



UNIVERSITY OF MARYLAND

STAT400 – Applied Probability and Statistics I

Fall 2022

Instructor. Mickaël Latocca (he/him) (latocca@umd.edu), [MHT4104](#).

Office Hours on Mondays 8:00am – 9:00am and Wednesdays 4:00pm – 5:00pm.

Lectures. Mondays, Wednesdays, Fridays 12:00pm – 12:50pm, [BRB1101](#).

- All MWF 08/29 – 12/12, no class on 09/05, 11/23 and 11/25.
- Lectures are in-person, on blackboard only.
- Lectures (audio and video) will be recorded (the instructor will try its best) and uploaded with panopto on ELMS-CANVAS.

Teaching Assistants.

- Chengze Duan, office hour: Thursdays 2:30pm – 3:30pm and Fridays 3:00pm – 4:00pm in MATH 4400.
(cduan12@umd.edu)
- Joseph Engmark, office hour: Wednesdays 2:00pm – 3:00pm in PHY 2105.
(engmark@umd.edu)
- Jackson Hopper, office hour: Mondays 3:00pm – 4:00pm in MATH 2117.
(hopper@umd.edu)

Textbook. Jay L. Devore, *Probability and Statistics: For Engineering and the Science*, 8th or 9th edition. You are **not** required to buy the textbook.

Level of rigour. Standard. This means that unjustified answers are not considered as answers. Even if fully rigorous proofs are not expected, explanation of how you get to the result is expected.

Prerequisites. The basic prerequisite for this class is a Calculus II course, like MATH131 or MATH141. In the lectures we will put efforts in explaining again some notions encountered in Calculus II if time permits. Notions such as integration techniques, integration on unbounded intervals and infinite series manipulation are important.

Topics covered in the course. Chapters 2, 3, 4, 5, (6 or 7 depending on time) of the textbook will be covered. This includes: definition of probabilities, counting techniques and discrete probability, distribution function and continuous probability, random variables, expected value and variance, classical probability laws, independence of random variables, the law of large numbers, the central limit theorem, joint distribution, sample mean.

Course website and communication. The course [website](#) is on ELMS-CANVAS. Important announcements will be sent *via* the ELMS-CANVAS messaging. You must make sure that your email and announcement notifications (including changes in assignments and/or due dates) are enabled in ELMS-CANVAS so you do not miss any messages. You are responsible for checking your email and ELMS-CANVAS inbox with regular frequency.

Should you have a question related to the course, the lectures, the assignments or anything related, you may contact the pedagogical team by email. Send your email to who you think is better suited to answer your question (your teaching assistant or the instructor, and if your question can be answered by your teaching assistant, ask them). Any email addressed to the instructor must have a name starting with [STAT400] in order for it to be routed to the corresponding folder, therefore maximising your chances of obtaining an answer. The instructor will not answer your email if the answer is accessible on ELMS.

Assessment. The final grade is composed as follows: Homework and Quizzes (20%), Midterm 1 (20%), Midterm 2 (20%), and Final Exam (40 %). The Homework and Quizzes grade is computed as follows: each quizz and homework gives a mark on 10 points, the lowest quizz and the lowest homework is not taken into account, this leaves 5 homework and 5 quizzes, giving a grade on 100.

All assessment scores will be posted on the course ELMS page.

If you want to appeal your grade (of Homework, Midterm or exam), you need to appeal within one week by sending an email to the teaching assistant grading your work with the instructor in copy of the email.

Some adjustments in the level of homework could be made during the semester if the initial homework were too difficult (in the opinion of the pedagogical team).

The final letter grade will be assigned according to the following rule:

$97 \leq \text{Grade} \leq 100$	A+
$94 \leq \text{Grade} < 97$	A
$90 \leq \text{Grade} < 94$	A-
$87 \leq \text{Grade} < 90$	B+
$84 \leq \text{Grade} < 87$	B
$80 \leq \text{Grade} < 84$	B-
$77 \leq \text{Grade} < 80$	C+
$74 \leq \text{Grade} < 77$	C
$70 \leq \text{Grade} < 74$	C-
$67 \leq \text{Grade} < 70$	D+
$64 \leq \text{Grade} < 67$	D
$60 \leq \text{Grade} < 64$	D-
$57 \leq \text{Grade} < 60$	E+
$54 \leq \text{Grade} < 57$	E-
$50 \leq \text{Grade} < 54$	E-
$\text{Grade} < 50$	F

Midterms and Final Exam policy. Printed and handwritten notes are forbidden. The use of any electronic device is also forbidden.

