

Experimental Methods in Physics

(PHY329)

Fall 2017

SUNY College at Cortland

Physics Department

Description

This course is a prerequisite for Intermediate Laboratory and is designed to both give you exposure to statistics before you enter the lab and to give you exposure to scientific writing before you must start writing your own papers. (1 cr. hr.)

Required Text

Foundations and Applications of Statistics, An introduction using R. Randall Pruim, Published by AMS 2010.

Instructor Information

Instructor: Douglas Armstead

Office: 127 Bowers (607) 753-2919

Office Hours: MTW 2-3pm and by appointment.

Email: douglas.armstead@cortland.edu

Course Website: <http://facultyweb.cortland.edu/douglas.armstead/F17/ExpMethods.html>

Course meets: W 10:20-11:10am in Bowers 0139.

Grades

The final score for the course is found in the following way:

$$\text{score} = 0.8 * H + 0.1 * Q + 0.1 * P$$

where H= homework average, Q= quiz average, P=presentation. Each element is out of 100.

The homework will largely be drawn from the text and will require you to analyze data, make graphs, perform fits etc.

The quizzes will be used to establish that you have read the article before arriving in class, you may use notes you have taken on the article during the quiz but not the article itself.

You will make a presentation on a paper of your choice during the final exam period where you will explain the paper with a special focus on the analysis they did of their data.

The scores will map roughly to

Final score	Grade
90-100	As
80-89	Bs
70-79	Cs etc.

Improvement and class participation may be used raise a border line grade.

Academic Integrity

You are expected to observe the University's statements and procedures on Academic Integrity in the college handbook, Chapter 340. Ask me if you have any uncertainty about what it means to cheat or the distinction between proper collaboration and plagerism.

Students with a Disability

If you are a student with a disability and wish to request accomodations, please contact the office of Student Disability Services located in VanHoesen B-1 or call (607) 753-2066 for an appointment. Information regarding your disability will be treated in a confidential manner. Because requests for accommodation take time to review and many accommodations require early planning, requests for accommodations should be made as early as possible.

Class Schedule

All dates are tentative.

Week(s)	Chapter	Topic
8/28	What is Statistics	Intro
9/4 and 9/11	Chapter 1	Summarizing Data
9/18 and 9/25	Chapter 2	Probability and Random Variables
10/2 and 10/9	Chapter 3	Continuous Distributions
10/23 and 10/30	Chapter 4	Parameter Estimating and Testing
11/6 and 11/13	Chapter 5	Likelihood-Based Statistics
11/20 and 11/27	Chapter 6	Introduction to Linear Models
12/4	Chapter 7	More Linear Models.

Presentations at 8:30am-10:30am on Friday Dec. 15. 2017.