Course Outline
Faculty of Science
Department of Mathematics and Statistics

Course: MATH 2030: Elementary Probability
Term: Summer 2021
Section: A (TR 14:30 - 16:00 in the comfort of your house)
Prerequisite: One of SC/MATH 1014 3.00, SC/MATH 1310 3.00, SC/ISCI 1402 3.00, SC/ISCI 1410 6.00.

Instructor: Aram Dermenjian (aram.dermenjian@gmail.com)
Lectures: Online, asynchronous (pre-recorded)
Problem Sessions: Tuesdays, Thursdays 14:30 - 16:00 (During normal class time)
Student Hours: Wednesdays 10:00 - 11:30; 18:00 - 19:30; by appointment through Calendly (through zoom)
Zoom info: 963 1417 8718 (password: 64)

Hi human! My name is Aram and my preferred pronouns are he/him. I'll be teaching probability this semester! Feel free to call me Aram or Dr. Dermenjian, or any mix that makes you feel comfortable.

I tend to teach classes a little bit differently than most other math professors at York. As this is the first time I'm teaching a full semester online, I've tried to design the class with the current world situation in mind while also providing you with the tools you need to learn the required material. The course is a flipped style course which means that lecture time and problem time are swapped. What this means is that instead of learning in class and doing problems at home, you'll be doing the learning at home and the problems in class. Each week I will put online the lectures for the week and a set of handouts. The handouts, if you chose to use them, are there to help you take notes instead of having to write down everything. The videos themselves will be uploaded in 5-15 minute chunks to make watching the videos easier. I will also put them into playlists in case you prefer watching them back to back without interruption.

Due to the pandemic that is still happening, I wanted to say that I understand these are difficult times to study and to learn. Concentration is difficult and we don't all have the proper environment to study to the fullest of our capabilities. I've tried to design the course with flexibility so that you can do most things at your own pace. If you need extensions for anything, don't hesitate to ask.

-Aram

Official Course Description: Introduction to the theory of probability as preparation for further study in either mathematical or applied probability and statistics. Topics include probability spaces, conditional probability, independence, random variables, distribution functions, expectation, Chebyshev's inequality, common distributions, moment-generating functions and limit theorems.

Textbook:
Probability by Jim Pitman (1993).

COURSE POLICIES

Language: All assignments may be completed in either English or French.

Late policy/extensions: Life happens. A short extension will be granted if you contact me before a deadline.

Websites:

- eClass (Moodle): Moodle will be the primary website used for the online course website.

- Aram's personal website will serve as a backup for all course content in case moodle ever is offline. It will also be the location of the student portal where you will access homework and exam.

- Piazza: We will be using Piazza for questions/problems in the course. Post all questions on homeworks, quizzes, etc. in Piazza so that others who have the same question can see it. If you know the answer to a question posted on piazza you're more than welcome to respond to it before I do! (This is a great way for you to make sure you actually understand a concept!) If you feel uncomfortable asking/answering questions through piazza, know that you can post anonymously and no one will see who asked (even me)! So don't be afraid to use it and to ask all questions. The only rule is that you can't post "how do I solve this problem" questions from exams and homework unless that exam or homework is already completed for the entire class (aka after the second chance/make-up exam is done).

Email: All course related questions should be asked in Piazza. If you need to ask a personal question that is related to you personally (such as asking for an extension), you may email me at aram.dermenjian@gmail.com. Note that I will not respond to emails after 17:00 or before 10:00. I will try and respond to all emails within 24 hours of receiving the email.

Grading: The grading scheme for the course conforms to the 9-point grading system used in the undergraduate programs at York:

Grade	Grade Point	Percent Range	Grade	Grade Point	Percent Range
A+	9	90–100	C	4	60–64
A	8	80–89	D+	3	55–59
B+	7	75–79	D	2	50–54
B	6	70–74	E	1	45 − 49
C+	5	65–69	F	0	0 − 44

Course Evaluation: The final grade for the course will be weighted as indicated below:

Quizzes:	**15%**	24 total, 4 dropped
Homeworks:	**20%**	8 total, 1 dropped
Exams:	**45%**	3 total
Project:	**20%**	

NOTE: Exam grades are variable. The test that you do the best on will count more (worth 20%) and the test you did your worst on will count less (10%). This gives a total of $20\% + 15\% + 10\% = 45\%$. (Moodle won't let me do a grading system like this, so note that moodle will show the average grade. I will implement the variable grade once the semester has completed.)

Course Assessments:

- **Weekly Quizzes:** Available on eClass every Monday. Each quiz will have two parts:

  1. Update Quiz: Must be completed before Tuesday to help me plan class. Can only be submitted *one* time. More of a check-in than a quiz.

  2. Mastery Quiz: You may retake the mastery portion as many times as you need until you get the grade you want. You have two weeks to do the quiz. The point is for you to test yourself to make sure you understand the material.

  Your lowest 4 quizzes are automatically dropped and thus no make-up quizzes are given.

