



**York College of Pennsylvania
MAT350 Introduction to Probability
Fall 2018 Syllabus**

Instructor:

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Office Hours:

Mon: 12:00pm-2:00pm; Wed: 12:00pm-2:00pm; Fri: 12:00pm – 1:00pm.

Class Times and Location

MAT350 Mon, Wed, Fri: 9:00am-9:50am CH303

Welcome!

This course aims to provide a first approach to the subject of probability, which is one of the most widely used mathematics in other branches of sciences. The focus of the course will be the study of various distributions, discrete and continuous, expectation, central limit theorem.

To achieve these goals, you must take responsibility for your own learning and participate as an active learner. The best way to learn the Mathematics is to attend the class and do the homework. There is no way you can learn Mathematics without practicing. I encourage group study. You can work on your own or with a classmate as a group (turning in one copy for the whole group with the name of each in the group written on the homework). Homework should represent the efforts of the group not just one member of the group.

Official YCP Information about Course: MAT350 Probability

Catalog Course Description

A calculus-based course in probability and statistics that will involve probability and a study of the distributions and expected values of continuous and discrete random variables. While both the fall and spring sections cover the same essential theoretical material, the fall semester focuses on applications relevant to preparation for the actuarial society probability exam (P1) and for secondary math students.

Course Prerequisites:

MAT171 and MAT172 with a grade of 2.0 or higher.

Required Materials

Textbooks:

"Introduction to Probability", DAVID ANDERSON, [TIMO SEPPÄLÄINEN](#), and [BENEDEK VALKÓ](#), Cambridge University Press, 2017.

Course Resources

Canvas is used by the instructor to share information throughout the semester. It is the student's responsibility to check class site regularly.

Learning Outcomes

After taking the course, students should be able to:

1. define probability sample space, events, and probability functions;
2. use combinations to evaluate the probability of outcomes in coin-flipping experiments;
3. calculate the probability of union and intersection of events and conditional probability;
4. apply Bayes' theorem to simple situations;
5. calculate the expected values of discrete and continuous random variables;
6. determine the distribution of the sums of random variables;
7. calculate cumulative distributions and marginal distributions;
8. use random processes to model and predict phenomena governed by binomial, multinomial, geometric, exponential, normal, and Poisson distributions;
9. explain and use the law of large numbers and the central limit theorem.

Evaluation Criteria

Here are the components that comprise your final course grade:

<i>Project/Assignment</i>	<i>% of Final Grade</i>	<i>Due Date</i>
Homework	20%	TBA
Quizzes	20%	TBA
Test 1	20%	TBA
Test 2	20%	TBA
Test 3	20%	TBA

Major projects.

No projects

Submitting your homework on Canvas.

You will be expected to scan assignments and upload one file to Canvas to submit the assignment.

- Many smartphones have a scanning function in the Notes App. Search YouTube to see if (and how) your smartphone has this capability.
- If your smartphone does not have this capability, there are many scanning apps in the Appstore (CamScanner is popular) or if you have your own printer, it may also have a scanning function.
- Please do not take pictures using the phone camera and upload pictures to Canvas.
- Please let me know if you have difficulty scanning your assignment as a single file.

In-class student expectation.

1. Please attend class on the day that you are assigned each week.
2. Attendance will be taken for both in-class and Zoom students.
3. Student dress should be the same in-person or through Zoom, we are a professional learning community.
4. Listen actively & participate in daily lessons.

Zoom student expectations.

1. Attendance is required whether meeting virtually or in person, log in approximately 5 minutes before class begins.
2. Mute yourself upon entering the virtual classroom with the camera on for the entire duration of class.
3. The environment should be free from distractions with appropriate lighting to work and participate in class.
4. Student dress should be the same as if meeting in person, we are a professional learning community.
5. Listen actively and participate in daily lessons.

Homework and In-class Work.

To be posted on “Canvas”.

York College of Pennsylvania student commitment.

YCP Spartan Oath: *"As a York College Student, I pledge to support and contribute to a healthy living and learning college environment."*

As it relates directly to class, it is understood that you signed a commitment to reduce the spread of Covid-19 as a York College student. In this signed commitment, you agree to wear a mask in class at all times. Below is the statement of your commitment:

"I agree to follow [CDC](#) and York College of Pennsylvania behavioral guidelines designed to reduce the chance of spreading COVID-19, including wearing a face covering in all public spaces, maintaining physical distance of six feet or more from others, practicing good hygiene, and monitoring my daily health for COVID-19 symptoms." (Number 2, Bullet 1)

If there is an instance in which you must remove your mask, please step outside and be sure that you are at least 6 feet away from fellow students, faculty, and staff.

