Course Title: Survey of Calculus
Semester Course Prefix and Number: MATH 1556
Old Quarter Course Prefix and Number: MATH 120
Number of Credits: 4
Semester(s) Offered: Negotiated by AASC on: (date)
Class Size: 35
Number of Lecture Credits: 4
Number of Lab Credits: Number of Lab Hours: Number of Studio/Demonstration/Internship Credits:

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)
- 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 offered for those wishing a brief survey of calculus including some integration. This course will include a review of real numbers, graphing, functions, and inequalities. There will be an introduction of limits, continuity, differentiation, and integration, application of differentiation and integration from physics, business, social and behavioral sciences, logarithmic and exponential functions with applications of growth, decay, interest, and populations. Students planning to enroll in more than one semester of calculus should begin with Calculus (MATH 1561).

Prerequisites and/or recommended entry skills/knowledge:
Course Prerequisite(s): None
Reading Prerequisite: None
Composition Prerequisite: None
Mathematics Prerequisite: MATH 1521 (or previous course MATH 117) or appropriate test score (offered alternate years)

Career Programs and Transfer Majors Accessing this Course:
This course is designed for students with majors that require a one-semester survey of calculus course, such as business, social and behavior sciences, or economics.

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. 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:

- Demonstrate proficiency in differentiating and integrating algebraic functions.
- Demonstrate proficiency in differentiating and integrating logarithmic functions.
- Demonstrate proficiency in differentiating and integrating exponential functions.
- Demonstrate proficiency in solving applications problems using differentiation and integration.

Student Assessment Methods:

Tests, daily assignments, and group projects, and a final exam

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

Students will be encouraged to use graphing calculators and one of the available math software: Derive, Maple, or Mathematica.

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

Transfer Information: (Please list colleges/majors that accept this course in transfer.)
This course transfers to schools that have either a short course in calculus or a survey or calculus course in their curriculum

Affiliated Mesabi Range College Courses and Programs:

Approvals:

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Distribution: Original – Instructional Services
Copies: Transfer Specialist, Originating Faculty Member, Records
Revised: December 2012