

VALENCIA COLLEGE

Department of Architecture, Engineering, & Technology

West Campus Building 9 room 140 – 407.582.1902

EGN 2440 – Probability & Statistics for Engineers Summer 2019

Textbook: *Probability and Statistics for Engineering and the Sciences*,
9th Edition, by Jay L. Devore (Recommended but Not Required)

Instructor: Oscar Vera Moronta, Ph.D., P.E., D.WRE.

Office: None

Phones: None

Email: overamoronta@valenciacollege.edu

Office Hours: None. Time will be allocated in-class, after class or via email for consulting purposes.

Prerequisite: MAC 2312 – With a grade of C or better.

Course Objectives: Topics include axioms of probability, measures of location and dispersion, sampling distributions, estimations and tests of hypotheses, probability distributions, combinatorial and geometrical probability, linear regression, and engineering applications.

Grading Policy:

Class Material Grade Distribution		Final Course Grade Distribution	
In-Class Participation ¹	5%	90.000 – 100.000	A
Quizzes and/or Homeworks	15%	80.000 – 89.999	B
Midterm Exams	50%	70.000 – 79.999	C
Final Exam	30%	60.000 – 69.999	D
Total	100%	Less Than 60.000	F

1. Class participation entails solving problems on the board and presenting them to the class. Class attendance and asking questions do not count towards class participation.

Grading Policy:

No make-up exams or quizzes will be given without explicit consent of instructor, which will only be granted in case of documented extreme emergency involving the student.

Disclaimer:

Changes in syllabus and/or schedule may be made at any time during the term by announcement from the instructor.

Notes:

- ❑ Students **MUST** read the appropriate book chapter and sections prior to attending class to keep up with the information provided in class. Failing to read the textbook will make it hard for the student to understand the materials presented by the instructor.
- ❑ Students **MUST** practice by solving problems from the textbook and/or additional practice problems provided by the instructor. This selection may not give the student enough practice. Consider your own level of understanding, and practice additional problems as needed.
- ❑ Even though most of the course material is from the textbook, class lectures **WILL NOT** follow the textbook word-by-word. Therefore, it is the student's responsibility to be in class and take notes. Exams will only cover material covered in class, appropriate book chapter and sections, PowerPoint slides, assignments and/or recommended problems.

Topics Covered:

- ❑ Chapter 1: Overview and Descriptive Statistics
- ❑ Chapter 2: Probability
- ❑ Chapter 3: Discrete Random Variables and Probability Distributions
- ❑ Chapter 4: Continuous Random Variables and Probability Distributions
- ❑ Chapter 5: Joint Probability Distributions and Random Samples
- ❑ Chapter 6: Point Estimation
- ❑ Chapter 7: Statistical Intervals Based on a Single Sample
- ❑ Chapter 8: Tests of Hypotheses Based on a Single Sample
- ❑ Chapter 9: Inferences Based on Two Samples
- ❑ Chapter 12: Simple Linear Regression and Correlation (Take Home Assignment)

Important Dates:

May 27th No Class.
July 5th Withdrawal deadline for "W" grade.
July 29th Final Exam.

Exams:

Mid-Term Exam #1 Chapters 1, 2
Mid-Term Exam #2 Chapters 3, 4, 5, 6
Final Exam Chapters 7, 8, 9

Exam/Quiz policy:

1. Circle all test answers for credit. **Show all your work for full grade.** Simply written down answers will not be given any credits and will receive a grade of "0" (zero).
2. Exams and quizzes are closed book and closed notes unless otherwise instructed.

3. There is no “dropped” exam or quiz score.
4. **No Make-up for exam/quizzes** without explicit consent of instructor which will only be granted in case of documented extreme emergency involving the student.

Quizzes:

Quizzes (15 min.) will be given **at the beginning** of the class. You'll miss the quiz if you come late. Check the class schedule for the tentative dates.

Homework Assignments:

Homework assignments will only be accepted the day they are due. Late submissions will not be accepted. Homework assignments are due during regular class sessions. Submittals via email will not be accepted.