Final Grade Criteria

Final grades correspond to the following percentages:

4 (Excellent) = 90-100%	2 (Average) = 70-74.9%
3.5 (Very Good) = 85-89.9%	1 (Below Average) = 60-69.9%
3 (Good) = 80-84.9%	0 (Failure) = 0-59%
2.5 (Above Average) = 75-79.9%	

4 (Excellent): This grade denotes accomplishment that is truly distinctive and decidedly outstanding. It represents a high degree of attainment and is a grade that demands evidence of originality, independent work, an open and discriminating mind, and completeness and accuracy of knowledge, as well as an effective use of the knowledge.

3.5 (Very Good): This grade denotes mastery of the subject matter. It represents very good achievement in many aspects of the work, such as initiative, serious and determined industry, the ability to organize work, and the ability to comprehend and retain subject matter and to apply it to new problems and contexts.

3 (Good): This grade denotes considerable understanding of the subject matter. It represents a strong grasp and clear understanding of the subject matter and the ability to comprehend and retain course content.

2.5 (Above Average): This grade denotes above average understanding of the subject matter. It represents a good grasp of the subject matter and the ability to comprehend and retain course content.

2 (Average): This grade denotes average understanding of the subject matter. It represents the grade that may be expected of a student of normal ability who gives the work a reasonable amount of time and effort.

****1 (Below Average):** This grade denotes below average understanding of the subject matter. It represents work that falls below the acceptable standard.

****0 (Failure):** This grade denotes inadequate understanding of the subject matter. It signifies an absence of meaningful engagement with the subject matter and that the student is not capable of doing or understanding the work or has made little or no effort to do so.

****In order to fulfill the general education requirement, students must pass 200-level FCOs with a minimum grade of 2.0.** If a student earns a final course grade of less than 2.0, it means that the student has failed to complete enough work to demonstrate that they have mastered basic college level communication skills or that the student has not fulfilled the course requirements or policies outlined by the instructor in the syllabus. The student may repeat an FCO course for which less than a 2.0 was earned; it does not affect the student's grade-point average.

Attendance Policy

Attendance of the class is NOT mandatory. However "Moodle Attendance" will be used to keep tracks of students' attendances of the class following the college's recommendation. If you are to miss a class, let me know your reasons.

Revision Policy

No revised work will be accepted.

Calculator Policy

A basic scientific calculator is allowed to do your homework. No calculator is allowed for quizzes and tests.

CTL and Writing Center

Students are encouraged to enhance their learning by meeting with the tutors and the study skills coaches in the Center for Teaching and Learning (CTL) and in the Writing Center. The CTL and Writing Center offers one-on-one sessions with peer and professional tutors who will provide feedback and suggestions for assignments in every course. Contact the CTL to make an appointment by calling 815-1216 or stopping by HUM Room 01.

Late Submission of Course Materials

No late homework will be accepted unless you are sick for a week or longer or if you are in a college athletic team and have to leave on dates of the class. The two lowest homework will be dropped. I do not

give makeup quiz unless you are sick for a week or longer or you are in a college athletic team and have to leave on Friday. The two lowest quizzes will be dropped.

Communication Standards

York College recognizes the importance of effective communication in all disciplines and careers. Therefore, students are expected to competently analyze, synthesize, organize, and articulate course material in papers, examinations and presentations. In addition, students should know and use communication skills current to their field of study, recognize the need for revision as part of their writing process, and employ standard conventions of English usage in both writing and speaking. Students may be asked to further revise assignments that do not demonstrate effective use of these communication skills.

Use of Personal Technology in the Classroom

While York College recognizes students' need for educational and emergency-related technological devices such as laptops, mobile devices, cellular phones, etc., using them unethically or recreationally during class time is never appropriate. The college recognizes and supports faculty members' authority to regulate in their classrooms student use of all electronic devices. Calculator may be used in class or for your homework. But it is NOT allowed for quiz and exam.

