Collin College Mathematics Department  
2017 Spring Faculty Instructor’s Syllabus

Professor’s Website: http://iws.collin.edu/vantohe  
Professor’s Name: Dr. Valeria Antohe  
Email: vantohe@collin.edu  
Course: Math-2413  
Course Title: Calculus I

Course Description:
Limits and continuity; the Fundamental Theorem of Calculus; definition of the derivative of a function and techniques of differentiation; applications of the derivative to maximizing or minimizing a function; the chain rule, mean value theorem, and rate of change problems; curve sketching; definite and indefinite integration of algebraic, trigonometric, and transcendental functions, with an application to calculation of areas. Lab included.

Textbook and Required Material:
Calculus - Early Transcendentals, 8th ed., by James Stewart, © 2016 Cengage Learning with Enhanced WebAssign Access Code; WebAssign student access code is required for online course work to receive credit. The WebAssign access code includes the text as an eBook. The Course Orientation document is posted in the WebAssign course. Required Graphing Calculator: TI-83, TI-84, or non-CAS TI-Nspire; Supplies: Straightedge

WebAssign Registration Requirements
You must register in the WebAssign course (at https://www.webassign.net/) on or before the first day of the semester. The class key is collin 4963 3675.

Prerequisite(s): Math 2412 or TSI assessment
Census Date: January 30, 2017  
Withdrawal Date: March 17, 2017  
Final Exam Date: May 4-9, 2017

Course Syllabus Link: http://www.collin.edu/math/math_syllabi.htm

Course Repeat Policy: Please see the “Repeating Courses” section of the Registration Guide for more information.

Course Delivery Method: Online (no lecture)

Course Requirements:
Completion of homework assignments, and labs, reading from the e-book, watching online videos, checking email and posted announcements, and during designated date ranges, taking three semester exams and a comprehensive final exam at Spring Creek testing center at Collin College. If you would like to take the regular exams at a different Collin campus you will need to arrange it by 5 pm on the Friday of the first week. All assignments and exams have due dates. It is the student responsibility to keep up with the required assignments and due dates. If you fall behind the schedule, you will not be given extensions. Do not send any email messages requesting extensions to various assignments. All class policies are applied evenly to all students and no exceptions will be granted.

College Wide Email System for Students: CougarMail:
If you wish to communicate with me concerning grades, you need to use CougarMail. I cannot, for reasons of confidentiality and privacy, respond to messages on grades sent from e-mail accounts other than your CougarMail account. The e-mail messages you send me must have the following subject line: MATH 2413.WS1/ Last Name.
Messages without this information will not be responded to.

Student Learning Outcomes: (Upon completion of this course, the students should be able to do the following)

1. Develop solutions for tangent and area problems using the concepts of limits, derivatives, and integrals.
2. Draw graphs of algebraic and transcendental functions considering limits, continuity, and differentiability at a point.
3. Determine whether a function is continuous and/or differentiable at a point using limits.
4. Use differentiation rules to differentiate algebraic and transcendental functions.
5. Identify appropriate calculus concepts and techniques to provide mathematical models of real-world situations and determine solutions to applied problems. (Critical Thinking and Communication Skills)

* If any link is not functional, copy and paste it in the browser.
6. Evaluate definite integrals using the Fundamental Theorem of Calculus.
7. Articulate the relationship between derivatives and integrals using the Fundamental Theorem of Calculus.

(Critical Thinking and Communication Skills)

Method of Evaluation:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOMEWORK</td>
<td>10 %</td>
<td>32 assignments, done in WebAssign (see Homework Policy below)</td>
</tr>
<tr>
<td>LABS</td>
<td>8 %</td>
<td>4 labs, done in WebAssign (see Lab Policy below)</td>
</tr>
<tr>
<td>For all exams</td>
<td>-</td>
<td>see Exam Policy below, for exam testing periods - see the last page</td>
</tr>
<tr>
<td>EXAM 1</td>
<td>19 %</td>
<td>covering chapter 2</td>
</tr>
<tr>
<td>EXAM 2</td>
<td>19 %</td>
<td>covering chapter 3</td>
</tr>
<tr>
<td>EXAM 3</td>
<td>19 %</td>
<td>covering chapter 4</td>
</tr>
<tr>
<td>FINAL EXAM</td>
<td>25 %</td>
<td>comprehensive, covering chapters 2-5</td>
</tr>
</tbody>
</table>

The formula to compute the final grade is:

\[ 0.57 \times (\text{Exam average}) + 0.1 \times (\text{HW average}) + 0.08 \times (\text{Lab average}) + 0.25 \times (\text{Final exam}) \]

The resulting number will be rounded to the closest whole number to get the grade.