Make-up exams. The following circumstances will be considered exceptional for missing a midterm or exam: Religious observance (when the nature of the observance prevents the student from being present during the exam), mandatory military obligation, participation in university activities at the request of university authorities (for such planned absences the student must inform the instructor as early as possible), Illness of the student or other compelling circumstances beyond the student's control (In these cases, the student must inform the instructor as soon as possible, and documentation should be provided upon request.)

Please note that it is your responsibility to let me know in advance if you plan to take the make-up exam.

Homework policy. Late work will not be accepted for course credit so please plan to have it submitted well before the scheduled deadline.

You are required to upload a copy of your homework, which should be a single file. Failure to comply with this rule may result in a 0 grade for the corresponding homework. The deadline are strict. It is your responsibility to make sure that the upload was completed before the deadline, and that your file is legible.

For Homework, collaboration or help is allowed. The only rule is that you acknowledge the help you received. It is a matter of intellectual honesty to you and the people that helped you. If acknowledged, seeking help will never lower your grade.

Tentative schedule. L stands for Lecture, M1 and M2 are the midterms, (HW) and (Q) refer to homework and quizzes that should be uploaded before the deadline, usually at 11:59am.

Week 1: L + L + L	Introduction of the class, Ch. 2.1, 2.2
Week 2: L + L	Ch. 2.2, 2.3
Week 3: (Q1)L + (HW1)L + L	Ch. 2.3, 2.4, 2.5
Week 4: L + (HW2)L + L	Ch. 3.1, 3.2
Week 5: L + M1 + L	Ch. 3.3, 3.4
Week 6: L + (Q2)L + L	Ch. 3.5, start of Chapter 4
Week 7: L + (HW3)L + L	Ch. 4.1, 4.2
Week 8: L + (Q3)L + L	Ch. 4.3, 4.4
Week 9: L + (HW4)L + L	Ch. 4.5, Ch. 5.1
Week 10: L + (Q4)L + L	Ch. 5.2, Review of probability
Week 11: L + L + M2	Ch. 5.3, 5.4
Week 12: L + (Q5)L + L	Ch. 5.5, Ch. 7.1
Week 13: (HW5)L	Ch. 7.2, 7.3
Week 14: L + (Q6)L + L	Ch. 7.4, start of Chapter 6
Week 15: L + (HW6)L + L	Topics in statistics
Week 16: L	Review of the course

Policies

For any general UMD course related policy, please visit www.ugst.umd.edu/courserelatedpolicies.html.

Names/Pronouns and Self-Identifications

The University of Maryland recognises the importance of a diverse student body, and we are committed to fostering inclusive and equitable classroom environments. I invite you, if you wish, to tell us how you want to be referred to in this class, both in terms of your name and your pronouns (he/him, she/her, they/them, etc.). Keep in mind that the pronouns someone uses are not necessarily indicative of their gender identity. Visit trans.umd.edu to learn more. Additionally, it is your choice whether to disclose how you identify in terms of your gender, race, class, sexuality, religion, and dis/ability, among all aspects of your identity (e.g., should it come up in classroom conversation about our experiences and perspectives) and should be self-identified, not presumed or imposed. I will do my best to address and refer to all students accordingly, and I ask you to do the same for all of your fellow Terps.

Communication with Peers

With a diversity of perspectives and experience, we may find ourselves in disagreement and/or debate with one another. As such, it is important that we agree to conduct ourselves in a professional manner and that we work together to foster and preserve a virtual classroom environment in which we can respectfully discuss and deliberate controversial questions. I encourage you to confidently exercise your right to free speech—bearing in mind, of course, that

you will be expected to craft and defend arguments that support your position. Keep in mind, that free speech has its limit and this course is NOT the space for hate speech, harassment, and derogatory language. I will make every reasonable attempt to create an atmosphere in which each student feels comfortable voicing their argument without fear of being personally attacked, mocked, demeaned, or devalued.

Any behaviour (including harassment, sexual harassment, and racially and/or culturally derogatory language) that threatens this atmosphere will not be tolerated. Please alert me immediately if you feel threatened, dismissed, or silenced at any point during our semester together and/or if your engagement in discussion has been in some way hindered by the learning environment.

