SU DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE SYLLABUS *(Tentative)*

MATH 105: *Liberal Arts Mathematics: Quantitative Reasoning and Effective Thinking*

OBJECTIVES: To introduce students to mathematics and its role in culture.

INTENDED FOR: Liberal Arts Majors.

PREREQUISITES: High School Algebra II and plane geometry.

TEXTS: "The Heart of Mathematics: An Invitation to Effective Thinking," by Edward B. Burger and Michael Starbird; Key College Publishing, Fourth edition, 2012. *What is Calculus, Where Did It Come From and Why Should I Care*….will be available on course website

	Weeks
Chapter 1 *Fun and Games* Mathematical thought and problem solving.	1.5
Chapter 2 *Number Contemplation* Counting, numerical patterns in nature, prime numbers, clock arithmetic, codes, irrational numbers.	2.5
Chapter 3 *Infinity* Meaning of infinity, different sizes of infinity	1.0
Chapter 4 *Geometric Gems* Pythagorean Theorem, the Golden Ratio, symmetry, Platonic solids, the shape of space and non-Euclidean geometry, the fourth dimension	4.0
Chapter 5 *Contortions of Space* Rubber sheet geometry, Moebius bands and Klein bottles	1.0
Chapter 7 *Risky Business* Brief introduction to probability, randomness, brief introduction to statistics	1.5
What is Calculus, Where Did It Come From and Why Should I Care	1.0
Tests, Review and Other Additional Activities	1.5

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EVALUATION
Tests and Final Exam 50%
Homework, Quizzes, Discussion Board and Class Work 40%
Biography Paper and Presentation 10%

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