Prerequisites: Math 1111 or Math 1113 or Mat 151.

Instructor: Dr. Rui Xu
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Office hours: MWF 9:00 – 10:00 am, 2:00 – 4:00 pm T 2:00 – 3:00 pm or by appointment

Textbook: Brief Calculus (2nd Edition), by Bill. Armstrong and Don Davis

Course Description: This course will provide a survey of the differential and integral calculus of polynomial, rational, exponential and logarithmic functions with an emphasis on applications to problems from business, economics and life science.

Topics: Limits, Instantaneous rate of change, Derivative, Applications of derivative, Additional differentiation techniques, Further applications of derivative and Integral calculus.

Learning Outcomes:
1. The students will be able to compute limits.
2. The students will be able to differentiate polynomial, rational, exponential, and logarithmic functions
3. The students will be able to apply differential calculus to solve problems from business, economics, and life science.
4. The students will be able to integrate polynomial, rational, exponential, and logarithmic functions and to apply the Fundamental Theorem of Calculus.
5. The students will be able to apply integral calculus to problems from business, economics, and life science.
6. The students will understand the basic techniques of integration.

Grades: Grades will be assessed based on a total of 630 points (as shown below), using the standard decade scale: (90−100%=A, 80−89%=B, 70−79%=C, 60−69%=D, below 60%=F). Attendance will be monitored.

| Test 1 (Covering Chapter 2) | 100pts |
| Test 2 (Covering Chapter 3 & 4) | 100pts |
| Test 3 (Covering Chapter 5 & Chapter 6.1–6.3) | 100pts |
| Test 4 (Covering Chapter 6.4–6.6) | 70pts |
| Final (Comprehensive) | 130pts |
| Quizzes and/or Worksheet | 50pts |
| **Total** | **550pts** |

Quizzes, Worksheet & Test policy: No make-up for missing in-class quizzes. Students who have University Approved Absence Excuses are eligible for make-up tests/worksheet. In that case, students should contact the instructor in advance to reschedule the make-up test.
Other Policies:

1. Class attendance will be taken every class day. You are not allowed to come to class late or to leave early. If you miss class for any reason, it is your responsibility to get the lecture notes from a classmate, read the text, and do the homework.

2. Pagers or cell phones should be set to an inaudible setting.

3. If you are a person with any kind of disability and anticipate needing any type of accommodation to participate in this class, please let me know and make appropriate arrangements with Disability Services.

Important Dates:
- June 5 – 6: Drop/Add and late registration
- June 28: Last day to withdraw with a grade of W
- July 4: Independence Day Holiday (no classes, offices closed)
- July 25: Last day of class
- July 26: Reading Day
- July 27 (Thursday): Final Exam 10:00 am – 12:00 pm

Please note that the homework problems have been chosen to give you an idea of the range of problems you are expected to be able to work. The number of problems has been kept at a reasonable amount, and you are suggested to do all of the problems. You should do more problems for practice. Spend at least 2 hours doing exercises for every hour of class time; more if you are having difficulty.

Section 2.1: 4, 7, 31, 39, 45, 49, 51
Section 2.2: 11, 13, 25, 29, 33, 35, 37, 38, 42, 43, 45, 53
Section 2.3: 1, 2, 3, 4, 5, 6, 9, 11, 13, 15, 19, 23, 25, 27 (a), 28 (a), 33, 45
Section 2.4: 3, 5, 11, 13, 17, 23, 33, 35, 49
Section 2.5: 5, 11, 13, 23, 33, 37, 45, 55, 69
Section 2.6: 13, 17, 21, 27, 31, 39, 51, 64
Section 2.7: 1, 2, 3, 4, 5, 6, 7, 8, 11, 13, 15, 17, 21, 33, 35
Section 3.2: 3, 5, 13, 17
Section 4.1: 11, 15, 19, 29, 33, 37, 49, 57, 83
Section 4.2: 3, 7, 15, 21, 27, 31, 39, 43
Section 4.3: 3, 11, 19, 23, 31, 35, 39, 45
Section 4.4: 5, 9, 13, 19, 25, 29, 35, 47, 55, 59
Section 5.1: 1, 3, 15, 17, 31
Section 5.2: 1, 3, 11, 19
Section 5.4: 3, 9, 15, 19, 37, 49
Section 5.5: 3, 5, 9, 13, 21, 31, 39
Section 6.1: 1, 3, 15, 17, 27, 33, 37, 39, 45, 53, 59
Section 6.3: 7, 13, 15, 23, 33, 35, 57
Section 6.4: 1, 5, 7, 9, 25, 41
Section 6.5: 3, 9, 15, 21, 29, 33, 35, 47, 63
Section 6.6: 7, 13, 37, 43, 49, 63