

Department of Mathematics and Computer Science

in conjunction with

Nicholls General Education Assessment Committee

announces a

New General Education Mathematics Course MATH 117
Effective Fall 2008

Beginning Fall 2008, MATH 117, *Contemporary Mathematics and Quantitative Analysis*, will be offered as a general education mathematics course. The course is especially, but not exclusively, designed for arts and humanities majors. Certain details are provided below.

MATH 117 cannot be “course substituted” for MATH 100 / 101.

COURSE DESCRIPTION

MATH 117. Contemporary Mathematics and Quantitative Analysis. 3-3-0. Prerequisite: Grade of C in MATH 003, or grade of D in MATH 100 or MATH 101, or MATH ACT subscore of 20, or satisfactory score on placement test. *This course can be used to satisfy general education requirements. MATH 100 or 101 is needed if students pursue credit in any mathematics course except MATH 214.* Selected topics from ratio, proportion, percent and percentages, modeling with algebraic functions, consumer mathematics, elementary graph theory, applications of mathematics to everyday problem-solving. (27.0101)

MATH 117 is especially intended for students enrolled in arts and humanities curricula. These students are not on a calculus “track,” and in some sense may not fully appreciate how mathematics can be relevant in their lives.

The class focuses on three areas.

- (1) *Problem-solving.*** The course provides an opportunity for students to explore solutions to various propositions arising in natural situations and having mathematical connections. Many of these problems are open-ended, so discussions can take place about which solutions are optimal given different circumstances.
- (2) *Critical thinking.*** Inquiry based on the scientific procedure of observation, conjecture, and representation affords students an outlet for creative interpretations of “real-life” mathematics-related problems.
- (3) *Intellectual curiosity / Independent thinking.*** Based on their backgrounds, students have different perspectives on issues and problems. Students will observe that even mathematical problems can be non-deterministic and open to interpretation and generalization.

New General Education Track Possibilities:

MATH 117 provides an alternate track to MATH 101:

- (a) MATH 117 / 100
- (b) MATH 117 / 101: Students exiting Math 003, or having ACT 21, or having proper placement test results may still choose to take MATH 101 after MATH 117.
- (c) MATH 117 / 214: This track misses MATH 100 / 101 completely. Students exiting MATH 003, or having ACT 20, or having proper placement test results, or having a D in MATH 100 / 101 may choose this track.

OR

MATH 117 serves as a general education mathematics elective after the successful completion of MATH 100 or MATH 101:

- (d) MATH 100 / 117: ACT 18 may schedule MATH 100; passing MATH 100 allows entry into MATH 117
- (e) MATH 101 / 117

Tracks (a), (b), (c), and (d) encourage students to take MATH 100 or 101, due to possible minors, changes of major, or double majors. Students must have a C in MATH 100 or 101 to earn credit in MATH courses numbered above 101 *EXCEPT MATH 117 or MATH 214*. MATH 117 is part of a different general education track; it is not a course “substitute” for MATH 101.

MATH 117 serves as a prerequisite to MATH 214. Competency in mathematics requires a grade of C or better in MATH 100 or 101 or 117.

MATH 117

CONTEMPORARY MATHEMATICS AND QUANTITATIVE ANALYSIS
Nicholls State University, Fall 2008

Instructor: Dr. Brian Heck
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Phone: 448-4383
Email: brian.heck@nicholls.edu
Webpage: <http://math.nicholls.edu/heck/home.html>

My office hours are 9:00 am – 12:00 pm M, W, F, 4:00 – 5:00 pm W, and 4:00 – 6:00 pm TH. Please contact me (phone, email, or in person) during these times if you have any questions. If you need assistance at a different time, let me know and we'll work something out.

Prerequisites: Grade of C in MATH 003, or grade of D in MATH 100 or MATH 101, or MATH ACT subscore of 20, or satisfactory score on placement test.

Required Materials: *Mathematics All Around*, (3rd ed.), by Thomas L. Pirnot and a calculator.

Course Description (catalog): *This course can be used to satisfy general education requirements. MATH 100 or 101 is needed if students pursue credit in any mathematics course except MATH 214.* Selected topics from ratio, proportion, percent and percentages, modeling with algebraic functions, consumer mathematics, elementary graph theory, applications of mathematics to everyday problem-solving.

Grading Policy: We will have 4 exams throughout the semester and then a comprehensive final. The exams will count for 80% of your semester grade and the final exam counts for the remaining 20%. I will assign letter grades based on the usual 10% scale (A: 90-100%; B: 80-89%; C: 70-79%, etc.)

