

Syllabus

Course Number: MT 270

Course Title: Introduction to Statistics

Course Description:

Presents standard topics in introductory statistics for students whose major is not mathematics. Topics include descriptive statistic, probability distributions, estimations, hypothesis testing, linear regression, correlation, and other topics.

Prerequisite Courses:

None.

Course Outcomes:

Upon completion of this course, learners should be able to:

- Demonstrate the ability to communicate the concepts of statistics, so that you may provide the public with information and expert judgment as part of the basis for social and political decisions.
- Demonstrate an awareness of the socially beneficial uses of statistics, as well as harmful uses of statistics.
- Explain the different types of data collection methods used for statistical studies.
- Explain the strengths and weaknesses of different sampling techniques and when each is appropriate.
- Interpret and produce descriptive statistics used in business and science.
- Explain the basic laws of probability and the use of contingency tables to directly compute probabilities.
- Use and compute confidence intervals in estimation.
- Explain the basics of hypothesis testing and how to conduct one.
- Use linear regression to model scattered data.
- Explain the various methods for displaying data including the benefits and potential misuse of these methods.

Course Materials:

Required Texts:

Required:

Triola, M. F. (2014). *Elementary statistics (12th ed.)*. Boston, MA: Addison-Wesley (Pearson). ISBN10: 032189023X or ISBN13: 9780321890238 text w/Excel lab manual/workbook & access to MyStatLab. (Please note that if you purchase the textbook used, you will need to purchase the access card for MyStatLab separately. It often turns out that purchasing the textbook new is the best buy.)

Required Resources:

A scientific calculator with statistical functions is also required for this course.

Course Assignments and Activities:

Week	Learning Topics	Activities	Reading Assignments	Assignments
1	Introduction to Statistics, Random Sampling	Facilitated discussion questions, online course content, optional videos as assigned by facilitator	Chapter 1	My Math Lab Week 1 Assignments in Course Compass Week 1 Quiz
2	Organizing and Displaying Data Graphically	Facilitated discussion questions, online course content, optional videos as assigned by facilitator Read about How to Construct Bad Charts and Graphs as indicated in Week 2 Weekly Activities, and perform the assigned activities.	Chapter 2	My Math Lab Week 2 Assignments in Course Compass Week 2 Quiz
3	Measures of Center and Variation	Facilitated discussion questions, online course content,	Chapter 3	My Math Lab Week 3 Assignments in Course Compass

		optional videos as assigned by facilitator		Week 3 Quiz
4	Probability	Facilitated discussion questions, online course content, optional videos as assigned by facilitator	Chapter 4	My Math Lab Week 4 Assignments in Course Compass Week 4 Quiz
5	Discrete Probability Distributions and the Binomial and Poisson Distributions	Facilitated discussion questions, online course content, optional videos as assigned by facilitator	Chapter 5 Chapter 6, Sections 1-3	My Math Lab Week 5 Assignments in Course Compass Midterm Exam
6	Statistical Estimation and Confidence Intervals	Facilitated discussion questions, online course content, optional videos as assigned by facilitator	Chapter 6 Sections 4-7 Chapter 7 Sections 1-4	My Math Lab Week 6 Assignments in Course Compass Week 6 Quiz
7	Hypothesis Testing	Facilitated discussion questions, online course content, optional videos as assigned by facilitator	Chapter 8	My Math Lab Week 7 Assignments in Course Compass Week 7 Quiz
8	Regression and Correlation	Facilitated discussion questions, online course content, optional videos as assigned by facilitator discussions	Chapter 10	My Math Lab Week 8 Assignments in Course Compass Final Exam

Student Evaluation Grid:

Assignments	Weighted Percentage
Participation/Discussion	10%
Weekly Homework	15%
Weekly Quizzes	30%
Midterm Exam	20%
Final Exam	25%
TOTAL	100 %

CC&IS Grading Scale

Letter Grade	Percentage	Grade Point
A	93 to 100	4.00
A-	90 to less than 93	3.67
B+	87 to less than 90	3.33
B	83 to less than 87	3.00
B-	80 to less than 83	2.67
C+	77 to less than 80	2.33
C	73 to less than 77	2.00
C-	70 to less than 73	1.67
D+	67 to less than 70	1.33
D	63 to less than 67	1.00
D-	60 to less than 63	.67
F	Less than 60	0

Additional information about grading can be found in the latest edition of the University Catalog, available at <http://www.regis.edu/Academics/Course%20Catalog.aspx>.

CC&IS Policies and Procedures

Each of the following CC&IS Policies & Procedures is incorporated here by reference. Students are expected to review this information each term, and agree to the policies and procedures as

identified here and specified in the latest edition of the University Catalog, available at <http://www.regis.edu/Academics/Course%20Catalog.aspx> or at the link provided.

- The CC&IS Academic Integrity Policy.
- The Student Honor Code and Student Standards of Conduct.
- Incomplete Grade Policy, Pass / No Pass Grades, Grade Reports.
- The Information Privacy policy and FERPA. For more information regarding FERPA, visit the [U.S. Department of Education](http://www.ed.gov).
- The HIPAA policies for protected health information. The complete Regis University HIPAA Privacy & Security policy can be found here: <http://www.regis.edu/About-Regis-University/University-Offices-and-Services/Auxiliary-Business/HIPAA.aspx>.
- The Human Subjects Institutional Review Board (IRB) procedures. More information about the IRB and its processes can be found here: <http://regis.edu/Academics/Academic-Grants/Proposals/Regis-Information/IRB.aspx>.

The CC&IS Policies & Procedures Syllabus Addendum summarizes additional important policies including, Diversity, Equal Access, Disability Services, and Attendance & Participation that apply to every course offered by the College of Computer & Information Sciences at Regis University. A copy of the CC&IS Policies & Procedures Syllabus Addendum can be found here: <https://in2.regis.edu/sites/ccis/policies/Repository/CCIS%20Syllabus%20Addendum.docx>.

