

COURSE OUTLINE

MATH 122: Logic and Foundations

Instructor(s)

Lecturer Anthony Quas

Email aquas@uvic.ca

Phone 250-721-7463

Office David Turpin Building A-538

General Course Information

Number of Units 1.5

Pre-requisite One of MATH 100, 102, 109 and 151; or permission of the Department.

Textbook

Discrete Mathematics for Logic and Foundations (Custom UVic edition of *Discrete Mathematics with Graph Theory, 3rd Ed.* by Goodaire and Parmenter.

Additionally, Gary MacGillivray has written a fairly complete set of course notes, based on the textbook, available at <http://www.math.uvic.ca/faculty/gmacgill/122Notes/>

Office Hours and Assistance

Tuesdays 2:00 pm to 3:00 pm, DTB A-538

Thursdays 2:00 am to 3:00 pm, DTB A-538

or send an email to make an appointment

Learning Objectives

After taking this course, you will:

- be able to analyse the logical structure of an argument;
- be able to construct mathematical proofs;
- be familiar with many basic mathematical objects;

Class Meetings

Tuesdays, Wednesdays and Fridays from 10:30–11:20 in David Turpin Building, A110.



Specific Topics

- Logic (validity of arguments, truth tables);
- sets and relations (operations on sets, equivalence relations, partial orders);
- functions (inverse functions, one-to-one correspondences);
- the integers (divisibility, greatest common divisor, prime numbers, congruence);
- induction and recursion;

Evaluation and Grading

Your final percentage grade will be computed according to the following scheme.

Five take-home assignments (4% each)	20%
In-class assignments	10%
Six bi-weekly quizzes (5% each)	30%
Final exam	40%

You should expect to spend an average of 6–10 hours per week outside class time working on this class.

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 Resource Centre for Students with a Disability (RCS D) as soon as possible. The RCS D staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations <http://rcsd.uvic.ca/>. 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 (<http://web.uvic.ca/calendar2017-05/undergrad/info/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: <http://web.uvic.ca/calendar2017-05/undergrad/info/regulations/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/calendar2017-05/undergrad/info/regulations/attendance.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.

Missing work If you miss an exam due to illness, you must obtain a doctor’s note explaining your absence. In this case, the final grade will be used to replace the missing exam grade.

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 student’s transcript, or a suspension.

It is your responsibility to understand the University’s policy on academic integrity: <http://web.uvic.ca/calendar2017-05/undergrad/info/regulations/academic-integrity.html>

Course Schedule (Dates are approximate)

Date	
1/5/17	First day of classes
3/7/17–4/7/17	Reading break
28/7/17	Last day of classes

