MATH 2412 Syllabus
Cedar Valley College

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Instructor Information
Instructor Information will be available on the first day of class.
Name: TBA
DCCCD Email: TBA
Office Phone: TBA
Office Location: TBA
Office Hours: TBA
Division Office and Phone: STEM Division, M217, 972-860-5211

Course Information
Course Title: PreCalculus
Course Number: MATH 24 12
Section Number: TBA
Semester/Year: Spring 20 20
Credit Hours: 4
Class Meeting Time/Location: TBA
Certification Date: Monday, February 3, 2020
Last Day to Withdraw: Thursday, April 16, 2020

Course Prerequisites
MATH 13 16
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

ALEKS 3 60 Access Code
All work for the course is completed in ALEKS. The ALEKS 3 60 Access Code will provide access to ALEKS, which includes an electronic copy of the text, video instruction, and many other helpful features.
ISBN: 9781259723322

Temporary Access to ALEKS
ALEKS provides students temporary access to ALEKS for a two-week period. Once the temporary access expires, students will be locked out of their ALEKS account until a regular Student Access Code is purchased. It is highly recommended that students purchase the regular Student Access Code before the two weeks expire to prevent interruptions in their ALEKS account. The availability of temporary access will depend on its ethical use by instructors and students, and may be discontinued at the discretion of ALEKS at any time. Students completing the entire course using temporary access will receive a grade of F regardless of course performance. An ALEKS 3 60 Access Code must be purchased in order for students to receive a grade based on course performance.

Note: A student of this institution is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Technology Requirements
Students must have an active e-mail account and regular access to a computer, other than a Chromebook, with a reliable internet connection and an integrated or USB connected Webcam. Students with a Chromebook will need to make arrangements to take Comprehensive Knowledge Checks on campus in the Math Resource Center or Collaborative Learning Center during their hours of operation, or use another computer with a reliable internet connection and a webcam.
Optional Course Materials

Calculator
Graphing calculators (TI-83/84) are recommended in MATH 24 12. You will have free access to a graphing calculator in ALEKS on selected questions.

Textbook
An eText is included with the ALEKS 3 60 Access Code. Students also have the option of purchasing a loose leaf copy of the text through the Menu in ALEKS. Students wishing to purchase a hard copy of the text should refer to the following information:
Author: Miller/Gerken
Title: Precalculus
Edition: 1st Ed.
Publication Year: 2017
Publisher: McGraw-Hill
ISBN: 9780078035609

Course Outline
The course begins with an Initial Knowledge Check (IKC). ALEKS uses this information to award you credit for topics you already know, and determine what you are most “Ready-to-Learn.”

There are a total of 380 topics in the course consisting of 59 Prerequisite Topics and 321 Goal Topics. Each week you will work on a designated set of both Goal and Prerequisite Topics from the following categories.

- Polynomial and Rational Functions
- Exponential and Logarithmic Functions
- Trigonometric Functions
- More Trigonometric Functions and Applications
- Polar Coordinates and Vectors
- Getting Ready for Calculus

As you progress through the course, you will encounter a Progress Knowledge Check each time you have worked in ALEKS for 5 hours and learned 20 topics. Progress Knowledge Checks are used to confirm understanding of recently learned material. While Progress Knowledge Checks are not used to calculate your grade in the course, your performance can impact the number of topics you need to complete.
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. The student enrolled in the course must be the person completing course work.

Students should expect to spend a minimum of 8 hours each week working in the course outside of class time.

Summary of Graded Work

<table>
<thead>
<tr>
<th>Course Requirement</th>
<th>Percentage of Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly Topics</td>
<td>45%</td>
</tr>
<tr>
<td>Comprehensive Knowledge Checks</td>
<td>55%</td>
</tr>
</tbody>
</table>

**TOTAL: 100%**

Throughout the course, your current grade can be found in your ALEKS Gradebook. The overall average represents your current average, however, any items completed prior to their due date will not be included in your current average until the due date occurs.

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>80-89.9%</td>
<td>B</td>
</tr>
<tr>
<td>70-79.9%</td>
<td>C</td>
</tr>
<tr>
<td>60-69.9%</td>
<td>D</td>
</tr>
<tr>
<td>0-59.9%</td>
<td>F</td>
</tr>
</tbody>
</table>

Description of Graded Work

**Weekly Topics**

Weekly Topics open at 12am on Mondays and are due at 11:59pm the following Sunday. On the due date, you will receive a grade based on the percentage of Goal Topics you learned/mastered for the week. For example, if a week has 20 Goal Topics and you learn/master 16 of them, your grade for that week’s topics would be 16/20=80%.
Comprehensive Knowledge Checks

A Comprehensive Knowledge Check (CKC) is designed to assess your retention of topics learned in the course. This assessment will begin with your most recently learned topics, then branch out to determine the number of topics you have mastered in the entire course. You will be asked no more than 30 questions and you may use your notes. There is no time limit on a CKC, but CKCs must be completed by their due date.

