MATH 1030
CRN #24456
QUANTITATIVE REASONING
SPRING SEMESTER, 2012
T,TH 2:30-3:45

Instructor: Kathie Ott, M.S. **Office:** NIB 156
Phone: 879-4253 **Hours:** T, Th 12-2:30, W 12-3
Course Text: Thinking Mathematically, 5th Ed. **E-mail:** ott@dixie.edu (best way to reach me)

Course Description: Fulfills General Education Mathematics requirement for students in Fine Arts or Liberal Arts degrees. Focuses on development of analytical problem solving skills through the application of various mathematical concepts to real life problems. Topics of study include: modeling with algebra; geometry; logic; financial math; right triangle trigonometry (indirect measurement); probability and statistics. Students are cautioned to check degree and/or transfer requirements before taking this course. Prerequisite: MATH 1010 (Grade C or higher) within two years of enrollment in this course; OR ACT (or equivalent placement score) 23 or higher within two years of enrollment in this course.

Attendance: Attendance is essential and roll will be taken, and is worth 25 points toward your grade. Tardiness is annoying and causes you to miss important information presented at the beginning of class. There will likely be minor changes in the course schedule that will be announced in advance in class. *You will be held accountable for all information presented during class.*

Homework: Homework assignments are due the day of the test and will be collected in class. If you are ill and unable to attend, homework may be turned in at the math department office on the due date or before. Tell the secretary to put it in my box. **Late assignments receive half credit, and are only accepted until the week after the test on that chapter**. Your work should be neat and easily followed, and you must show work to receive credit on a problem. Each homework packet is worth 25 points and will be graded on number of problems completed. Homework is a significant portion of your grade (150 points) and is important for success in this course.

Exams: Each student is expected to take the exams as scheduled in the syllabus or as changed in class. If there is a personal emergency, the instructor must be contacted (in person, or by telephone or e-mail) before the scheduled exam time. Each exam is worth 100 points. Instead of a comprehensive final exam, a project, consisting of a written report and oral presentation, is required for this course. This project is worth 175 points.

General remarks: Course schedules, assignments, and exam dates are subject to change as circumstances dictate. Any changes will be announced in class.
Important dates this semester: http://new.dixie.edu/reg/?page=spring2012
Sources of help:

- Library - **http://library.dixie.edu**
- Writing Center - **http://new.dixie.edu/english/dsc_writing_center.php**
- Testing Center - **http://new.dixie.edu/testing**
- Tutoring Center - **http://dsc.dixie.edu/tutoring/**

Disability statement:

If you suspect or are aware that you have a disability that may affect your success in the course you are strongly encouraged to contact the Disability Resource Center (DRC) located in the North Plaza Building. The disability will be evaluated and eligible students will receive assistance in obtaining reasonable accommodations. Phone # 435-652-7516

D-Mail:

You are required to frequently check your dmail account. Important class and college information will be sent to your dmail account, including DSC bills, financial aid/scholarship notices, notices of cancelled classes, reminders of important dates and deadlines, and other information critical to your success at DSC and in your courses. If you don't know how to access your dmail account, go to www.dixie.edu and select "Dmail" from the left column. To locate your dmail username and password, go to www.dixie.edu, and click on "Log in to student services" (upper right corner).

Severe consequences for academic dishonesty are supported by the college and are enforced in this class. The official college policy is as follows:

Cheating: Academic dishonesty in any form will not be tolerated at Dixie State College, including but not limited to plagiarism on written assignments, submitting other person's work as one's own, and cheating on exams or quizzes. Teachers at Dixie State College may discipline students proven guilty of academic dishonesty by:

Giving a failing grade on the specific assignment where dishonesty occurred,

Failing the student in the entire course,

Immediately dismissing and removing the student from the course, and/or

Referring the student to Student Affairs, a committee which may reprimand, place on probation, suspend, and/or expel the student.

The following college policies are supported in this course:

"**Policy for Absences Related to College Functions**"

Disruptive behavior policy

COURSE OBJECTIVES

All mathematics classes at Dixie College will:

- Require students to perform mathematical processes including fractions, percentages, decimals, proportions/ratios, algebraic equations and/or calculus techniques.
- Provide students with application problems that use a variety of methods including arithmetical, algebraic and geometric methods.
- Challenge students to make inferences from mathematical models that include formulas, graphs and tables.
- Provide students with real-life applications that use a variety of mathematical functions.

