.g. vocal ensemble)
- 4 – Other college course not considered a part of MNTC (e.g. computer science, health, physical education)
- X 5 – Course which is intended to fulfill the Minnesota Transfer Curriculum (MNTC) requirements or intended for transfer.
- 9 – Continuing Education/Customized Training specialized credit course (not occurring in 0-5)

Catalog Description:
This course is a continuation of the study of Calculus, including differentiation and integration of the Transcendental functions: logarithmic, exponential, inverse trigonometric, hyperbolic, and inverse hyperbolic. This course covers techniques of integration, infinite series, conic sections, parameterized curves and polar coordinates.

Prerequisites and/or recommended entry skills/knowledge:
Course Prerequisite(s):
Reading Prerequisite:
Composition Prerequisite:
Mathematics Prerequisite: Calculus I (MATH 1561)

Career Programs and Transfer Majors Accessing this Course:

Minnesota Transfer Curriculum Goal(s) partially met by this course if applicable:
(Notes: No more than two goals may be met by any one course. AASC review and the Chief Academic Officer’s approval are required.)
0. None
1. Communications
2. Critical Thinking
3. Natural Sciences
4. X Mathematical/Logical Reasoning
5. History and the Social and Behavioral Sciences
6. The Humanities and Fine Arts
7. Human Diversity
8. Global Perspectives
9. Ethical and Civic Responsibility
10. People and the Environment
**Learning Outcomes:** (including any relevant competencies listed in the Minnesota Transfer Curriculum)

Upon completion of this course, the student will be able to:

- Differentiate transcendental functions
- Integrate transcendental functions
- Integrate using the method of Partial Fractions
- Graph and analyze conic sections in Cartesian, Polar, and Parametric form

**Student Assessment Methods:**
Graded Exams and Homework

**Use of Instructional Technology:** (includes software, interactive video and other instructional technologies):

TI-89 or Voyage 200

**Additional Special Information:** (special fees, directives on hazardous materials, etc.)

**Transfer Information:** (Please list colleges/majors that accept this course in transfer.)

**Affiliated Mesabi Range College Courses and Programs:**

IRE (Itasca Community College)

**Approvals:**

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<th>Body</th>
<th>Representative Signatures</th>
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<td>Faculty Association</td>
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**Distribution:** Original – Instructional Services

**Copies:** Transfer Specialist, Originating Faculty Member, Records

**Revised:** December 2012