**Catalogue Description**

Math 75A - Calculus with Review IA (4 units): Functions, graphs, limits, continuity, derivatives, and applications, with extensive review of algebra and elementary functions.

**Course Prerequisites:** elementary geometry, intermediate algebra, and trigonometry; or precalculus. Passing score on the department's Calculus Readiness Test required prior to enrollment. In addition, students must meet the ELM requirement.

**Learning Outcomes**

Upon completion of this course, students should be able to:

- Define, manipulate, and graph any polynomial, rational, trigonometric, power, exponential, or logarithmic function
- Use functions to represent changing quantities
- Compute limits of algebraic expressions
- Define the derivative as the limit of a difference quotient and appreciate its physical significance
- Compute the derivative of any function referred to in #1 above, and any combination of such functions
- Identify the ways in which a function can fail to have a derivative

**Required Materials**

1. You must purchase one of the following MyMathLab access code bundles:

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<tbody>
<tr>
<td>Price: $85</td>
<td>Price: $126.97</td>
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2. An account on [http://pearsonmylabandmastering.com/](http://pearsonmylabandmastering.com/) is required (more on this below).

**Optional Materials**

1. **Companion Textbook:**

   ![A Companion to Calculus](image)

   **A Companion to Calculus**
   
   2nd Ed.
   
   Dennis Ebersole et al. Thomson Brooks/Cole Publishing

2. **Ebook Software:** If you wish to use the ebook version of the our calculus textbook you will need to install the Wolfram CDF reader software on a computer. You can find the software at [http://www.wolfram.com/products/player/pearson.html](http://www.wolfram.com/products/player/pearson.html)

3. **Clickers:** An [clicker](http://clicker.org) student response device is required if you wish to receive bonus points for answering in-class questions. [clickers](http://clicker.org) are available in the bookstore and you will most likely use them in a number of courses during your time here at Fresno State.

**Homework**

The homework for this class is done entirely online. You must register at [pearsonmylabandmastering.com](http://pearsonmylabandmastering.com) in order to do the homework. Please read the following document for detailed instructions on how to register: [MyMathLab Getting Started Handout _2013spring_.pdf](MyMathLab%20Getting%20Started%20Handout%20_2013spring_.pdf)

**Important Note:** When you register for MyMathLab you must use the Course Code **keim28637** and the university zip code **93740**

- Homework will be done using the MyMathLab system, part of the [pearsonmylabandmastering.com](http://pearsonmylabandmastering.com) website. An access code for MyMathLab comes with copies of the textbook from the bookstore.
- MyMathLab is a web-based homework system that gives instant feedback as to whether or not your answer is correct. You can then correct your mistakes, review the relevant material before attacking the problem again, or seek help. This means that if you begin the homework promptly, you can get 100% on every homework!
- There is no need to print out and turn in any of your MyMathLab work. The system records everything that you do and automatically enters scores into a grade book. (Of course you can always print out copies of the homework to use for studying.)
- No late homework will be accepted. Pay close attention to the due dates and times. Do not wait to the last minute to do your homework. If too many students attempt to input their homework at the last minute, it is likely that the computer system will be significantly slowed down. Therefore you should begin the homework far in advance of the actual due date.

### Midterm Exams
There will be four class meetings with midterm exams. These exams will take place on

- Thursday 7 February (Week 4)
- Thursday 7 March (Week 8)
- Thursday 4 April (Week 12)
- Wednesday 8 May (Week 17)

### Final Exam
The final exam for the course will be on **Monday, 13 May from 8:45-10:45 AM**. The exam will take place in the regular classroom unless otherwise announced.

Arrangement for final examinations that need to be held at times other than this in the schedule must be made in advance, subject to the approval of the department chairman and the college/school dean.

### Examination Policies

- Every examination should be considered cumulative.
- No make-up exams will be given.

### Grade Determination
Your total course percentage will be determined using the highest five categories from the six categories listed below. In other words, your lowest exam score will be dropped (unless all of your exams are higher than your homework percentage, in which case your homework score will be dropped).

<table>
<thead>
<tr>
<th>HW and Quizzes</th>
<th>Midterm 1</th>
<th>Midterm 2</th>
<th>Midterm 3</th>
<th>Midterm 4</th>
<th>Final Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Your course grade will be assigned according to your total course percentage as follows:

<table>
<thead>
<tr>
<th>Course %</th>
<th>Grade</th>
</tr>
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<tbody>
<tr>
<td>100-90</td>
<td>A</td>
</tr>
<tr>
<td>89-70</td>
<td>B</td>
</tr>
<tr>
<td>79-60</td>
<td>C</td>
</tr>
<tr>
<td>69-60</td>
<td>D</td>
</tr>
<tr>
<td>59-0</td>
<td>F</td>
</tr>
</tbody>
</table>

During each lecture we will have a few "Clicker Questions" to see if you have been paying attention and taking good notes. Correctly answering these questions will contribute bonus points toward your homework grade.