**There is no extra credit in this class.**

Grading Scale:

- A=90-100
- B=80-89
- C=70-79
- D=60-69
- F=0-59

Requirements for Participation in Online Discussion or Collaborative Activities:

The purpose of the discussion board is to replicate asking and answering questions in the classroom. You may use the discussion board to interact with each other in a similar way to lecture classes. Participation in discussions is encouraged, but it is not required.

Criteria Used to Evaluate Participation in Such Activities:

There is no credit for participation in online discussion or collaborative activities.

Delivery Method of Feedback and/or Graded Material:

- Students will be able to view the numeric score they earn for each assignment, lab and exam in WebAssign.
- Students will receive posted grades for each lab assignment and exam within one week from the assignment due date.
- The lab solutions will be available and visible to the students immediately after the due date/time in WebAssign.
- Announcements on common errors and exam keys with full solutions are posted in WebAssign after each exam is graded.
- Students may review their graded exam by requesting a scanned copy of their exam.

Standards for Instructor Response and Availability:

- For non-credit questions related to the course material use the discussion board from WebAssign course at www.webassign.com.
- For administrative and personal questions, the preferred contact method is by email. Administrative questions asked Monday through Friday, 9 am-5 pm, will be answered within 24 hours. Questions asked Friday (after 5 pm) through Sunday will be answered the latest on Monday.

Minimum Technology Requirement:

Students must have access to high speed Internet. If you are experiencing slow download times, you may need a faster connection.

System Requirements:

WebAssign is tested and supported for the systems/browsers listed at:

http://www.webassign.net/manual/student_guide/c_a_system_requirements.htm

Minimum Student Skills:

- scan documents and email attachments
- use the equation editor provided in the WebAssign course to show work
- upload/download documents
- simultaneously work on multiple browser windows
- to determine if the online format is appropriate for you, please take the survey:
  http://iws.collin.edu/vantohe/Courses/CalculusIIOnline/IsOnlineCourseForYou.html
Netiquette Expectations:
1. Standards of courtesy and respect must be maintained at all times in our online “classroom.” Join in to the discussion, but remember that this is still a “classroom” setting and that respect and consideration are crucial for any intellectual discussion.
2. Discussion areas are the place for intelligent and respectful airing of ideas. Name-calling and personal attacks are not permitted.
3. Any violation of the standards of appropriate behavior online will be reported to the Dean of Students and appropriate disciplinary action will be taken by the college.

Attendance Policy:
No classroom lectures. Students are responsible for all information posted in the Announcements section of the WebAssign course.

Homework Policy:
Each homework assignment will consist of problems taken from the WebAssign online software bundled with a new textbook. The lowest six homework grades are dropped to account for illness or other personal reasons. Students are welcome to use the resources of the Math Lab when working on their homework assignment. Each assignment score (max. 100) is recorded on its due date in the gradebook and cannot be turned in late nor made up for credit. It is the student’s responsibility to open and submit all the course assignments. The homework assignments will not be extended for any reasons. The homework assignment solutions will be available and visible to the students immediately after the due date/time.

Lab Policy:
The lab assignments will be given online. Students are welcome to use the resources of the Math Lab when working on their lab assignments. There will be no extension time for any labs. It is the student’s responsibility to open and submit all the course assignments. The lab assignments will not be extended for any reasons. The lab solutions will be available and visible to the students immediately after the due date/time. Directions for Labs are given in the Course Orientation document.

Exam Policy:
This class requires onsite proctored testing at Spring Creek testing center at Collin College or a testing center approved by the instructor on the dates listed in class calendar. If you would like to take the regular exams at a different Collin campus you will need to arrange it by 5 pm on the Friday of the first week. The Final Exam, which is cumulative and comprehensive, must be taken at the Spring Creek Campus Testing Center.

Exam requirements (All Students):
- All exams have to be proctored.
- Student identification card has to be presented at the beginning of each exam. The tests will not be issued without identification.
- The student is not allowed to use any notes or formula cards.
- The exams are not limited in time.