Class Room Policies:

1. It is the student’s responsibility to find out what was covered in class if absent.
2. It is the **student’s responsibility to withdraw from the course**. Any withdrawal after the withdraw deadline could result in “F”.
3. Grades will not be disclosed over the telephone or via e-mail, except through your Atlas account.
4. **This course is not about your ability to use a calculator or to derive formulas.** Derivation of formulas is for mathematicians! This course is about improving your abilities to correctly and properly think, analyze, process, interpret and solve real problems as a future engineer.
5. Cheating is prohibited. If any student is caught cheating, the instructor has the right to withdraw the student from the class and recommend expulsion from the program.
6. Classroom behavior will be governed by the “Student Code of Classroom Conduct”.
7. Students with disabilities who qualify for academic accommodations must provide a letter from the Office for Students with Disabilities and discuss specific needs with the Instructor, preferably during first 2 weeks of class. The OSD office determines accommodations based on appropriate documentation of disabilities (SSB-102 ext. 1523).
8. Beepers and cellular phones must be turned off or put on silent mode during the class.
9. No audio or videotaping is allowed in-class.

Class schedule:

The following is a tentative schedule based upon class needs. The instructor reserves the right to make any schedule changes, if necessary.

Date	Lecture on	Comment
05/06	Introduction, Chapter 1	
05/08	Chapter 1	
05/13	Chapter 1 / Chapter 2	
05/15	Chapter 2	Quiz or Homework 1
05/20	Chapter 2	
05/21	Chapter 2 / Chapter 3	
05/27		No Class
05/29		Mid-Term Exam 1
06/03	Chapter 3	
06/05	Chapter 3	
06/10	Chapter 3 / Chapter 4	
06/12	Chapter 4	
06/17	Chapter 4	
06/19	Chapter 4 / Chapter 5	
06/24	Chapter 5	Quiz or Homework 2
06/26	Chapter 5	
07/01	Chapter 6	
07/03		Mid-Term Exam 2
07/08	Chapter 7	
07/10	Chapter 7	
07/15	Chapter 7	Quiz or Homework 3
07/17	Chapter 8	
07/22	Chapter 8	
07/24	Chapter 9	
07/29		Final Exam

Withdrawal Policy

Per Valencia Policy 4-07 (Academic Progress, Course Attendance and Grades, and Withdrawals), a student who withdraws from class before the withdrawal deadline will receive a grade of “W.” A student is not permitted to withdraw after the withdrawal deadline. A faculty member MAY withdraw a student up to the beginning of the final exam period for violation of the class attendance policy. A student who is withdrawn by faculty for violation of the class attendance policy will receive a grade of “W.” Any student who withdraws or is withdrawn from a class during a third or subsequent attempt in the same course will be assigned a grade of “F.” For a complete policy and procedure overview on Valencia Policy 4-07 please go to: <http://valenciacc.edu/generalcounsel/policydetail.cfm?RecordID=75>

Student Core Competencies

The faculty of Valencia Community College have established four Core Competencies that describe the learning outcomes for a Valencia graduate. They are: THINK, VALUE, COMMUNICATE, and ACT. These general competencies can be applied in many contexts and must be developed over a lifetime. They specify how learning can be expressed and assessed in practice. They enable students and faculty to set learning goals and assess learning within and across the many disciplines of human inquiry. Use the descriptions and examples of academic work for each to measure your own learning outcomes. Samples of the academic work are great additions to your Learning Portfolio. For further information on student core competencies please go to www.valenciacc.edu/competencies.

Expected Student Conduct

Valencia Community College is dedicated not only to the advancement of knowledge and learning but is concerned with the development of responsible personal and social conduct. By enrolling at Valencia Community College, a student assumes the responsibility for becoming familiar with and abiding by the general rules of conduct. The primary responsibility for managing the classroom environment rests with the faculty. Students who engage in any prohibited or unlawful acts that result in the disruption of a class may be directed by the faculty member to leave the class. Violation of any classroom or Valencia’s rules may lead to disciplinary action up to and including expulsion from Valencia. Disciplinary action could include being withdrawn from class, disciplinary warning, probation, suspension, expulsion, or other appropriate and authorized actions. You will find the Student Code of Conduct in the current Valencia Student Handbook

Students with disabilities who qualify for academic accommodations must provide a letter from the Office for Students with Disabilities (OSD) and discuss specific needs with the professor, preferably during the first two weeks of class. The Office for Students with Disabilities determines accommodations based on appropriate documentation of disabilities (West Campus SSB 102, ext. 1523).