### Tentative Course Outline

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Sections (Ebersole)</th>
<th>Sections (Briggs)</th>
<th>Topics</th>
<th>Slides</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>21-24 Jan</td>
<td>Chpt 1 + 2A-2C</td>
<td>1.1-1.2 + Appx A</td>
<td>MLK; Precalc Review; Functions</td>
<td>PreCalcReviewFunctions</td>
</tr>
<tr>
<td>3</td>
<td>28-31 Jan</td>
<td>2D-2F</td>
<td>2.1-2.2</td>
<td>More Functions; Limits</td>
<td>DomainAndRangeEssentialFunctions</td>
</tr>
<tr>
<td>4</td>
<td>4-7 Feb</td>
<td>3B + Chpt 5</td>
<td>2.3-2.5</td>
<td>More Limits; <strong>Exam 1</strong></td>
<td>GraphTransformationsLimitsSimplifying</td>
</tr>
<tr>
<td>5</td>
<td>11-14 Feb</td>
<td>Chpt 6</td>
<td>2.6 + 3.1</td>
<td>Asymptotes; Continuity</td>
<td>AsymptotesContinuity</td>
</tr>
<tr>
<td>6</td>
<td>18-21 Feb</td>
<td>Chpt 7</td>
<td>3.2-3.3</td>
<td><strong>Presidents' Day:</strong> Derivatives and Formulas</td>
<td>SecantsTangentsDerivativesRules</td>
</tr>
<tr>
<td>7</td>
<td>25-28 Feb</td>
<td>Chpt 8</td>
<td>1.4 + 3.4</td>
<td>Trig Review + Derivatives</td>
<td>TrigReviewTrigDerivatives</td>
</tr>
<tr>
<td>8</td>
<td>4-7 Mar</td>
<td>7B</td>
<td>3.5-3.6</td>
<td>Rates of Change; Chain Rule; <strong>Exam 2</strong></td>
<td>ChainRule</td>
</tr>
</tbody>
</table>
The only exceptions are the following:

Toward the end of the course I will be checking your student ID in order to deter students from hiring impostors to take classes for them. I will examine cheating and plagiarism or the University Catalog (Policies and Regulations).

Cheating occurs when a student uses unauthorized means to gain an unearned academic advantage by fraudulent or deceptive means. Plagiarism is a specific form of cheating which consists of obtaining course credit; such acts also include assisting another student to do so. Typically, such acts occur in relation to examinations. However, it is the intent of this definition that the term 'cheating' not be limited to examination situations only, but that it include any and all actions by a student that are intended to gain an unearned academic advantage by fraudulent or deceptive means. Plagiarism is a specific form of cheating which consists of the misuse of the published and/or unpublished works of others by misrepresenting the material (i.e., their intellectual property) so used as one's own work. Penalties for cheating and plagiarism range from a 0 or F on a particular assignment, through an F for the course, to expulsion from the university. For more information on the University's policy regarding cheating and plagiarism, refer to the Schedule of Courses (Legal Notices on Cheating and Plagiarism) or the University Catalog (Policies and Regulations).

Toward the end of the course I will be checking your student ID in order to deter students from hiring impostors to take classes for them. I will examine your photo, write down the ID number on the back, and compare it with my records. Your grade for this course will not be processed until I have verified your ID. The only exceptions are the following:

- you have taken a class with me in a previous semester, and/or
- you earn an F for the course.

I promise I will not laugh at your picture! Thank you for your cooperation.

**Honour Code.** Members of the CSU Fresno academic community adhere to principles of academic integrity and mutual respect while engaged in university work and related activities. You should:

- a) understand or seek clarification about expectations for academic integrity in this course (including no cheating, plagiarism and inappropriate collaboration).
- b) neither give nor receive unauthorized aid on examinations.
- c) take responsibility to monitor academic dishonesty in any form and to report it to the instructor or other appropriate official for action.

**Disruptive Classroom Behavior.** The classroom is a special environment in which students and faculty come together to promote learning and growth. It is essential to this learning environment that respect for the rights of others seeking to learn, respect for the professionalism of the instructor,
and the general goals of academic freedom are maintained. ... Differences of viewpoint or concerns should be expressed in terms which are supportive of the learning process, creating an environment in which students and faculty may learn to reason with clarity and compassion, to share of themselves without losing their identities, and to develop and understanding of the community in which they live. ... Student conduct which disrupts the learning process shall not be tolerated and may lead to disciplinary action and/or removal from class.

• **Copyright Policy.** Copyright laws and fair use policies protect the rights of those who have produced the material. The copy in this course has been provided for private study, scholarship, or research. Other uses may require permission from the copyright holder. The user of this work is responsible for adhering to copyright law of the U.S. (Title 17, U.S. Code). To help you familiarize yourself with copyright and fair use policies, the University encourages you to visit its copyright web page: [http://www.fresnostate.edu/library/information/copyright/](http://www.fresnostate.edu/library/information/copyright/). Digital Campus course web sites contain material protected by copyrights held by the instructor, other individuals or institutions. Such material is used for educational purposes in accord with copyright law and/or with permission given by the owners of the original material. You may download one copy of the materials on any single computer for non-commercial, personal, or educational purposes only, provided that you (1) do not modify it, (2) use it only for the duration of this course, and (3) include both this notice and any copyright notice originally included with the material. Beyond this use, no material from the course web site may be copied, reproduced, re-published, uploaded, posted, transmitted, or distributed in any way without the permission of the original copyright holder. The instructor assumes no responsibility for individuals who improperly use copyrighted material placed on the web site.

• **Disclaimer.** This syllabus and schedule are subject to change in the event of extenuating circumstances. If you are absent from class, it is your responsibility to check on announcements made while you were absent.