

### Basic Course Information

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|------------------|--|---|--|
| Semester         | <b>Spring 2016</b>                                       | Instructor's Name   | <b>Caroline Bennett</b>                                      |
| Course Title & # | <b>Math 170: Introductory Calculus with Applications</b> | Instructor's Email  | <b>caroline.bennett@imperial.edu</b>                         |
| CRN #            | <b>20805</b>   | Webpage   | <b>N/A</b>   |
| Room             | <b>Building 200; Room 212</b>                            | Office  | <b>Building 2700; Room 2765</b>                              |
| Class Dates      | <b>2/16/16 – 6/10/16</b>                                 | Office Hours  | <b>Mon/Wed 4:00 – 5:00 pm<br/>Tues/Thurs 12:00 – 1:00 pm</b> |
| Class Days       | <b>Monday / Wednesday</b>                                | Office Phone #  | <b>(760) 355 – 6124</b>                                      |
| Class Times      | <b>10:20 am – 12:25 pm</b>                               | Who students should contact if emergency or other absence | <b>(760) 355 – 6155</b>                                      |
| Units            | <b>4.0</b>   |   | <b>(760) 355 – 6201</b>                                      |

### Course Description

In this course, students will prepare for courses for which calculus is recommended and/or required, and study the ideas and concepts of advanced mathematics as applied to a modern computerized society. Topics covered include pre-calculus concepts, functions, differentiation, integration, differential equations, and functions of several variables. (CSU) (UC credit limited – see a counselor.)

### Student Learning Outcomes

Upon successful completion of this course, a student will:

1. Demonstrate an understanding of the relationship between slope, average rate of change, instantaneous rate of change, and the derivative. (ILO2)
2. Calculate limits, derivatives and integrals for polynomial, rational, exponential and logarithmic functions (ILO2)
3. Use differentiation and integration techniques to solve problems from business, economics, social science and life science. (ILO1, ILO2, ILO4)
4. Use the derivative to analyze and aid in graphing functions as well as solving optimization and related rate problems. (ILO1, ILO2)

### Course Objectives

Upon satisfactory completion of the course, students will be able to:

1. Demonstrate an understanding and comprehension of basic ideas and elementary concepts of algebra.
2. Demonstrate an understanding of functions and intuitive understanding of limits.
3. Demonstrate an understanding and a working knowledge of the derivative.
4. Demonstrate proficiency in problem solving when dealing with applications of differentiation.
5. Distinguish the various approaches when solving integration problems.
6. Demonstrate the ability to solve problems in a step-by-step manner when dealing with application of integration.
7. Demonstrate an understanding of logarithmic and exponential functions, and differential equations, and their use in applications.
8. Analyze functions of several variables.

### Textbooks & Other Materials

**MATHXL ACCESS CODE (required):** This comes as an insert if you buy a new textbook. If you do not buy a new text, you may purchase the access code online, OR at the IVC Bookstore.

**A handout with instructions on registering with MathXL, as well as the necessary Course ID number, will be provided and available for you on Blackboard.**

**TEXT (recommended):** *Calculus with Applications, Brief Version, 10e* by Lial, Greenwell, and Ritchey.  
ISBN-13: 978-0321748577

**CALCULATOR:** A graphing calculator, such as the TI-83+, is recommended, but not required. You should at least have a scientific calculator. Students may NOT share calculators during exams. Graphing calculators and cell phones are NOT permitted during exams.

### Course Requirements and Instructional Methods

**HOMEWORK** should always be taken seriously in a math class. Math is a skill that you can become good at by *practicing it*. Coming to class and taking good notes is important, but doing homework is what deepens your understanding and sharpens your skills. **Repetition “makes it stick”**. Homework also helps you assess your own problem areas. When you struggle with homework problems, it will help you to ask more informed questions during the following class (instead of just saying “I’m lost” or “I can’t do this”), so that I or a tutor can better help you.

Online homework with MathXL is used in this course. You are expected to keep up with this online practice on a regular basis and seek help when you need it. Exam problems will be based off of the online homework problems; therefore, the online homework provides you with vital practice. Some graded homework projects will be assigned in addition to the MathXL. You may work in groups on the projects. The textbook also offers practice problems (many of which I will suggest or cover in class), with answers to the odd exercises provided in the back. Although **only the online homework and assigned projects are graded and recorded**, the text’s problems offer an additional (optional) source of practice.

Math is best learned when it is practiced regularly. Our twice-a-week format is not ideal for learning math. Therefore, **it is an extremely bad idea to wait until the weekend to start your homework**. One of the best things you can do is reserve times slots in your weekly schedule that will be devoted to working on math (every week – not just when an exam is coming up).