Comprehensive Knowledge Checks are taken in ALEKS. Students must download the ALEKS Lockdown Browser and have a government or school-issued photo ID and a webcam. Students without a clear photo ID or not visible in the webcam during the entirety of the assessment will receive a score of zero. Extensions will not be granted for technical difficulties.

Comprehensive Knowledge Checks may be taken on campus in the Math Resource Center or Collaborative Learning Center during their hours of operation if you do not have access to a computer with the necessary Technology Requirements.

All Comprehensive Knowledge Checks should be completed without outside assistance – this includes apps, websites, or other people. Students committing/guilty of academic dishonesty – having others complete course work or using apps, online sites, or help from others – will receive a failing grade in the course.

The instructor reserves the right to require on-site testing at any time during the course.

**ALEKS Lockdown Browser Information**

Please download the ALEKS Lockdown Browser (LDB) prior to beginning a CKC. After downloading the LDB, please check the LDB and your webcam. For technical issues, consult these Troubleshooting Tips or contact ALEKS Customer Support.

**CKC Grading Information**

<table>
<thead>
<tr>
<th>CKC</th>
<th>Grading Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>CKC1</td>
<td>Students showing mastery of 76 topics or more on CKC1 will receive a grade of 100 for CKC1. The grade for all others will be the number of topics mastered on CKC1 out of 76.</td>
</tr>
<tr>
<td>CKC2</td>
<td>Students showing mastery of 171 topics or more on CKC2 will receive a grade of 100 for CKC2. The grade for all others will be the number of topics mastered on CKC2 out of 171.</td>
</tr>
<tr>
<td>CKC3</td>
<td>Students showing mastery of 285 topics or more on CKC3 will receive a grade of 100 for CKC3. The grade for all others will be the number of topics mastered on CKC3 out of 285.</td>
</tr>
<tr>
<td>CKC4</td>
<td>Students showing mastery of 380 topics on CKC4 will receive a grade of 100 for CKC4. The grade for all others will be the number of topics mastered on CKC4 out of 380.</td>
</tr>
</tbody>
</table>
## Course Calendar

All students are expected to adhere to course deadlines and due dates; extensions will not be granted.

<table>
<thead>
<tr>
<th>Graded Work</th>
<th>Description of Graded Work</th>
<th>Due Date</th>
<th>Percentage of Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wk1 Topics</td>
<td>24 Goal Topics</td>
<td>Jan. 26</td>
<td>3%</td>
</tr>
<tr>
<td>Wk2 Topics</td>
<td>24 Goal Topics with up to 3 Prerequisite Topics</td>
<td>Feb. 2</td>
<td>3%</td>
</tr>
<tr>
<td>Wk3 Topics</td>
<td>20 Goal Topics with up to 8 Prerequisite Topics</td>
<td>Feb. 9</td>
<td>3%</td>
</tr>
<tr>
<td>CKC1</td>
<td>76 Topics = 100%, open Feb. 8</td>
<td>Feb. 11</td>
<td>5%</td>
</tr>
<tr>
<td>Wk4 Topics</td>
<td>22 Goal Topics</td>
<td>Feb. 16</td>
<td>3%</td>
</tr>
<tr>
<td>Wk5 Topics</td>
<td>28 Goal Topics with up to 1 Prerequisite Topic</td>
<td>Feb. 23</td>
<td>3%</td>
</tr>
<tr>
<td>Wk6 Topics</td>
<td>21 Goal Topics with up to 4 Prerequisite Topics</td>
<td>Mar. 1</td>
<td>3%</td>
</tr>
<tr>
<td>Wk7 Topics</td>
<td>23 Goal Topics with up to 3 Prerequisite Topics</td>
<td>Mar. 8</td>
<td>3%</td>
</tr>
<tr>
<td>CKC2</td>
<td>171 Topics = 100%, open Mar. 7</td>
<td>Mar. 10</td>
<td>10%</td>
</tr>
<tr>
<td>Wk8 Topics</td>
<td>15 Goal Topics with up to 1 Prerequisite Topic</td>
<td>Mar. 22</td>
<td>3%</td>
</tr>
<tr>
<td>Wk9 Topics</td>
<td>20 Goal Topics with up to 12 Prerequisite Topics</td>
<td>Mar. 29</td>
<td>3%</td>
</tr>
<tr>
<td>Wk10 Topics</td>
<td>26 Goal Topics with up to 3 Prerequisite Topics</td>
<td>Apr. 5</td>
<td>3%</td>
</tr>
<tr>
<td>Wk11 Topics</td>
<td>28 Goal Topics with up to 6 Prerequisite Topics</td>
<td>Apr. 12</td>
<td>3%</td>
</tr>
<tr>
<td>CKC3</td>
<td>285 Topics = 100%, open Apr. 11</td>
<td>Apr. 14</td>
<td>15%</td>
</tr>
<tr>
<td>Wk12 Topics</td>
<td>20 Goal Topics with up to 4 Prerequisite Topics</td>
<td>Apr. 19</td>
<td>3%</td>
</tr>
<tr>
<td>Wk13 Topics</td>
<td>17 Goal Topics with up to 9 Prerequisite Topics</td>
<td>Apr. 26</td>
<td>3%</td>
</tr>
<tr>
<td>Wk14 Topics</td>
<td>11 Goal Topics with up to 2 Prerequisite Topics</td>
<td>May 3</td>
<td>3%</td>
</tr>
<tr>
<td>Wk15 Topics</td>
<td>24 Goal Topics with up to 2 Prerequisite Topics</td>
<td>May 10</td>
<td>3%</td>
</tr>
<tr>
<td>CKC4</td>
<td>380 Topics = 100%, open May 11</td>
<td>May 15</td>
<td>25%</td>
</tr>
</tbody>
</table>