Disability Support Services

In accordance with the provisions of Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990, York College and its faculty are obliged to make reasonable classroom and physical accommodations for students with disabilities. If you are a student with a disability in need of classroom accommodations and have not already registered with Linda Miller, Director of Disability Support Services, please contact her at 815-1785 or lmille18@ycp.edu to discuss policies and procedures related to disability services and to establish the accommodations for which you are eligible.

Academic Integrity Policy (Philosophy Statement)

York College of Pennsylvania, as an institution of higher education, serves to promote and sustain the creation, acquisition, and dissemination of knowledge. In order to fulfill this purpose, an environment of integrity, dependability and honesty must be maintained by all members of the York College community. Without a foundation based on intellectual honesty and integrity, the very ability to uphold the academic endeavors that York College strives to pursue is inhibited. The Spartan Oath embodies the expectation that all members of the York College community foster an environment of integrity and responsibility. Recognize that adhering to an ethical standard of honesty leads to professional, mature and responsible citizens, and enables society at large to trust our scholarship, research, and conferred degrees. Thus, each member of the York College community must be truthful, honest, personally and professionally responsible, and respect the intellectual contributions of others.

Definition of Academic Dishonesty

Engaging in academic dishonesty is a violation of the school's academic integrity policy and is not tolerated at York College. Examples of academic dishonesty include, but are not limited to, cheating on assignments or examinations, plagiarism (i.e. passing someone else's words or ideas off as one's own without proper attribution), improper paraphrasing, fabricating research, falsifying academic documents, handing in material completed for another course, and submitting work not done independently (unless part of an explicitly collaborative project).

Academic Integrity Procedure – Reporting

- When a faculty member believes a student has violated the Academic Integrity Policy, the faculty member is encouraged to discuss the incident in person with the student promptly, identifying the sanction he or she is going to apply. The faculty member should then reiterate the charge and sanction in writing to the student.

- The faculty member has full discretion to determine a suitable sanction, such as a “0” on the assignment in question, up to a course grade of “0”. In the case of an egregious first offense, the faculty member may request that the Student Welfare Committee conduct a hearing and determine a sanction, which may involve academic probation, suspension, or dismissal from the College.
- The faculty member has ten days from the written notification to the student to report the incident to the Department Chair and Associate Provost of Academic Services. The faculty member must submit as part of the report: 1) a detailed description of the incident, 2) a course syllabus, 3) an assignment sheet or assignment instructions, 4) the assignment in question, and 5) supporting documentation, such as copied material. The documentation will be kept on file in the student’s permanent record.
- Students cannot withdraw from a course in which they have been accused of academic dishonesty, until the accusation is withdrawn by the faculty member, or is overturned by the Student Welfare Committee or the Associate Provost of Academic Services. Academic Integrity Procedure – Appeals
- Students who believe they have been unjustly charged or sanctioned have ten days after receiving written notification from their instructor regarding the incident to file an appeal with the Student Welfare Committee by submitting a formal letter to the Associate Provost of Academic Services.
- If an appeal is filed, the Student Welfare Committee will schedule a hearing which includes inviting the student and faculty member to attend to provide additional information or clarity regarding the incident. The Student Welfare Committee will then review the charge and/or sanction.
- If the Associate Provost of Academic Services determines that the incident of academic dishonesty is the student’s second or subsequent offense, he or she will provide written documentation to the student, faculty member, and Department Chair. The Student Welfare Committee will automatically conduct a hearing to review the charge and decide on an appropriate sanction: academic probation, suspension or dismissal from the College.
- Academic Services will receive written notification of the Student Welfare Committee’s decision. Students who are unsatisfied with the decision may submit a second and final written appeal to the Associate Provost of Academic Services within 72 hours of receiving notification of the Student Welfare Committee’s decision. All decisions made by the

Associate Provost of Academic Services will be final.

Course Topics and Schedule

Chapter 1: 1.1-1.5;
 Chapter 2: 2.1-2.5;
 Chapter 3: 3.1-3.5;
 Chapter 4: 4.1-4.5;
 Chapter 5: 5.1-5.2;
 Chapter 6: 6.1-6.3;
 Chapter 7: 7.1-7.2.
 Chapter 8: 8.1-8.5;
 Chapter 9: 9.1-9.3.

Disclaimer: This syllabus is subject to revision by the instructor.