

# MAT2377B Probability and Statistics for Engineers

## Winter 2021 | Instructor: P. Boily

### COURSE DESCRIPTION

A concise survey of: combinatorial analysis; probability and random variables; discrete and continuous densities and distribution functions; expectation and variance; normal (Gaussian), binomial and Poisson distributions; statistical estimation and hypothesis testing; method of least squares, correlation and regression. The emphasis is on statistics and quality control methods for engineers.

### PRE-REQUISITES

Prerequisite: MAT1320 or 1330. MAT1322 or 1325 or 1332 is a co-requisite to MAT2377.

### ASSIGNMENTS

There will be 3 assignments, posted on the course website.

Prepare each assignment as a single PDF file and upload to the course Brightspace page. Documents in other formats will not be marked.

You can overwrite your submissions prior to the deadline, but you cannot submit after the deadline. Submissions by e-mail will not be accepted, unless there are exceptional circumstances.

### MAIN TEXT

R.E. Walpole, et. al, *Essentials of Probability and Statistics for Engineers and Scientists*, Pearson.

### EVALUATION

**Assignments** (20%)  
**Midterm Exam** (25%)  
**Final Exam** (55%)

### NOTES

Any change to the course outline will be announced in the exercise sessions, on the course webpage, or on Brightspace.

The materials you receive for this course are **copyrighted**. You do not have permission to upload the course materials, including any lecture notes or recordings, to any website.

### COURSE SCHEDULE

**VIDEO LECTURES** are asynchronous and available on the course website.

**EXERCISE SESSIONS** are held on TUE 10:00-11:20 and THU 08:30-09:50; they will be recorded and made available on the course website, as will the Zoom link to join.

**OFFICE HOURS** will be held during the exercise sessions; appointments can be made *via* Slack.

### EXAMS

The midterm exam will be held online on **Thu, Feb 25, 2021**, from 10:00am to 11:20am (EST).

The final exam (3hrs) will be held online during the examination period.

Both exams will use the Mobius platform, which must be accessed from the course Brightspace page. For more information, **consult the Mobius Exam Instructions** on the course website.

Online monitoring software such as Respondus will **NOT** be used.

### EXPECTATIONS

Ideally, you'd spend at least 8-10 hours each week on this course, on average (watching the videos, trying some of the exercises, in the classroom, working on the assignments, etc.). But it's the \$%& pandemic. Let's keep that in mind.

For all deliverables in this course, you must write your answers individually, according to the University's Academic Regulation 14. The penalty for cheating is an F for ALL the term's courses.