Note: Students who do not learn all topics each week may find they have more Prerequisite Topics in future weeks than shown above.
Attendance and Your Final Grade

Attendance is required and can affect your grade in this course.

- Only your instructor can excuse an absence.
- Students are allowed two unexcused absences.
- Students more than 15 minutes late or leaving more than 15 minutes early will be counted absent.
- Excessive absences will impact the maximum grade possible in the course, regardless of performance.

<table>
<thead>
<tr>
<th>Number of Absences</th>
<th>Maximum Possible Overall Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 to 8 absences</td>
<td>B</td>
</tr>
<tr>
<td>9 to 16 absences</td>
<td>C</td>
</tr>
<tr>
<td>17 or more absences</td>
<td>D</td>
</tr>
</tbody>
</table>

Late Work Policy

All students are expected to adhere to course deadlines and due dates; late work is not accepted.

Certification Policy

Students must attend and participate in their on-campus or online course(s) in order to receive federal financial aid. Instructors are required by law to validate attendance in order for students to receive financial aid.

To be certified as attending on campus mathematics courses, students must attend class AND do one of the following prior to the Certification Date: a) complete the Initial Knowledge Check in ALEKS; or b) complete the Instructor Assigned Knowledge Check upon transferring previous work. Students should contact the instructor with any questions regarding what constitutes the Initial Knowledge Check or Instructor Assigned Knowledge Check.

Failure to show proof of attendance in the course prior to the Certification Date can affect Financial Aid.
Withdrawal Policy
Please consult your instructor before withdrawing from this course, visit the Dropping or Withdrawing From Classes webpage.

Instructor Policies
If a student experiences a situation during the course which prevents the student from working or negatively affects the student's performance, it is the responsibility of the student to contact the instructor immediately for guidance. Notifying the instructor of such a situation at the end of the semester is not sufficient and will not result in an extension.

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.

Cedar Valley Institutional Policies

Student Learning Outcomes
Texas Higher Education Coordinating Board (THECB) Student Learning Outcomes
Upon successful completion of this course, students will:
1. Demonstrate and apply knowledge of properties of functions.
2. Recognize and apply algebraic and transcendental functions and solve related equations.
3. Apply graphing techniques to algebraic and transcendental functions.
4. Compute the values of trigonometric functions for key angles in all quadrants of the unit circle measured in degrees and radians.
5. Prove trigonometric identities.
6. Solve right and oblique triangles.

Cedar Valley Student Learning Outcomes
1. Use algebraic and trigonometric techniques necessary for calculus. (THECB #s 1-6)
2. Use vectors to solve problems, both in 2 dimensions and in 3 dimensions.
3. Find partial fraction decomposition and solve nonlinear systems.
4. Perform operations on complex numbers in rectangular and polar form.
5. Solve problems involving arithmetic or geometric sequences and series.

**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

MATH 24 12 develops Critical Thinking, Communication, and Empirical and Quantitative Skills by requiring students to solve and analyze applications of trig functions and their graphs.