In fact, you should always begin your homework as soon as possible after each class, especially if math is a difficult subject for you. Here are some further tips:

- 1) Form a study group and work homework problems together with classmates.  
The Math Lab is a good place to study and work together with classmates.
- 2) If there is a particular homework problem you would really like to see in class, ask me before or at the beginning of class. I will try to accommodate requests if there is time; if there is not sufficient time, then we can arrange to meet after or outside of class for help.
- 3) Take advantage of the free tutoring resources on campus (see last page for details).

**ALGEBRA REVIEW MINI-TEST:** A “mini-test” (50 points = one third of a regular exam) will take place on Wednesday, Feb. 24 (third class meeting). The purpose of this is to encourage students to refresh some very crucial prerequisite skills that are necessary to succeed in the material that we will be covering this semester. For students who may have some algebraic deficiencies, a supply of practice problems (not for credit) will be made available in MathXL. **It is extremely difficult, if not impossible, to succeed in Calculus without having the necessary fundamental algebra skills beforehand. It is the responsibility of the student to assess and sharpen these algebra skills, if need be, throughout the semester.**

**EXAMS** closely reflect the material covered in class and on the homework. A tentative exam schedule is provided in this syllabus; however, exam dates (with the exception of the final exam) may be subject to change, in accordance with the pace of the class. If an exam date is changed, you will be notified sufficiently in advance, both in class and on the Blackboard announcements page.

**HOMEWORK QUIZZES:** There may be some quizzes sprinkled throughout the semester; these will be announced in class and on Blackboard. They are not listed in the syllabus calendar, as their dates are dependent upon the pace and progress of the class. These are called “homework quizzes” because they come directly from the MathXL homework problems. Therefore, the best way to prepare for them is to stay caught up with your MathXL homework. These quiz points are included under your “Class Work” points.

**Homework quizzes are open-note.** You can use your lecture notes and/or homework scratch work, but NOT a textbook. You may also work in groups of up to 4 students (quizzes only – NOT during exams). All group members from each group receive the same quiz score. Quizzes almost always take place during the last part of class, and may not be taken early (don’t even ask!). **There are no make-up quizzes. If you are absent or leave class early for ANY reason, then you miss the quiz. Period.**

**MAKE-UPS:** There are no make-up exams. Do not miss a scheduled exam. No exam scores will be “dropped”. However, your lowest exam grade may be replaced with your final exam grade if that improves your overall grade.

**OUT OF CLASS ASSIGNMENTS:** The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a semester. The Western Association of Schools and Colleges (WASC) has adopted a similar requirement. **Since this is a 4 unit class, this means that you should expect and plan for a minimum of 8 hours to be spent working on calculus *outside of class* each week.**

**PACE:** This course will move rapidly. **Because we only meet twice per week, we must cover a lot of material during each class period.** It is critical that you stay caught up, avoid missing class, avoid falling behind, stay organized, ask questions, and get additional help whenever necessary.

**Course Grading Based on Course Objectives**

| <u>EVALUATION:</u>         |       | <u>GRADING SCALE</u> |   |
|----------------------------|-------|----------------------|---|
| Algebra Review Mini-Test   | 50    |                      |   |
| Class Work & Group Quizzes | 125   | 900 – 1000           | A |
| MathXL Homework            | 100   | 800 – 899            | B |
| Projects                   | 75    | 700 – 799            | C |
| 3 exams × 150 points each  | 450   | 600 – 699            | D |
| Final Exam (cumulative)    | + 200 | Below 600            | F |
|                            | 1000  |                      |   |

**The grade that is earned, according to the point scale above, is the grade that will be received. Grades are not subjective. Grades are not negotiable. All students will be treated equally.**

**NOTE: The final exam in this course is cumulative and mandatory for all students.**

**Attendance**

- A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of an online class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student’s status will be the same as that of any other student who desires to add a class. It is the student’s responsibility to drop or officially withdraw from the class. See General Catalog for details.
- Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absences exceed the number of hours the class is scheduled to meet per week may be dropped. For online courses, students who fail to complete required activities for two consecutive weeks may be considered to have excessive absences and may be dropped.
- Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as ‘excused’ absences.

Any in-class activities or worksheets that are missed due to an absence CANNOT be made up. Furthermore, on quizzes and exams you are responsible for all material covered in class, regardless of whether or not you were here. Therefore, if you do miss class, you should obtain any missed worksheets or other materials from the instructor, and obtain lecture notes from a classmate.