Make-up Procedure: If a student knows in advance of a scheduled test that he or she will be absent due to a school-sponsored function, or a scheduled appointment, then he or she may take a make-up test provided arrangements are made sufficiently in advance with the instructor and documentation of the absence can be produced by the student. In order to be eligible to take a make-up for other reasons, such as medical emergencies and illnesses, the student must supply for verification purposes *appropriate documentation and relevant phone numbers* upon the first day returning to class. The instructor will judge what is or is not appropriate.

Administrative Adds: *The department strongly discourages administrative adds after the tenth class day. Such an add requires the permission of the instructor and the department head. Absolutely no administrative adds will be permitted on or following the fourteenth class day.*

Student Outcome Objectives: Students will be able to:

- Use logic to evaluate and critique proposed arguments.
- Use mathematical ideas about savings, loans, and investments to achieve financial goals.

- Put into perspective numbers and quantities encountered in the news.
- Use mathematical models to gain insight into real-world issues.
- Use mathematical inquiry to make conjectures about “real-life” problems.
- Use modeling and logic to make conclusions about non-deterministic problems.

Attendance Policy: Attendance in class is mandatory. The university’s First Alert program will be utilized to help improve students’ academic success. Absences will be reported to the Coordinator of First Alert and excessive absences will result in a mandatory meeting with an advisor and/or the Dean of University College to determine an appropriate action.

Academic Honesty Policy: Sanctions for academic cheating and plagiarism are outlined in the Code of Student Conduct handbook, section 1.9. Use of cell phones during a test is considered to be cheating. Cheating is a serious offense and sanctions will be implemented.

Disability: If you have a documented disability that requires assistance, you will need to register with the Office of Disability Services for coordination of your academic accommodations. The Office of Disability Services is located in Peltier Hall, Room 100-A. The phone number is (985) 448-4430 (TDD 449-7002).

Academic Grievances: The proper procedure for filing grade appeals or grievances related to academic matters is listed in Section 5 of the *Code of Student Conduct* and at the following link: http://www.nicholls.edu/documents/student_life/code_of_conduct.pdf.

Continued Learning following an Extreme Emergency:

In order to make continued learning possible following an extreme emergency,

students are responsible for:

- reading regular emergency notifications on the NSU website;
- knowing how to use and access Blackboard (or university designated electronic delivery system);
- being familiar with emergency guidelines;
- evacuating textbooks and other course materials;
- knowing their Blackboard (or designated system) student login and password;
- contacting faculty regarding their intentions for completing the course.

faculty are responsible for:

- their development in the use of the Blackboard (or designated) software;
- having a plan for continuing their courses using only Blackboard and email;
- continuing their course in whatever way suits the completion of the course best, and being creative in the continuation of these courses;
- making adjustments or compensations to a student’s progress in special programs with labs, clinical sequences or the like only in the immediate semester following the emergency.

Sect.	Title	Assignment (odds only unless otherwise noted)
1.1	Problem Solving	1-11, 27-30 all, 37-55, 61-69
1.2	Estimation	13-16 all, 29-59
1.3	The Language of Sets	11-79
1.4	Comparing Sets	11-45, 51
1.5	Set Operations	11-61
	TEST #1	
1.6	Survey Problems	7-39
2.1	Inductive and Deductive Reasoning	7-49
2.2	Statements, Connectives, and Quantifiers	11-29, 43-50 all
5.1	Number Theory	9-63, 73-77
5.2	The Integers	7-21, 27-91
	TEST #2	
5.3	The Rational Numbers	9-115 every other odd
5.4	The Real Number System	19-49, 77-80 all
5.5	Exponents and Scientific Notation	9-81
6.1	Linear Equations	9-51, 53-56 all, 59-73
6.5	Proportions and Variation	7-39
6.6	Functions	11-35
	TEST #3	
11.1	Percent	7-69
11.2	Interest	7-63
11.3	Consumer Loans	7-31
11.5	Amortizations	5-17, 19-47 every other odd
	TEST #4	

Important Dates: Test #1 – Tuesday, September 9, 2008
Test #2 – Tuesday, September 30, 2008
‘W’ Day - Friday, October 24, 2008
Test #3 – Tuesday, October 28, 2008
Test #4 – Tuesday, November 18, 2008
Final Exam – Thursday, December 4, 2008 (8:00-10:00)