Upon successful completion of Math 1030, a student will demonstrate through testing and projects the ability to:

- Use algebra to graphically represent and analyze linear, quadratic, exponential, and logarithmic models.
- Assess methods of geometry used in artistic representations of the world.
- Identify aspects of logic used to solve complex problems and use logic to make sound decisions in personal and business life.
- Use trigonometry to solve triangles and related applications.
- Use principles of finance to calculate simple and compound interest, values of annuities, and amortization schedules.
- Apply the concepts of probability to calculate outcomes and the corresponding odds in the games that people play.
- Use statistic techniques to organize, display, and analyze data, especially as it applies to situations in the real world.

Grades: Your semester grade will be based on the following scale: **A**(93-100%), **A-**(90-92%), **B+**(87-89%), **B**(83-86%)**, B-**(80-82%), **C+**(77-79%), **C**(73-76%), **C-**(70-72%), **D+**(67-69%), **D**(63-66%), **D-**(60-62%), **F**(0-59%).

ASSIGNMENT SCHEDULE

Week of:

JAN 9	Intro	
	1.1	1-33(x4),47,49,59
	1.2	3-31(x4),43-51(odds)
	1.3	1-37(x4), 45
JAN 16	2.1	1-21(x4),27,35,37,53, 61,67,81,87,105-109
	2.2	21-61(x4),83,85
	2.3	5-29(x4),75,93,109-113
	2.4	33,37,41,43
JAN 23	3.1	11-39(x4),57
	3.2	1-39(x4),59-85(x4)
	3.7	15-35(x4),43-59(x4)
	REVIEW	
JAN 26-27	**Exam 1 (testing center)**	
JAN 30	4.1	7-52(x3)
	4.2	9-48(X3)
	4.4	1-36(x3)
	5.1	9-37(x4),45-65(x4)
FEB 6	5.2	17-97(x4),63,99
	5.3	13-69(x4),107,125,131
	5.4	17-51(x3),61,77,81
	5.5	15-23(odd),29-44
	5.6	1-49(x4),71-87(x4), 93,111
FEB 13	5.7	Fibonacci sequence
	REVIEW	
FEB 14-15	**Exam 2 (Testing Center)**	
	6.1	27,31,35,37,51,55,59,71
	6.2	1-77(x6),105
FEB 20	6.3	1-25(x4),29,33,47,57
	6.4	17-49(x4),77,81,85,87
	6.5	5-65(x4)
FEB 27	7.1	1-49(x6)
	7.2	1-45(x4)
	7.3	1-41(x4), 51-53
	REVIEW	
MAR 1-2	**Exam 3 (testing center)**	
MAR 5	8.1	9-57(x4), 47,55,66
	8.2	5-29(x4),35,37,41
	8.3	5-17(x4),25,29,39,43,47
	8.4	1-17(x4),19-31(x4)
	8.5	1-21(x4)

MAR 12-16 Spring Break!

MAR 19	9.1	1-41(x4),57-71(odd)
	9.2	1-28(x3),33
	9.3	5-43(x4),73
	REVIEW	
MAR 22-23	**Exam 4 (testing center)**	
	10.1	11-43(x4)
MAR 26	10.2	5,9,13,15,21,25,35,39
	10.3	5-10,21,23,47
	10.4	1-29(x4),33,37
	10.5	1-29(x4),39
	10.6	1-25(x4),35,37,39
APR 2	11.1	1,5,9,13,17
	11.2	13-49(x4)
	11.3	5-33(x4)
	REVIEW	
APR 5-6	**Exam 5 (testing center)**	
	11.4	1-53(x4)
APR 9	11.5	1-13(x3)
	11.6	1-37(x4),55-83(x4)
	11.7	1-25(x4)
	11.8	3-13(odd)
APR 16	12.1	17-18,22-25,26-29
	12.2	9-11,21-23,33-35,45-47
	12.3	11-25
	12.4	1-45(x4)
APR 23	12.5	1-29(x4)
	REVIEW	
APR 24-25	**Exam 6 (testing center)**	
	Presentations	
MAY 1	2:00-4:00--Presentations	