Attendance is crucial to your success in this course. You are expected to attend every class and **remain during the entire class. Leaving class early without prior consent from the instructor counts as an absence, and costs points.** If you cannot commit to being in class during the regularly scheduled time (Monday/Wednesday, 10:20 am – 12:25 pm), then you should drop this class and take it at a different time. If you have 4 unexcused absences, I may drop you from the course.

Although you may be dropped for excessive absences, you should never *assume* that the instructor has dropped you if you simply stop showing up. It is your responsibility to ensure that you have dropped through WebSTAR by the deadline (May 14, 2016) to receive a “W” instead of a failing grade.

## Classroom Etiquette

**School is place to act with respect.** Remember that different students have different paces and styles of learning, and that all students have the right to ask questions in class. As a student, you have the right to a safe and comfortable learning environment. You do not have the right to impinge on other students' learning. Talking or other disruptive classroom behavior WILL affect your grade.

Students who disrupt or interfere with a class may be sent out of the room and required to meet with the Campus Disciplinary Officer before returning to continue with coursework. For further information, refer to the Standards of Student Conduct on pages 41-42 of the 2015-2016 General Catalog.

### Class work points:

- You do not receive points just for attending class or lose points for missing class. However, several in-class activities will be worth points which you can only receive if you are in class that day. Any activities you miss by being absent CANNOT be “made up”.
- Unlike exam points and homework points, **class work points can be both earned and lost.** Points are lost through disrespectful or disruptive behavior such as talking in class, leaving class early, answering cell phones, etc.

### Cell phones and other electronic devices:

- Turn OFF all cell phones and electronic devices before class, and especially during exams.
- Cell phones that are on “vibrate” mode are STILL DISRUPTIVE.
- Leaving the room to answer cell phones that are in “silent” mode is disruptive and unacceptable. Take care of private calls/texting on your own time.
- Students caught texting during class may be asked to leave class, with an unexcused absence given for that day. Simply put, **if you do not plan to participate and engage in class, then do not bother coming to class.**
- The use of text messaging or other electronic devices for cheating on tests will be treated with the same seriousness as any other form of cheating (see ACADEMIC HONESTY below). Cell phones may not be used as calculators during exams.

### Academic Honesty

- Plagiarism is to take and present as one's own the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing written materials. If you do not understand how to correctly 'cite a source', you must ask for help.
- Cheating is defined as fraud, deceit, or dishonesty in an academic assignment or using or attempting to use materials, or assisting others in using materials, or assisting others in using materials, which are prohibited or inappropriate in the context of the academic assignment in question.

Anyone caught cheating or will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action. Please refer to the General School Catalog for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to the following: (a) plagiarism; (b) copying or attempting to copy from others during an examination or on an assignment; (c) communicating test information with another person during an examination; (d) allowing others to do an assignment or portion of an assignment, (e) use of a commercial term paper service

- The consequences of academic dishonesty are severe and may include the possibility of expulsion. For further information, refer to the Standards of Student Conduct on p. 34 and pp. 41-42 of the 2015-2016 General Catalog.

### Additional Help

- Blackboard support center: <http://bbcrm.edusupportcenter.com/ics/support/default.asp?deptID=8543>
- Learning Labs: There are several 'labs' on campus to assist you through the use of computers, tutors, or a combination. Please consult your college map for the Math Lab, Reading & Writing Lab, and Learning Services (library). Please speak to the instructor about labs unique to your specific program
- Library Services: There is more to our library than just books. You have access to tutors in the learning center, study rooms for small groups, and online access to a wealth of resources.

### Disabled Student Programs and Services (DSPS)

Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs and Services (DSP&S) office as soon as possible. If you feel you need to be evaluated for educational accommodations, the DSP&S office is located in Building 2100, telephone 760-355-6313.

### Student Counseling and Health Services

Students have counseling and health services available, provided by the pre-paid Student Health Fee. We now also have a fulltime mental health counselor. For information see <http://www.imperial.edu/students/student-health-center/>. The IVC Student Health Center is located in the Health Science building in Room 2109, telephone 760-355-6310.

