Instructor Information

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Office Hours: Please see eCampus Faculty Info. folder for more details.
Division Office and Phone: Location P330, 972-273-3500

Course Information
Course Title: MATH 2412 – PRE-CALCULUS MATH
Course Number: MATH 2412
Section Number: 70431
Semester/Year: Spring 2020
Credit Hours: 3
Class Meeting Time/Location: Monday through Sunday, Online.
Certification Date: 04/03/2020
Last Day to Withdraw: 05/04/2020

Course Prerequisites
Math-1316

Course Description
This course consists of the study of algebraic and trigonometric topics including polynomial, rational, exponential, logarithmic and trigonometric functions and their graphs. Conic sections, polar coordinates, and other topics of analytic geometry will be included.

Required Course Materials:
ISBN for Textbooks 9780135402207.
Technical Support
Connect support website: https://support.pearson.com/getsupport/s/
Technical support for eCampus: 972-669-6402

Program-Level Outcome

As developed by the Texas Higher Education Coordinating Board

Program-Level Outcome 1: Communication Skills – to include effective development, interpretation and expression of ideas through written, oral and visual communication.
1. Written: Process and produce effective written communication adapted to audience, purpose, and time constraints.
2. Visual: Effectively interpret visual images or produce effective images.

Program-Level Outcome 2: Critical Thinking Skills - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.

Program-Level Outcome 3: Empirical and Quantitative Skills – to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

Math 2412 is a Tier 1 course in the Quantitative Reasoning learning category.
“Knowledge and skills that are important to your success in other college courses will be introduced and reinforced in Tier 1. The Quantitative Reasoning category promotes the application of mathematics to increase your ability to solve “real-world” problems. When you are quantitatively literate, you can use logic and critical thinking in new ways.” - Catalog of the Colleges of DCCCD

Student Learning Outcomes

Upon successful completion of this course, students will:
1. Apply calculus to solve business, economics, and social sciences problems.
2. Apply appropriate differentiation techniques to obtain derivatives of various functions, including logarithmic and exponential functions.
3. Solve application problems involving implicit differentiation and related rates.
4. Solve optimization problems with emphasis on business and social sciences applications.
5. Determine appropriate technique(s) of integration.
6. Integrate functions using the method of integration by parts or substitution, as appropriate.
7. Solve business, economics, and social sciences applications problems using integration techniques. Students will use the definition to calculate the derivative for simple continuous

**Texas Core Objectives**
The College defines essential knowledge and skills that students need to develop during their college experience. These general education competencies parallel the Texas Core Objectives for Student Learning. In this course, the activities you engage in will give you the opportunity to practice two or more of the following core competencies:

1. **Critical Thinking Skills** - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
2. **Communication Skills** - to include effective development, interpretation, and expression of ideas through written, oral, and visual communication
3. **Empirical and Quantitative Skills** - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
4. **Teamwork** - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal
5. **Personal Responsibility** - to include the ability to connect choices, actions, and consequences to ethical decision-making
6. **Social Responsibility** - to include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities

**Means of Assessment of Course Learning Outcomes**
Course Learning Outcomes will be assessed by a variety of means.

1. Online and proctored written exams will be given to assess each Learning Outcome.
2. Homework will be assigned and assessed either using the software component or by the instructor.
3. Observation of student’s collaboration will be used to assess all outcomes.
4. Students will complete projects and learning activities that will address specific course learning outcomes.

**Graded Work**
The tables below provide a summary of the graded work in this course and an explanation of how your final course grade will be calculated.