If you are NOT taking your exams at a Collin College testing center, you will need to find a college or university in your area with a testing center that offers proctored testing. If there is a Testing Center at your current college/university, check if they provide this type of proctor services for distance courses. After you identify a testing center that proctors exams according to the requirements presented below, you need to send the instructor the name and contact information (email and phone number) of the person in charge (Supervisor of the Testing center only) no later than 5 pm, on the Friday of the first week. This information should be verifiable using an official online directory posted by the college/university. It is not acceptable to send information that does not conform with this requirement.

Additional Exam requirements (If NOT taking the exam at Collin College testing centers):
- All exams should be taken at the same testing center.
- Students need to contact the testing center and arrange with the contact person the dates to take the exams within the periods listed in the course calendar.
**Make-up Policy:**
Make-up exams will not be given under any circumstances and a zero grade will be assigned to every missed exam. Your final exam grade will substitute the grade of one missed exam. If you did not miss any exams and your final exam is higher than one of the three exams, the lowest grade exam will be replaced by the final exam grade. All class policies are applied evenly to all students and no exceptions will be made.

**Resource Material:**
Any student enrolled in this class has access to the Math Lab (locations given below). The Lab is staffed with faculty and tutors; in addition, it offers free tutorial help, graphing calculators, and computer assistance. Collin students may arrange for tutoring with the ACCESS office (D140). Please call 972-881-5898 for scheduling and availability.

**Math Lab:**
Please note that tutors can answer only specific questions. Student solution manuals are available, if you do not want to purchase one. TI calculators are available for use in the lab.

<table>
<thead>
<tr>
<th>Campus</th>
<th>Math Lab</th>
<th>Location</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring Creek Campus</td>
<td>Math Lab</td>
<td>D203</td>
<td>972-881-5921</td>
</tr>
<tr>
<td>Preston Ridge Campus</td>
<td>Math Lab</td>
<td>F148</td>
<td>972-377-1639</td>
</tr>
<tr>
<td>Central Park Campus</td>
<td>Math Lab</td>
<td>C220</td>
<td>972-548-6896</td>
</tr>
</tbody>
</table>

**Study Tips:**
Schedule at least 12 hours a week to solve the assigned practice problems. Make the effort to complete all the assignments by their due dates. More study tips can be found at [http://iws.collin.edu/vantohe/StudySkills.html](http://iws.collin.edu/vantohe/StudySkills.html)

**Withdrawal Policy:**
Under section 51.907 of the Texas Education Code, students may not withdraw from more than six courses including any course a transfer student has withdrawn from at another Texas institute of higher education. For exemptions, visit [http://www.collin.edu/gettingstarted/register/withdrawal.html](http://www.collin.edu/gettingstarted/register/withdrawal.html). Please see your instructor before you withdraw and the current Collin Registration Guide for the last day to withdraw.

**Course Withdrawal:**
To withdraw from this class, you need to do the following:
1. Attain a Drop/Add form from the office of Admission and Records, 972-881-5710,
2. Turn in the completed Drop/Add form to the office of Admission and Records on or prior to the withdrawal deadline,
3. Make sure your course withdrawal satisfies the college withdrawal policy,
4. You may receive an F if they do not finish this class and do not withdraw on or prior to the withdrawal deadline.

**Religious Holy Days:**
In accordance with section 51.911 of the Texas Education Code, the college will allow a student who is absent from class for the observance of a religious holy day to take an examination or complete an assignment scheduled for that day within a reasonable time. Please refer to the current Collin Student Handbook.

**Evaluation of Instructions:**
Collin College seeks to improve the learning experience of all students. To assist in evaluating courses, students will be requested to complete an evaluation of instruction form near the end of the semester.

**Americans with Disabilities Act Statement:**
Collin College will adhere to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student’s responsibility to contact the ACCESS office, SCC-D140 or 972.881.5898 (V/TTD: 972.881.5950) to arrange for appropriate accommodations. See the current Collin Student Handbook for additional information.

**Collin College Academic Policies:**
See the current Collin Student Handbook. Any incidence of scholastic dishonesty will be reported to the Dean of Student Development Office. Students who commit scholastic dishonesty—cheating on a test, plagiarism, collusion, or any other form of dishonesty—will receive a penalty ranging from an F on the assignment to an F in the course, at the discretion of the instructor.

**Disclaimer:**
The instructor reserves the right to make changes to this syllabus during the semester in writing.
### Tentative Course Calendar

#### Online Calculus I

**Spring 2017**

Homework assignments for each section will be available on the first day of the semester. Homework assignments are due **by 9 am** as shown in the course calendar.

Labs will be available on the first day of each unit. Unit Labs are due on **Tuesday by 9 am** as shown in the course calendar.

