Basic Course Information

Semester	**Fall 2016**	Instructor's Name	**Caroline Bennett**
Course Title & #	**Math 240: Discrete Mathematics**	Instructor's Email	**caroline.bennett@imperial.edu**
CRN #	**10139**	Webpage	**N/A**
Room	**Building 2700; Room 2727**	Office	**Building 2700; Room 2765**
Class Dates	**8/16/16 – 12/08/16**	Office Hours	**Mon/Wed 4:00 pm – 5:00 pm** **Tues/Thurs 2:00 – 3:00 pm**
Class Days	**Tuesday/Thursday**	Office Phone	**(760) 355 – 6124**
Class Times	**8:00 – 9:25 am**	Who students should contact if emergency or other absence	**(760) 355 – 6155**
Units	**3.0**		**(760) 355 – 6201**

Course Description

This course is an introduction to the theory of discrete mathematics and introduces elementary concepts in logic, set theory, graph theory, number theory and combinatorics. This forms a basis for upper division courses in mathematics and computer science, and is intended for the transfer student planning to major in these disciplines. The topics covered in this course include methods of proof, sets and relations, functions, number theory, induction, recursion, counting principles and probability trees, permutations, combinations, introduction to computer programming, and graph theory. (CSU, UC)

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Textbooks & Other Materials

Textbook:
     a. Option 1: *Discrete Math w/Graph Theory, 3E* by Goodaire & Parmenter, Pearson (bookstore)
     b. Option 2: *Discrete Math w/Apps, 4E* by Susanna Epp, Brooks/Cole Publisher (free pdf download)

Course Objectives

Upon satisfactory completion of the course, students will be able to:
1. Use recursion to analyze algorithms and programs.
2. Write proofs using symbolic logic and Boolean Algebra.
3. Use sets to solve problems in combinatorics and probability theory.
4. Apply matrices to analyze graphs and trees.
5. Use finite state machines to model computer operations.

Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:
1. Use a truth table to test the validity of an argument. (ILO1, ILO2, ILO4)
2. Construct proofs of mathematical statements using standard techniques, including induction. (ILO1, ILO2, ILO4)
3. Apply graph theory to real world situations. (ILO1, ILO2, ILO4)

Course Requirements and Instructional Methods

HOMEWORK, as you know by now, should always be taken seriously in a math class, regardless of its point value. Some of the concepts in this course are likely very different than the type of math you are accustomed to studying. We will be entering levels of abstraction that may be new to you. Therefore, it is more important than ever that you stay caught up, begin homework as soon as possible after it is assigned, and seek help immediately if you need it. If you are generally somewhat of a "loner" when working on math homework, consider getting together and working with classmates this semester, at least once in a while, and see if it helps.

Here are some general tips for success:

1) Form a study group and work through homework problems together with classmates.
   The back rooms in Math Lab are good places to study and work together with classmates.

2) If there is a particular homework problem or concept 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).

Homework problems may be assigned from the Epp textbook; additionally, homework projects may be assigned in the form of typed handouts posted to Blackboard.

MAKE-UPS: There are no make-up exams. Do not miss a scheduled exam. No exam scores will be "dropped". However, your lowest regular exam grade may be replaced by your final exam percentage if that improves your overall grade. If you miss an exam (only one exam), then that will count as the lowest score to be replaced by the final exam score.

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 3 unit class, this means that you should expect and plan for a minimum of 6 hours to be spent working on math *outside of class* each week.**

PACE: This course will move quickly, as all college math courses do. 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

EVALUATION:

		GRADING SCALE	
Homework & Projects	150	900 – 1000	A
3 exams × 200 points each	600	800 – 899	B
Final Exam (cumulative)	+ 250	700 – 799	C
	1000	600 – 699	D
		Below 600	F

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 (Tuesday/Thursday, 8:00 – 9:25 am), then you should drop this class and take it during a different semester or at a different school. 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* 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 (November 5, 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 43 - 44 of the 2016-2017 General Catalog.

Class work points:

• You don't receive points 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 <u>not</u> be used as calculators during exams.

Academic Honesty

• <u>Plagiarism</u> 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.

• <u>Cheating</u> 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. 36 and pp. 43 - 44 of the 2016-2017 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

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!*)

Week	Dates	Weekly Goals
1	8/16, 8/18	Chapter 1
2	8/23, 8/25	Chapter 1
3	8/30, 9/1	Chapter 2
4	9/6, 9.8	Chapter 3
5	9/13, 9/15	Chapter 3, Chapter 4
6	9/20, 9/22	Chapter 4; **Exam 1**
7	9/27, 9/29	Chapter 4
8	10/4, 10/6	Chapter 4, Chapter 5
9	10/11, 10/13	Chapter 5
10	10/18, 10/20	Chapter 6
11	10/25, 10/27	Chapter 7, **Exam 2**
12	11/1, 11/3	Chapter 7
13	11/8, 11/10	Chapter 8
14	11/15, 11/17	Chapter 9, Chapter 10
	11/22, 11/24	**THANKSGIVING WEEK – NO CLASSES**
15	11/29, 12/1	Chapter 10; **Exam 3**
16	12/6, 12/8	Review; **Final Exam**

IMPORTANT DATES AND DEADLINES:

August 27	Last day to withdraw without owing fees and/or be eligible for a refund
	Last day to add a class
August 28	Last day to withdraw without course appearing on transcripts (without receiving a "W")
November 5	Last day to withdraw and receive a "W"
December 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. – 7 p.m.

Friday: 9 a.m. – 5. p.m.

Saturday: Closed

(760) 355 – 6384 (Josue Verduzco)
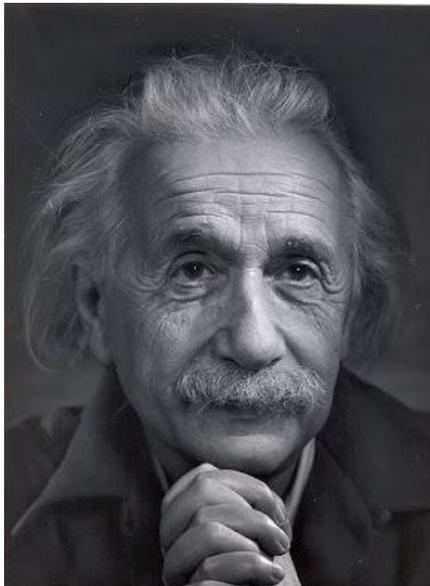
"Never regard your study as a duty, but as the enviable opportunity to learn to know the liberating influence of beauty in the realm of the spirit for your own personal joy and to the profit of the community to which your later work belongs."

-- Albert Einstein