

# Possible MAT138 description changes

August 29, 2018 7:55 AM

## Was:

**Course Description:** The reading and understanding mathematical statements, analyzing definitions and properties, formulating conjectures and generalizations, providing and writing reasonable and precise arguments, modelling and solving proofs. This course is an excellent preparation for MAT157Y1, MAT237Y1, MAT240H1, and other proof-oriented courses. Note: students may take this course concurrently with MAT157Y1 or prior to registering in MAT157Y1.

**Prerequisite:** High school level calculus

**Exclusion:** MAT157Y1

**Distribution Requirement:** Science

**Breadth Requirement:** The Physical and Mathematical Universes (5)

From <<https://timetable.iit.artsci.utoronto.ca/>>

## Felix:

The goal of this course is for students to become comfortable with abstraction, rigour and logic. To understand the difference between a definition and a theorem and to learn how to critique and to write simple proofs.

The use of quantified propositions and their negations in the formulation of math properties and their proofs, the most common valid arguments involved in math proofs and the most common fallacies will be discussed in this course.

Some of the types of proofs that will be considered, mostly through selected examples, include: direct proofs, proofs by contrapositive, by contradiction, by induction, by case analysis and by combined methods as well as proofs by counterexample and proofs of existence and uniqueness.

The course is aimed to students interested in the creative character of mathematics, particularly those planning to take any of our proof oriented courses.

The specific mathematical content of the course, as well as its "problem solving" component may vary from year to year.

## Alfonso:

The goal of this course is for students to become comfortable with abstraction, rigour, logic, and proofs. They will practice reading and understanding mathematical statements, analyzing definitions and properties, formulating conjectures and generalizations, providing and writing reasonable and precise arguments, writing and critiquing proofs. The instructor may use specific mathematical content, which could vary from year to year, to practice these skills. The course is aimed to students interested in the creative character of mathematics, particularly those planning to take any of our proof-oriented courses, and is an excellent preparation for MAT137Y1, MAT157Y1, or MAT240H1.

Note: students may take this course concurrently with MAT157Y1 or MAT137Y1, or prior to registering in MAT157Y1 or MAT137Y1.