

# California Lutheran University

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## Bachelor's Degree for Professionals

### Math 241 Discrete Mathematics

Winter 2016, Nov. 23 to Feb. 18

Room Hum 116

#### **Instructor information:**

Jonathan Detgen

Email: detgen@callutheran.edu

Phone: 805-368-2757

Office Hours: Tuesday/Thursday 8:30pm to 9:30pm or by appointment.

#### **Course Information:**

Lecture: Tuesday/Thursday 6:00 - 8:15pm

Room: HUM 116

Units: 4

Textbook: Discrete Mathematics and Its Applications, 7th Ed. ISBN-13 9780073383095

#### **Important Dates:**

Last day to drop without a "W" and full tuition reimbursement ..... December 7th

Midterm Exam ..... January 19th

Last day to drop without academic penalty

or remove incompletes from summer ..... January 19th

Final Exam ..... February 18th

#### **Course Description:**

Studies set theory, number systems, the nature of proofs, recursion, algorithms, graph theory and problem solving. Required for computer science and computer information systems majors.

#### **Course Objectives:**

At the end of this course you will be able to:

- ♣ Gain confidence in several areas of mathematics
- ♣ Be introduced to modular arithmetic
- ♣ Get exposed to sets, graphs, logic, and probability
- ♣ Learn counting principles, including permutations and combinations

#### **CLU Educational Objectives:**

- Develop Critical Thinking skills
- Develop Interpersonal and Teamwork skills
- Develop Quantitative Literacy skills

#### **Prerequisites:**

Mathematics 151 or satisfactory score on MPE

### **Course Work and Attendance Policy:**

Each class, homework will be assigned and previous homework will be returned. Homework will be started as class work and finished by the student at home. There will be a quiz at the end of each chapter covered in the textbook, one midterm exam and one final exam. If you will not be able to be in class the day of a quiz or exam, give me at least one week notice so we can set up an alternative time for the quiz/exam. If you miss a class call or email me to get the missed homework assignment. **Please read the sections from the book before each class they are to be covered** (See schedule below).

### **Number of Hours Outside of Class:**

The expectation is that a 4-credit course will meet for 50 hours of instructional time and will have 100 hours of out-of-class work (homework).

- As our 4-credit courses meet for about 49.5 hours in-person, the remaining 30 minutes of instructional time will be done through interactive discussion posts
- Outside of class, you are expected to read the text to get familiar with concepts covered each class, and to work on the homework assignments.

### **Carnegie Hours Chart**

Activity	Instructor-Led Hours		Homework Hours		Remarks
	Weekly	Course	Weekly	Course	
Readings of required text			5	55	Over 11 weeks, uneven distribution
Weekly Classes	4 hr. 30 min.	49 hrs. 30 min.			Includes final exam
Mid-term Prep				10	Average, varies by student
Homework Assignments			4	44	
Discussion Boards		2			Average, varies by student
Final Exam Prep				10	Average, varies by student
<b>Total</b>		<b>51.5</b>		<b>119</b>	

\*\* In this chart the Carnegie Instructional Hours have already been converted to traditional clock hours; these are based on a 60-minute clock hour.

### **Grading:**

Description	Percentage	Points	Your Data
Midterm	20%	75	
Final	20%	75	
Homework	20%	5 points each	
Quizzes	20%	10 points each	
Discussions	20%	1 point per post	

*Roughly, this will be the scaling:*

Grade	A	A-	B+	B	B-	C+	C	C-	D
cut-off	93%	90%	88%	83%	80%	78%	73%	70%	60%

### **Course Evaluation:**

When the course evaluation is available online you will receive an email. Feedback is important for the constant improvement of the course. The link is

<http://courseval.callutheran.edu>

### **Help Desk:**

Students may contact the Help Desk about telephone, network, wireless network, software questions password problems, hardware problems, and general consultation (i.e. you cannot log into your MyCLU portal, or you are having problems with Blackboard). Please email specific details about your problems to [helpdesk@callutheran.edu](mailto:helpdesk@callutheran.edu), click on the following link for more information [http://www.callutheran.edu/iss/technology\\_services/helpdesk.php](http://www.callutheran.edu/iss/technology_services/helpdesk.php) or call: 805.493.3698

### **Disability Statement:**

California Lutheran University is committed to providing reasonable accommodations in compliance with ADA of 1990 and Section 504 of the Rehabilitation Act of 1973 to students with documented disabilities. If you are a student requesting accommodations for this course, please contact your professor at the beginning of the semester and register with the Disability Support Services Coordinator, Wendy Jimenez, for the facilitation and verification of need. The Disability Support Services Coordinator is located in the Center for Student Success Office at 3259 Pioneer Street, and can be contacted by calling 805.493.3878 or emailing [wjimene@callutheran.edu](mailto:wjimene@callutheran.edu)

### **Veteran's Resources:**

If you are a veteran, military member, or a family member of a veteran or military member, please refer to Cal Lutheran's Veterans Resources webpage for important information: <http://www.callutheran.edu/veterans/> Also, if you are a veteran receiving benefits and you are struggling in a class, you most likely qualify for free tutoring. Please contact the Veterans Coordinator, Jenn Zimmerman, [veterans@callutheran.edu](mailto:veterans@callutheran.edu) or 805.493.3648, for more information.

