

## COURSE OUTLINE

### MATH 322 [A01; CNR 22057]: Combinatorial Designs

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### General Course Information

**Number of Units** 1.5

**Pre-requisites** Either MATH 122 or MATH 151 and MATH 211 or MATH 233A, or MATH 222; or permission of the department

### Lectures, Office Hours, and Assistance

**Lectures** 3:30 - 4:20 pm Monday, Wednesday, and Thursday in CLE A-206 [Lecture begins on January 7 and ends on April 5.]

**Office Hours** 10:00 - 11:00 am Monday and 1:00 - 2:00 pm Wednesday ( DTB A549) [or by appointment (send email to book one)]

### Course Material and Online Resources

**Reference1** Notes for Math 322 by Dukes and MacGillivray

**Reference2** Combinatorics by Peter J. Cameron, Cambridge University Press

**Course webpage** Look at [www.uvic.ca/science/math-statistics](http://www.uvic.ca/science/math-statistics) → Current Students → Undergraduate → Courses → 322; this page contains all the information about the course.

**Calculator** The only acceptable calculator is the Sharp EL-510R or the Sharp EL-510RNB. It may be purchased at the UVic Bookstore or elsewhere for about \$12. A calculator is permitted in this course.

### Syllabus

Set systems, extremal set theory, partially ordered sets, lattices, latin squares, factorization of graphs, block designs, finite geometry, and error correcting codes. Some topics may be added or omitted, as time permits.



## Term work

There will be five graded assignments throughout the term. Assignments will be posted on the course web. You will need to submit your solutions to the assignment questions in class on the due date (indicated on the assignment sheet) before the lecture starts. No late submission will be accepted. Assignments must be done neatly and contain complete explanations. Marked assignments will be returned to you in class (usually) within seven calendar days. There will be two midterm tests which are scheduled tentatively on February 14 and March 28 respectively and a 3-hour final examination.

## Evaluation and Grading

Your final percentage grade will be computed according to the scheme shown in the table below.

Homework Assignments	Midterms	Final Exam
Bi-weekly	Feb. 14 , Mar. 28	TBA
26%	24%	50%

## Missing Work

Concessions are considered only in accordance with the section on Academic Concessions in the UVic Calendar in cases of illness, accident or family affliction. A note from a doctor or counsellor or varsity coach is required for any concession. In case when concessions are approved, we will apply the following to recover the percentage of the missed work:

- (i) Missed assignments: Marks for midterm covering the same work will be substituted;
- (ii) Missed assignments as well as midterm covering the same work: one make-up assignment will be given; for missed midterm see (iii) and (iv);
- (iii) One missed midterm: total calculated out of 88 and adjusted to a percentage;
- (iv) Two missed midterms: a make-up test worth 12% covering all the work of both midterms will be given on April 5 for all students concerned; total calculated out of 88 and adjusted to a percentage.

If you have any question or concern about your scores on assignments/tests, you need to bring it to my attention within seven calendar days of the date when the assignments/tests are returned to the class.

For homework assignments, collaboration with your classmates is encouraged but you must submit your own work (that is, all solutions must be written independently in your own words and reflecting your understanding).

Students who achieve less than 40% on the final examination will not pass the course. We are imposing this requirement because so much weight is being put on the assignments and midterms.



**Accessibility** Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the Centre for Accessible Learning (CAL) as soon as possible. The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations <http://uvic.ca/cal>. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

**Grading** Percentage scores will be converted to letter grades according to the university-wide standard table (Undergraduate: <http://web.uvic.ca/calendar/undergrad/info/regulations/grading.html#>). (Graduate: <http://web.uvic.ca/calendar/grad/academic-regulations/grading.html#>).

**Final Examination** Off-schedule final examinations (i.e., deferred examinations) are given only in accordance with the university policy as outlined in the Calendar. If you are unable to write a final examination due to illness, accident or family affliction, please refer to the following webpages for detailed instructions how to proceed: Undergraduate: <http://web.uvic.ca/calendar/undergrad/info/regulations/concessions.html> Graduate: <http://web.uvic.ca/calendar/grad/registration/concessions.html> Students are **strongly advised not to make plans for travel or employment during the final examination period** as special arrangements will not be made for examinations that conflict with such plans.

**Supplemental Examinations.** The Department of Mathematics and Statistics does not award 'E' grades or offer Supplemental Examinations in any of its courses.

## Policies and Ethics

**Attendance** The university Calendar states 'Students are expected to attend all classes in which they are enrolled.' (see <http://web.uvic.ca/calendar2014/FACS/UnIn/UARe/AcCo.html>). Our courses are conducted on that basis. If you miss an announcement (information concerning midterms, corrections to assignment, etc.) because you did not attend class, you must accept the consequences of not having learned of the change.

**Guidelines on Religious Observances** Where classes or examinations are scheduled on the holy days of a religion, students may notify their instructors, at least two weeks in advance, of their intention to observe the holy day(s) by absenting themselves from classes or examinations. Instructors will provide reasonable opportunities for such students to make up work or missed examinations.

**Academic Integrity** Academic integrity is intellectual honesty and responsibility for academic work that you submit individual or group work. It involves commitment to the values of honesty, trust, and responsibility. It is expected that students will respect these ethical values in all activities related to learning, teaching, research, and service. Therefore, plagiarism and other acts against academic integrity are serious academic offenses.



**The responsibility of the institution**

Instructors and academic units have the responsibility to ensure that standards of academic honesty are met. By doing so, the institution recognizes students for their hard work and assures them that other students do not have an unfair advantage through cheating on essays, exams, and projects.

**The responsibility of the student**

Plagiarism sometimes occurs due to a misunderstanding regarding the rules of academic integrity, but it is the responsibility of the student to know them. If you are unsure about the standards for citations or for referencing your sources, ask your instructor. Depending on the severity of the case, penalties include a warning, a failing grade, a record on the students transcript, or a suspension.

It is your responsibility to understand the Universitys policy on academic integrity:  
<http://web.uvic.ca/calendar2014/FACS/UnIn/UARe/PoAcI.html>