**Summary of Graded Work**
<table>
<thead>
<tr>
<th>Assignments</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework/quiz/practice tests (MLP)</td>
<td>25%</td>
</tr>
<tr>
<td>Chapter Tests</td>
<td>25%</td>
</tr>
<tr>
<td>Mid Term Exam</td>
<td>25%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25%</td>
</tr>
</tbody>
</table>

**TOTAL: 100%**

**Final Grade**

<table>
<thead>
<tr>
<th>Percentages</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100%</td>
<td>A</td>
</tr>
<tr>
<td>80-89%</td>
<td>B</td>
</tr>
<tr>
<td>70-79%</td>
<td>C</td>
</tr>
<tr>
<td>67-69%</td>
<td>D</td>
</tr>
<tr>
<td>0-66%</td>
<td>F</td>
</tr>
</tbody>
</table>

**Description of Graded Work**

**Tests**
Chapter tests will be online inside MyLabsPLus. Each chapter test ranges from 16 to 26 questions mixed with multiple choices and free response questions.

**Homework**
Homework is the most important learning part in the course. The homework includes videos, homework assignments, SLO quizzes and practice tests. Each assignment has a due date. No late work will be accepted.

**Midterm and Final Exam**
Midterm and Final Exam will be on e-Campus using Respondus lockdown browser and a webcam. Both Exams are comprehensive. Midterm covers the first half of the course and Final exam covers the entire course. Tests will be mixed with multiple choices and fill out the blanks. Both tests need to be completed on time. If you prefer paper test at North Lake College Central campus academic testing center L240, you need to notify the instructor at least one week prior to the date you plan to take the test.

**Late Work Policy**
Late work will not be accepted. There are no make-up exams. Late work will receive 10 points off for each day it is late up to 5 days. After that points, the exam access will end. Final exam has a firm deadline and will not be available after the deadline. Final exam can be used to replace one of your lowest test score if it is higher. There is a chance that you might be able to pass the course even you fail one test as long as you do well on other tests and the final exam.
STEM Center - Free Tutoring

The STEM Center, located in L137 and L139 provides assistance and resources free to students enrolled in mathematics and developmental mathematics classes at North Lake College. This is a great place to bring a study group, study quietly, get help with math classes, and use the center’s various resources.

Services offered:

- Tutorial services in all math courses taught at North Lake College
- Computers for use by students enrolled in courses that have an Internet component such as homework systems (i.e., MyLabsPlus, ConnectMath)
- Graphing calculators for use in the center
- Textbooks for use in the center
- A quiet area to study (Just ask one of the tutors)
- Opportunity for students to make up class absences
- Whiteboards space for study groups
- Content workshops covering how to use graphing calculators, course topics, review sessions, and study skills

Hours of Operation
Monday – Thursday: 9 a.m. – 6 p.m.
Friday & Saturday: 9 a.m. – 2 p.m.
Manager: Camrunn Beck, Room L135, camrunn.beck@dcccd.edu

Financial Aid Certification of Attendance

To be certified as attending, a student must complete all of first 6 days (for an 8wk course) and complete all of first 12 days (for a 16wk course) of assignments earning at least a score of 70%.

Drop Policy

If you are unable to complete this course, you must officially withdraw before or on 05/01/2020. Withdrawing is a formal procedure which you must initiate; your instructor cannot do it for you. See link within Institutional Policies p. 7

STOP BEFORE YOU DROP - Do NOT drop until you speak with your instructor.

Institutional Policies

Institutional Policies relating to this course can be accessed using the link below. These policies include information about tutoring, Disabilities Services, class drop and repeat options, Title IX, and more.
This course syllabus is intended as a set of guidelines for Math 2412. Both North Lake College and your instructor reserve the right to make modifications in content, schedule, and requirements as necessary to promote the best education possible within prevailing conditions affecting this course.

Course Outline

Chapter 1: Solving Polynomial and Rational Inequalities
Chapter 2: Circles
Chapter 3: Functions
Chapter 4: Polynomial and Rational Functions
Chapter 5: Exponential and Logarithmic Functions and Equations
Chapter 6: Introduction to Trigonometric Functions ~ Review
Chapter 7: Inverse Trigonometric Functions
Chapter 8: Trigonometric Identities
Chapter 9: Applications of Trigonometry
Chapter 10: Polar Coordinates and Polar Equations
Chapter 11: Conic Sections and Parametric Equations
Chapter 12: Systems of Equations and Inequalities
Chapter 14: Sequences and Series