

PHYS 3704L - Modern Physics Laboratory

Fall 2026 Syllabus, Section 01, CRN 43034,

Credit hours: 1

Course Meeting Times

T 2pm-4:50pm in Ward Beecher Hall 1001 (8/24 to 12/12)

Instructor

Michael Crescimanno

Email: mjcrescimanno@ysu.edu

Public Instructor Information

Instructor Title: Professor of Physics

Instructor Professional Qualifications: Physics Ph. D. (U. C. Berkeley, 1991), MSc Physics ((U. C. Berkeley, 1988), BS Physics (Princeton, 1985)

Instructor Office Location: Ward Beecher 2015

Instructor Office Phone: 330 941 7109

Private Instructor Information

Student Support Hours/Office Hours: M3-5, T10-11,
W 11-12, F 4-5

Additional Contact Methods: microsoft360

Preferred Contact Method: dcphntn@gmail.com

Communication Expectations: Will respond to gmail within 24 hours, 48 hours for microsoft360

How to Refer to me: Most students call me Dr. C.

Notes:

Course Description

3704L. Modern Physics Laboratory. Experimental work designed to supplement PHYS 3704. Three hours per week. Prereq. or concurrent: PHYS 3704. 1 s.h.

Course Readings

Group	Title	Author	ISBN
	Physics for Scientists and Engineers, 9th Ed.,	R. A. Serway and J. W. Jewett	10 1-113-95408-1

Physics for Scientists and Engineers, 9th Ed.,
by R. A. Serway and J. W. Jewett, a Brooks-Cole Publication, ISBN-10 1-113-95408-1, Chapters 23-39

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Additional Course Materials

Copyrighted material made, maintained and distributed by the instructor will be made available either as paper or online at:

<https://mjcrescimanno.people.ysu.edu/>

Course Learning Outcomes/Objectives/Goals

This course is part of the technical writing requirement for the physics major/minor. The writing elements in this course are divided into two parts:

We will complete 12 labs in Modern Physics over the course of the semester, 6 running concurrently each semester half. See the website/schedule for the list of this year's labs.

How to Succeed in This Course

Technology

In addition to blackboard access, you will need an internet enabled phone and/or laptop to complete some of the in-class exercises and analyze the data and compose the reports and poster panels.

We strongly support the use of professional data analysis tools, somewhat beyond the usual use/capabilities of microsoft office. Your instructor will model and encourage and support the adoption of these professional data analysis and plotting tools.

To successfully complete this course, you will need access to a computer with internet and Microsoft Office Suite (available free). Blackboard is free to use with your YSU login here. Please let me know the first day of class if you do not have the appropriate access to technology and/or anticipate having trouble navigating Blackboard. We will work together to make sure technology is not a barrier to your success in this course.

Blackboard: Please be sure to login to Blackboard at least weekly during the duration of the course. Blackboard will be regularly used to share important course information.

Understanding Early Alerts

In all your classes, your professors can create a "flag" related to your performance in a class. Professors may indicate that you are having difficulty understanding course material, not attending class, missing assignments, etc. These alerts do NOT stay on a permanent record, and they are NOT used in any way as a penalty against you. The alerts are used to help you find a solution that is realistic and helps you succeed.

How to Get Help

YSU is committed to your success. As a student you have access to several resources that may be instrumental in helping you succeed in this course and others. Please do not hesitate to utilize any of these free support services to support your academic success, physical and mental health, and help you navigate your time as a YSU student.

[Click here for YSU Student Support Resources](#)

Attendance Expectations

Class attendance adheres to the YSU Class Attendance Policy and the Religious Accommodations of Students Policy.

Attendance will be recorded for each of the laboratory groups and sections. At the beginning of each laboratory section we will be meeting in the lab room (WBSH 1001), Thursday from 9-12 am

All students in each group must be present in the laboratory during the laboratory and take part otherwise the lab cannot be done.

Additionally, your group must hand in the previous week's lab writeup in order to do this week's lab. Failure to do so will cause delays and lost points.

You can miss up to one lab for unforeseen circumstances. Missing 2 or more labs WILL REQUIRE YOU TO TAKE THE ENTIRE CLASS AGAIN.

Each student must hand in 4 written labs and two poster panels over the course of the entire semester to pass.

Late Work Submission Policy

Late work submission adheres to the YSU Class Attendance Policy and the Religious Accommodations of Students Policy.

I will not be accepting late work. See above class expectations.

Additional Course Expectations

A positive learning environment involves commitment of both instructor and students in a course. [Reciprocal Responsibilities for Undergraduate Students and Instructors](#) was developed jointly with the Student Government Association and YSU Academic Senate to outline mutual responsibilities in the classroom, and our class will follow these guidelines.

Artificial Intelligence Policy Statement

AI Use Prohibited

Students are not allowed to use generative artificial intelligence such as ChatGPT on assignments in this course. Each student is expected to complete each assignment without substantive assistance from others, including automated tools. Any use of AI tools for work in this class may be considered a violation of the *YSU Code of Conduct*.

Why? For 2 reasons. The use of AI seriously short-circuits your brain's ability to develop the technical and personal skills (patience, fortitude, time-on-task) that we seek to build up in this class. Secondly, much of the material you will be given is copyrighted by the authors and they have not agreed to being studied by AI engines.

To make it easier for you not to try to use AI, much of the homework and exercises are pre-distorted to make it clumsy to use AI.

Assignments/Assessments

Other (100%)
points

1000

Grading and Grading Scale

YSU courses follow the YSU Grading System.

Your grade will consist of your lab report grade average and your poster panel contributions. Your lab report average grade will count for %80 percent of your grade. The poster panel contributions will count for %20.

The resulting grading scale will be

85+ A

75-85 B

60-75 C

50-60 D

50- F

University Policies

University policies can be found online and provide you guidance on your rights as a student in this course. The links below take you directly to a specific policy. Should you have any questions about a policy, please do not hesitate to contact me using the information at the top of the syllabus.

- [Statement of Non-Discrimination from the University](#)
- [Academic Integrity/Honesty](#)
- [Student Accessibility](#)
- [Digital Accessibility](#)
- [Incomplete Grade Policy](#)
- [YSU Class Attendance Policy](#)
- [Religious Accommodation of Students](#)

Schedule of Topics and Assignments

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
8/24		Muon Energies in Cosmic Rays	
8/31		Speed of light	
9/7		Decay of $\text{In}115$	
9/14		Photoelectric effect	

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.