### **Academic Honesty:**

Academic excellence, honesty and integrity at every level of student life. Part of CLU's dedication to academic excellence is our commitment to academic honesty. Students, faculty, staff and administration share the responsibility for maintaining high levels of scholarship on campus. Any behavior or act which might be defined as "deceitful" or "dishonest" will meet with appropriate disciplinary sanctions, including dismissal from the University, suspension, grade F in a course or various forms of academic probation. Policies and procedures regarding academic honesty are contained in the faculty and student handbooks.

Plagiarism, cheating, unethical computer use and facilitation of academic dishonest are examples of behavior which will result in disciplinary sanctions. Plagiarism includes, but is not limited to:

- word for word copying without using quotation marks or presenting the work as yours
- using the ideas or work of others without acknowledgement
- not citing quoted material. Students must cite sources for any information that is not either the result of original research or common knowledge.

Standards of Student Conduct Statements:

- [http://www.callutheran.edu/student\\_life/student\\_handbook/](http://www.callutheran.edu/student_life/student_handbook/)
- <http://www.callutheran.edu/ctl/services/academic-honesty.php>

### **University Harassment Policy:**

Be civil to each other, both on- and offline. For information on the University's **student harassment policy and rights, please go to the following link:**

[http://www.callutheran.edu/student\\_life/student\\_handbook/](http://www.callutheran.edu/student_life/student_handbook/)

### **Sexual Misconduct:**

California Lutheran University does not tolerate any degree of sexual misconduct on or off-campus. We encourage you to report if you know of, or have been the victim of, sexual harassment, misconduct, and/or assault. If you report this to a faculty member, she or he must notify Cal Lutheran's Title IX Coordinator about the basic facts of the incident. More information about your options for reporting can be found at: <http://www.callutheran.edu/title-ix/>

### **Pearson Library:**

Pearson Library provides access to scholarly books, journals, ebooks, and databases of full text articles from scholarly journals. To begin using these materials, visit the library web page <http://www.callutheran.edu/iss/research/>

- To contact a librarian:
- Chat on the Library's home page
- Email: [CLUlibrary@callutheran.edu](mailto:CLUlibrary@callutheran.edu)
- Phone: (805) 493-3250.
- CLU's satellite locations, see <http://www.callutheran.edu/iss/research/satellite.php> for the full range of services provided.

### **CLU Writing Center:**

The Writing Center provides 1:1 writing consultations, in-person and online, with trained undergraduate and graduate writing consultants. We welcome all writing-related projects at any stage of the writing process across the diverse disciplines of study at CLU. The Writing Center also hosts writing workshops, provides in-class visits, facilitates writing groups, and offers a writer's studio option for longer, sustained projects. Services suit writers of all levels, including traditional undergraduates, graduate students from all fields, all English language learners, and accomplished scholars alike. All members of the CLU community with an @callutheran.edu email address are welcome to make use of our services. For more information, please visit at [www.callutheran.edu/writing\\_center](http://www.callutheran.edu/writing_center) or call 805-493-3257. Please schedule appointments online through MyCLU Blackboard with the yellow "The Writing

Center” icon in “Tools,” or stop by The Writing Center itself, located in the Darling Collaboration Suite of Pearson Library.

This syllabus is subject to change.

## Class Schedule

Tuesday 11/24/15

**Chap.** 1.1  
1.2  
1.3

Thursday 11/26/15

**Thanksgiving**

Tuesday 12/1/15

**Chap.** 1.4  
1.5  
1.6

Thursday 12/3/15

**Chap.** 1.7  
1.8

Tuesday 12/8/15

**Quiz**  
**Chap.** 2.1  
2.2

Thursday 12/10/15

**Chap.** 2.3  
2.4  
2.5

Tuesday 12/15/15

**Quiz**  
**Chap.** 4.1  
4.2

Thursday 12/17/15

**Chap.** 4.3  
4.4

12/18/15 to 1/3/16

**Winter Break**

Tuesday 1/5/16

**Chap.** 4.5  
4.6

Thursday 1/7/16

**Quiz**  
**Chap.** 6.1

6.2

Tuesday 1/12/16

**Chap.** 6.3

6.4

Thursday 1/14/16

**Chap.** 6.5

6.6

Tuesday 1/19/16

**Midterm**

Thursday 1/21/16

**Chap.** 7.1

7.2

Tuesday 1/26/16

**Chap.** 7.3

7.4

Thursday 1/28/16

**Quiz**

**Chap.** 10.1

10.2

Tuesday 2/2/16

**Chap.** 10.3

10.4

Thursday 2/4/16

**Chap.** 10.5

10.6

Tuesday 2/9/16

**Chap.** 10.7

10.8

Thursday 2/11/16

**Quiz**

**Chap.** 11.1

11.2

Tuesday 2/16/16

**Chap.** 11.3

11.4

11.5

Thursday 2/18/16

**Final Exam**