### Student Rights and Responsibilities

Students have the right to experience a positive learning environment and due process. For further information regarding student rights and responsibilities please refer to the IVC General Catalog available online at [http://www.imperial.edu/index.php?option=com\\_docman&task=doc\\_download&gid=4516&Itemid=762](http://www.imperial.edu/index.php?option=com_docman&task=doc_download&gid=4516&Itemid=762)

### Information Literacy

Imperial Valley College is dedicated to help students skillfully discover, evaluate, and use information from all sources. Students can access tutorials at <http://www.imperial.edu/courses-and-programs/divisions/arts-and-letters/library-department/info-lit-tutorials/>

### Anticipated Class Schedule / Calendar

(\*With the exception of the Final Exam, these dates are tentative and subject to change with advance notice!)

| Monday                        | Wednesday                            | Weekly Goals            |
|-------------------------------|--------------------------------------|-------------------------|
| 2/15 <b>Holiday: No class</b> | 2/17 <b>First day of class</b>       | Welcome, review (Ch. R) |
| 2/22                          | 2/24 <b>Algebra Review Mini-Test</b> | Ch. 1                   |
| 2/29 MathXL enrollment due    | 3/2                                  | Ch. 2                   |
| 3/7                           | 3/9                                  | Ch. 2, 3                |
| 3/14                          | 3/16                                 | Ch. 3                   |
| 3/21                          | 3/23 <b>Exam 1</b>                   | Ch. 3; review, exam     |
| 3/28 <b>S P R I N G</b>       | 3/30 <b>B R E A K</b>                | Ch. 3, 4                |
| 4/4                           | 4/6                                  | Ch. 4, 5                |
| 4/11                          | 4/13                                 | Ch. 5                   |
| 4/18                          | 4/20                                 | Ch. 5, 6                |
| 4/25                          | 4/27 <b>Exam 2</b>                   | Ch. 6; review, exam     |
| 5/2                           | 5/4                                  | Ch. 7                   |
| 5/9                           | 5/11                                 | Ch. 7                   |
| 5/16                          | 5/18                                 | Ch. 7,8                 |
| 5/23                          | 5/25                                 | Ch. 8, 9                |
| 5/30 <b>Holiday: No class</b> | 6/1 <b>Exam 3</b>                    | Ch. 8, 9                |
| 6/6 Final Exam review         | 6/8 <b>FINAL EXAM</b>                | Review; Final           |



**IMPORTANT DATES AND DEADLINES:**

|             |  |
|-------------|--|
| February 27 | Last day to withdraw without owing fees and/or be eligible for a refund<br>Last day to add a class |
| February 28 | Last day to withdraw without course appearing on transcripts (without receiving a “W”)             |
| May 14      | Last day to withdraw and receive a “W”   |
| June 8      | Final Exam (comprehensive)   |

**ON-CAMPUS TUTORING RESOURCES:**

**Math Lab**

Building 2500

Mon. – Thurs.: 8 a.m. – 9 p.m.

Friday: 8 a.m. – 5 p.m.

Saturday: 8 a.m. – 1 p.m.

(760) 355 – 6160 (Zhong Hu)

(760) 355 – 6187 (Rosalio Marin)

**Study Skills Center**

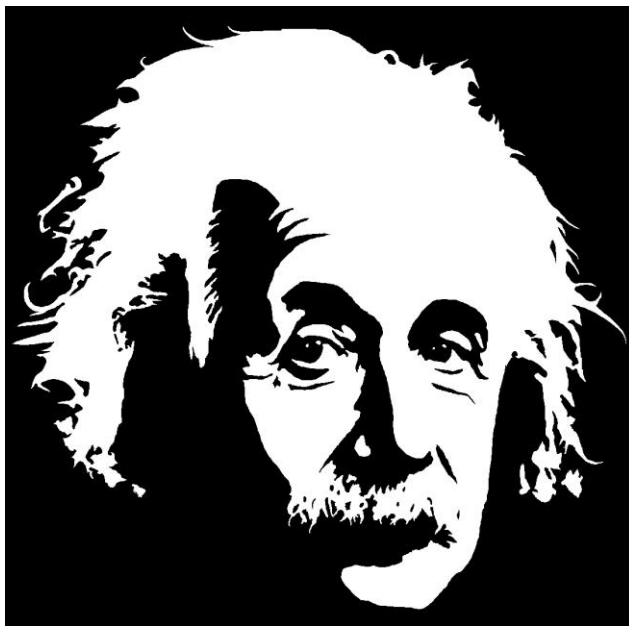
Located in the Library

Mon. – Thurs.: 9 a.m. – 5 p.m.

Friday: 9 a.m. – 3. p.m.

Saturday: Closed

(760) 355 – 6384 (Josue Verduzco)



***“Never regard your study as a duty, but as the enviable opportunity to learn to know the liberating influence of beauty in the realm of the spirit for your own personal joy and to the profit of the community to which your later work belongs.” -- Albert Einstein***