Exams should be taken in the designated testing periods.

The course material should be covered as shown in the course calendar.

<table>
<thead>
<tr>
<th>Wk.</th>
<th>Material</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit 1</strong>&lt;br&gt;Jan. 17 - Feb. 3</td>
<td>1. 2.1 The tangent and velocity problems; 2.2 The limit of a function; 2.3 Calculating limits using the limits laws</td>
<td>HW week 1 due 1/23</td>
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<tr>
<td></td>
<td>2. 2.4 The precise definition of a limit; 2.5 Continuity; 2.6 Limits at infinity &amp; horizontal asymptotes</td>
<td>HW week 2 due 1/30</td>
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<tr>
<td></td>
<td>3. 2.7 Derivatives and rates of change; 2.8 The derivative as function</td>
<td>Lab 1 (2.1 - 2.6) due Tues. 1/31</td>
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<tr>
<td></td>
<td><strong>Exam 1 in TC</strong> - prepare all sections in Unit 1; 2/2 - 2/7 by 9 p.m.; for 5 days</td>
<td></td>
</tr>
<tr>
<td><strong>Unit 2</strong>&lt;br&gt;Feb. 6 - Mar. 3</td>
<td>4. 3.1 Derivatives of polynomials and exponential functions; 3.2 The product and quotient rules; 3.3 Derivatives of trigonometric functions</td>
<td>HW week 3 due 2/6</td>
</tr>
<tr>
<td></td>
<td>5. 3.4 The Chain rule; 3.5 Implicit Differentiation; 3.6 Derivatives of Logarithmic Functions</td>
<td>HW week 4 due 2/13</td>
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<td>6. 3.7 Rates of Change in the Natural and Social Sciences; 3.8 Exponential Growth and Decay; 3.9 Related rates</td>
<td>HW week 5 due 2/20</td>
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<td></td>
<td>7. 3.10 Linear Approximations and Differentials; 3.11 Hyperbolic Functions</td>
<td>HW week 6 due 2/27</td>
</tr>
<tr>
<td></td>
<td><strong>Exam 2 in TC</strong> - prepare all sections in Unit 2; 3/2-3/4 and 3/13, 3/14 by 9 pm; for 5 days</td>
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<tr>
<td><strong>SPRING BREAK</strong>&lt;br&gt;Mar. 5 - Mar. 12</td>
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<tr>
<td><strong>Unit 3</strong>&lt;br&gt;Mar. 13 - Apr. 7</td>
<td>8. 4.1 Maximum and Minimum Values; 4.2 The Mean Value Theorem</td>
<td>HW week 8 due 3/20</td>
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<td></td>
<td>9. 4.3 How Derivatives Affect the Shape of a Graph; 4.4 Indeterminate Forms and L'Hospital's Rule</td>
<td>HW week 9 due 3/27</td>
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<td>10. 4.5 Summary of Curve Sketching; 4.7 Optimization Problems</td>
<td>HW week 10 due 4/3</td>
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<td>11. 4.8 Newton's Method; 4.9 Antiderivatives</td>
<td>Lab 3 (4.1 - 4.7) due Tues. 4/4</td>
</tr>
<tr>
<td></td>
<td><strong>Exam 3 in TC</strong> - prepare all sections in Unit 3; 4/6 - 4/11 by 9 p.m.; for 5 days</td>
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</tr>
<tr>
<td><strong>Unit 4</strong>&lt;br&gt;Apr. 10 - Apr. 28</td>
<td>12. 5.1 Areas and Distances; 5.2 The Definite Integral</td>
<td>HW week 11 due 4/10</td>
</tr>
<tr>
<td></td>
<td>13. 5.3 The Fundamental Theorem of Calculus; 5.4 Indefinite Integrals and the Net Change Theorem</td>
<td>HW week 12 due 4/17</td>
</tr>
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<td>14. 5.5 The Substitution rule</td>
<td>HW week 13 due 4/24</td>
</tr>
<tr>
<td><strong>May 1 - May 5</strong></td>
<td>15. Review Final exam</td>
<td>HW week 14 due 5/1</td>
</tr>
<tr>
<td></td>
<td><strong>Final Exam in SCC testing center (all sections from Unit 1 - 4); 5/4 - 5/9 by 9 p.m.; 5 days</strong></td>
<td>Lab 4 (5.1 - 5.5) due Tues. 5/2</td>
</tr>
</tbody>
</table>