
MATH 314 — WINTER 2020 — SECTION: 314 - 001
GAVIN ARMSTRONG — PROBABILITY & STATISTICS

CLASS MEETING:	13:00 - 13:50 Monday, Tuesday, Wednesday, Friday – Samuelson 245 Thursday – Samuelson Math Ed Lab 138
OFFICE HOURS:	Monday: 12:00 - 12:50 Tuesday: 12:00 - 12:50 Wednesday: 12:00 - 12:50 Thursday: 10:00 - 11:00 Friday: 10:00 - 11:00, 12:00 - 12:50.
OFFICE:	Samuelson 218J
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LEARNING OUTCOMES:

This course is a calculus-based introduction to probability and statistics. Some of the topics that we will focus on are as follows:

- Using the basic rules of probability to calculate probabilities.
- Calculating probabilities for continuous and discrete distributions.
- Using sampling distributions and limit theorems to calculate probabilities.
- Applying confidence intervals, hypothesis tests, and other statistical tools to real data sets.
- Choosing the appropriate statistical tool for a given situation.
- Stating statistical problems and results clearly and correctly.

MATERIALS:

- There is **no** required *textbook* for this section of Math 314. Digital copies of my notes from each day will be made available on Canvas as the course progresses. Complementary discussion of the material for this course can be found in the following books:

– *OpenIntro Statistics*, by Diez, Barr, & Çentinkaya-Rundel. This book can be downloaded for free (or donation):

<https://www.openintro.org/stat/textbook.php>

– *Probability and Statistics for Engineers*, by R Johnson.

Neither book is required and neither will be referenced from here on out.

- A scientific *calculator* is strongly recommended for this class. By “scientific calculator” I mean a calculator that has “ $\log(x)$ ” and “ $\exp(x)$ ” functions. A graphing calculator is not required (although it is allowed).
- I suggest that you bring *paper* to each class to take notes or to use as scratch paper.

CANVAS:

Course grades, announcements, relevant materials, as well as notes will all be available on the Canvas site for this course. If you find any issues with the files on Canvas, then please let me know.
<https://canvas.cwu.edu/>

GRADING:

Course grades for this class will be weighted as follows:

Homework	25%
Lab Write-ups	30%
Worksheets	10%
Attendance	5%
Final Exam	30%

Grade assignments will be made as follows:

F	D-	D	D+	C-	C	C+	B-	B	B+	A-	A
< 60	60-62	63-66	67-69	70-72	73-76	77-79	80-82	83-86	87-89	90-92	93-100

HOMEWORK:

Homework will be assigned at the end of each section of material and will generally be due a week after it has been assigned. All work for this class is expected to be written neatly and coherently. Unless otherwise stated, you are being graded on your process in finding the answers to mathematical questions, not on your final answers. In other words, points are awarded for work shown and not necessarily your final answer. If you have questions about your homework I am always happy to discuss them through email, in office hours, or in class (if time permits).

LAB WRITE-UPS:

For weeks in which the class has meetings in the computer lab, there will be a Write-up assignment. Your completed Write-up will be uploaded, by the given due date, to the appropriate link in the Assignments section of the course page on Canvas. We will be using R (programming language) in computer labs for this class, through the RStudio IDE. Both R and RStudio are available for free online.

WORKSHEETS:

Throughout the term, certain classes will be set aside for worksheets. I will provide prior notice before each worksheet. Worksheets themselves will be provided for you in class. If you have questions on a particular worksheet, then you can ask me or you can discuss it with your colleagues. Copying someone else's answers is not permitted. The work you submit must be your own work.

ATTENDANCE:

Attendance for this class is mandatory. You are expected to be present for each and every class, with the exception of excused absences. Excused absences are those that are both valid and verifiable, e.g. illness, bereavement, religious obligation, inclement weather, etc...

ACADEMIC DISHONESTY:

Incidents of academic dishonesty, as described by the CWU Student Conduct Code (CWUP 5-90-040(22), CWUR 2-90-040(22), and WAC 106-125-020), including, but not limited to, obtaining or giving unauthorized assistance on an assignment, plagiarism, and fabrication, will result in a grade of 0 points on that assignment.

ACCESSIBILITY:

Students requiring special accommodations are encouraged to contact Disability Services (ds@cwu.edu, (509) 963-2214, Hogue 126).