- **Homeworks:** You will have one to two homework assignments for each chapter of the book (8 homeworks in total). Your lowest homework grade will be dropped. You're allowed to turn in one homework up to 2 days late with no questions asked if you forgot to ask for an extension. After the one free allowance, if an extension is not requested there is a 20% penalty for each day the homework is late.

- **Exams:**

  - **Procedure:** Exams will be one hour long and will be available for 24 hours. You will submit your answers right away in eClass and then you can upload your solutions in crowdmark up to one hour later. Answers in your crowdmark upload must be the same as in your eClass submission. If you find a mistake after you've submitted to eClass, but before uploading to crowdmark, you may submit a supplemental solution on a second page which (a) gives the new solution and (b) explains: what you did wrong, why you did it wrong, what you changed in the new version, and why the new version is more correct than the original. *You must still submit the wrong version or no points will be given.*

  - **Second-chance exams:** Since life can be stressful, there will be a second-chance exam for each midterm exam in case exam day is particularly stressful and you fail the exam because of it. Second-chance exams will be held at the same time as make-up exams for those who asked for extensions. There is a penalty of 30% for second-chance exams (which means the max grade is 70%).

  - **What will be on the exams:** For each question asked about what material will be on the exam, I will increase the difficulty of the exam. It is to be assumed that any and all material covered in class can and will be on any exam.

  - **What can you use during an exam:** All exams are open book, meaning that you may use your notes from this course and the textbook. Online resources are strictly prohibited during the exam except for: our eClass, Piazza and the textbook in case you are reading it online. Please see the section on cheating for a more detailed account for what counts and does not count as cheating.

- **Final Project:** There will be final project in this class which will consist of either a 3-5 page essay or a 3-5 minute video on the topic of your choice of an application of a concept we learned in class. The aim of this assignment is to learn mathematics communication in order to better discuss mathematics. There will be a short outline due roughly six weeks before the final project is due so that you have a checkpoint to make sure you have a topic sufficiently ahead of time. Details for the final project will be provided later.

Cheating policy: Just as with any class, I ask that you please not cheat in this class. In a math class, cheating normally means having someone else do the work for you, although it can be a lot more nuanced than that. Below you'll see a more detailed description of what classifies as cheating for each assessment type.

If you're having difficulty in class, I'd rather you come to me or another student and ask for help rather than copying/cheating because in the end, you're only hurting yourself. The point of this class is to learn how to problem solve and to face difficult tasks (and also learn some probability in the process). There is nothing wrong nor abnormal with struggling and not understanding concepts (probability is confusing!). Don't be afraid to ask for help, that's what I'm here for. Let's work together to help you succeed in this class.

Quizzes: For quizzes everything is free game.

Homework and projects:

- **Offline material:** All offline resources allowed (this includes a scientific calculator).

- **Online material:** eClass, Piazza and an online version of the textbook.

- **Collaboration:** You are allowed to collaborate with other members of the class. (This does not mean copy off one another. This means work together in order to learn the material.)

- Asking questions online to people not registered in this class is considered cheating.

- You are not allowed to have someone else do an assignment (or a part of an assignment) for you.

Exams:

- **Offline material:** Notes from this class, a printed version of the textbook and a scientific calculator

- **Online material:** eClass, Piazza and an online version of the textbook.

- **Collaboration:** No collaboration between others is allowed

- Asking questions online to people other than myself is considered cheating.

- You are not allowed to have someone else do an assignment (or a part of an exam) for you.

Official Academic Integrity Information: Acts of academic dishonesty in this course are treated very seriously. Don't cheat, don't pay someone to do your work for you, etc.
`https://spark.library.yorku.ca/academic-integrity-what-is-academic-integrity/`

English version:
`https://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/`
Version française:
`https://secretariat-policies.info.yorku.ca/policies/honnetete-intellectuelle-politique/`

CAMPUS RESOURCES

A full list of campus resources available with detailed information can be found at:
`https://mathstats.info.yorku.ca/our-programs/need-help/`

Learning Commons has support for helping students academically:
`http://learningcommons.yorku.ca/`

Student Accessibility Services (SAS): The SAS provides academic accommodation and support to students with disabilities. Registration is confidential.
`https://accessibility.students.yorku.ca/`

Student Counselling and Development (SCD): The SCD provides psychological services to the York University Community. Registration is confidential.
`https://counselling.students.yorku.ca/`

Dates and Deadlines: University-wide dates and deadlines can be found at:
`https://registrar.yorku.ca/enrol/dates`

Key Dates:

- Classes Start – 10 May

- Last day to add a class – 23 May

- Last day to add a class (requires permission) – 7 June

- Reading Week – 22-25 June

- Canada Day (No class) – 1 July

- Last day to drop w/o grade – 9 July

- Last day to withdraw (Receive "W" on transcript) – 10 Aug.

- Classes End – 10 Aug

- Good Friday - University closed – 10 April

- Final Exams – 12-19 Aug