LETTER FROM THE DEAN

Expectations of a Valencia College Engineering, Computer Programming, and Technology Student

Welcome to the ECPT Division of Valencia College's West Campus. We are enthused to have this opportunity to assist you in achieving your educational goals. Higher education is a privilege and an opportunity; it is your responsibility to realize that you are in control of the behaviors and actions that can enable success in this course.

From your professors, **you can expect** the following:

1. They will be prompt, courteous and respectful.
2. They will provide a professional learning environment throughout the entire scheduled instructional period.
3. They will provide an up-to-date syllabus; when changes need to be made, they will announce changes in a manner that is conveyed to all students in their class.
4. They will provide you with a course that is of necessary rigor to prepare you for the career you have chosen; you will be taught with the same academic expectations as you would find at a four-year university. The bonus of starting your education at Valencia, when compared to attending a four-year institution, is you will be able to get more personal attention with small class sizes and you will be able to save money; the classes are not easier.
5. They will offer time outside of class to discuss your questions.
6. They will be available to discuss your class concerns in private, outside of class time; you should try to resolve your class concerns with your professor before you try to voice your concerns with administrators.
7. They will respond to emails within 2 business days.

In return, your professor will expect from you what she or he has expected from the many students who passed their classes in the past. **Your professor will expect that:**

1. You will be prompt, courteous and respectful.

Prompt means that you come to class on time, ready to work, with all assignments completed *before* you enter class or lab. It means that you have studied, that all conversations, texting, and diversions come to a stop, and that you are ready to contribute to a positive learning environment from the beginning of the class or lab.

Courtesy means you are polite in your attitude and behavior towards your professor and classmates.

Respectful means that you regard everyone's classroom experience as valuable to them, that you accept your professor's expertise and experience to create relevant course objectives and that you treat college and personal property with care.

2. You will read your syllabus; your syllabus is a contract between your professor and you. Be aware of deadlines to complete assignments on time and know your professor's attendance policy. You will need to attend class for the full length of time allotted to your class and (if applicable) lab.
3. You will be aware of Valencia College policies and procedures found in the college catalog; ignorance of policies and procedures doesn't mean they don't apply.
4. You will be serious about learning; it is your responsibility to be an active participant in your own learning. You will need to devote sufficient time to learn the material presented by your professor; the expectation is that you will spend at least two hours studying for every hour of in class instruction. Learning is an action verb; you will need to do more than sit through class and reread your notes to be successful. To succeed in higher level classes, you must retain the information, concepts and skills you will learn; this can only happen if you work at learning to make the course content a part of your long-term memory. Do not cram!!

5. You will be encouraged to produce your own study guides. Most college professors do not provide study guides, but they can give you tips that will help you produce your own study guides to gain a better understanding of the course content.
6. You will be expected to participate fully in classroom activities. The work you produce must be your own; cheating in any form is not tolerated and your professor will have specific consequences, in their syllabus, which will be enforced should cheating occur.
7. You will be expected to contribute to a positive learning environment. Avoid classmates who speak negatively, or who have a negative outlook, about your class or your professor. Instead, get to know your professor during office hours; you will learn much more with a positive attitude.
8. You will be held to a high standard of maturity and responsibility. Disruptive behaviors will not be tolerated in the classroom or lab. First time disruptions will be handled by your professor and may include a request that you leave the class or lab. Very serious or repeated disruptions will be reported, to the Dean of Engineering, Computer Programming, and Technology and the Dean of Students, with specific consequences that can include your permanent removal from the class. Disruptions include:
 - Being noisy when arriving late to class or leaving early.
 - Carrying on private conversations while the professor is talking.
 - Disrespectful language, tone, and mannerisms.
 - Sleeping or attempting to sleep in class.
 - Repeatedly asking unnecessary or irrelevant questions.

My wish is that you get the best learning value from the classes that you are taking. With everyone abiding by the expectations in this letter, your engineering, computer programming, and/or technology classes at Valencia should be the next step in achieving your academic dreams.

Dr. Paul Wilder
Dean of Engineering, Computer Programming, and Technology
Valencia College