Academic Integrity

The University's Code of Academic Integrity is designed to ensure that the principles of academic honesty and integrity are upheld. In accordance with this code, the University of Maryland does not tolerate academic dishonesty. Please ensure that you fully understand this code and its implications because all acts of academic dishonesty will be dealt with in accordance with the provisions of this code. All students are expected to adhere to this Code. It is your responsibility to read it and know what it says, so you can start your professional life on the right path. As future professionals, your commitment to high ethical standards and honesty begins with your time at the University of Maryland. It is important to note that course assistance websites, such as CourseHero, are not permitted sources, unless the instructor explicitly gives permission for you to use one of these sites. Material taken or copied from these sites can be deemed unauthorised material and a violation of academic integrity. These sites offer information that might not be accurate and that shortcut the learning process, particularly the critical thinking steps necessary for college-level assignments. Additionally, students may naturally choose to use online forums for course-wide discussions (e.g., Group lists or chats) to discuss concepts in the course. However, collaboration on graded assignments is strictly prohibited unless otherwise stated. Examples of prohibited collaboration include: asking classmates for answers on quizzes or exams, asking for access codes to clicker polls, etc. Please visit the [Office of Undergraduate Studies' full list of campus-wide policies](#) and reach out if you have questions.

Finally, on each exam or assignment you must write out and sign the following pledge:

"I pledge on my honor that I have not given or received any unauthorized assistance on this exam/assignment."

If you ever feel pressured to comply with someone else's academic integrity violation, please reach out to me straight away. Also, if you are ever unclear about acceptable levels of collaboration, **please ask!** To help you avoid unintentional violations, the following table lists levels of collaboration that are acceptable for each graded exercise.

Accessibility and Disability Services

The University of Maryland is committed to creating and maintaining a welcoming and inclusive educational, working, and living environment for people of all abilities. The University of Maryland is also committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of the University, or be subjected to discrimination. The [Accessibility & Disability Service \(ADS\)](#) provides reasonable accommodations to qualified individuals to provide equal access to services, programs and activities. ADS cannot assist retroactively, so it is generally best to request accommodations several weeks before the semester begins or as soon as a disability becomes known. Any student who needs accommodations should contact me as soon as possible so that I have sufficient time to make arrangements.

For assistance in obtaining an accommodation, contact Accessibility and Disability Service at 301-314-7682, or email them at adsfrontdesk@umd.edu. Information about [sharing your accommodations with instructors, note taking assistance and more](#) is available from the [Counseling Center](#).

Student Resources and Services

Taking personal responsibility for your own learning means acknowledging when your performance does not match your goals and doing something about it. I hope you will come talk to me so that I can help you find the right approach to success in this course, and I encourage you to visit [UMD's Student Academic Support Services website](#) to learn more about the wide range of campus resources available to you.

In particular, everyone can use some help sharpening their communication skills (and improving their grade) by visiting [UMD's Writing Center](#) and schedule an appointment with the campus Writing Center.

You should also know there are a wide range of resources to support you with whatever you might need ([UMD's Student Resources and Services website](#) may help). If you feel it would be helpful to have someone to talk to, visit [UMD's Counseling Center](#) or [one of the many other mental health resources on campus](#).

Basic Needs Security

If you have difficulty affording groceries or accessing sufficient food to eat every day, or lack a safe and stable place to live, please visit [UMD's Division of Student Affairs website](#) for information about resources the campus offers you and let me know if I can help in any way.

Veteran Resources

UMD provides some additional support to our student veterans. You can access those resources at the office of [Veteran Student life](#) and the [Counseling Center](#). Veterans and active duty

military personnel with special circumstances (e.g., upcoming deployments, drill requirements, disabilities) are welcome and encouraged to communicate these, in advance if possible, to the instructor.

Course Evaluation

Please submit a course evaluation through Student Feedback on Course Experiences in order to help faculty and administrators improve teaching and learning at Maryland. All information submitted to Course Experiences is confidential. Campus will notify you when Student Feedback on Course Experiences is open for you to complete your evaluations at the end of the semester. Please go directly to the [Student Feedback on Course Experiences](#) to complete your evaluations. By completing all of your evaluations each semester, you will have the privilege of accessing through Testudo the evaluation reports for the thousands of courses for which 70% or more students submitted their evaluations.

Copyright Notice

Course materials are copyrighted and may not be reproduced for anything other than personal use without written permission.