



## Marshall University Syllabus College of Science

### Course

PHY.204, General Physics 2 Laboratory

#### Course Description

Laboratory to accompany PHY.203 or PHY.213 focusing on classical E&M, circuits, and optics.

#### Credits

1 Credit Hour, undergraduate Core II Natural Science, Normal Grading Mode

#### Prerequisites

PHY.203 or PHY.213 as co-requisite (may be taken concurrently)

### Year, Term, Section, CRN

2024 Summer D – section 601 [CRN 4157]

#### Class Meeting Days/Times/Location

M\_W\_F 9:00am – 10:50am f2f in Sci.103

#### Academic Calendar

first regular class meeting M Jun.17  
drop/add ends M Jun.17  
Juneteenth Holiday – no classes W Jun.19  
Independence Holiday – no classes R Jul.04  
withdrawals end R Jul.18  
last regular class meeting F Jul.26, for Exam 2

### Instructor

Dr. Curt W. Foltz

#### Contact Information

- Office: Science Building room 159
- 159 Office Hrs: \_T\_R\_ 9<sup>30</sup>–10<sup>30</sup> ; MTWRF 1<sup>00</sup>-3<sup>00</sup>
- Office Phone: (304) 696-2519
- Marshall Email: foltzc@marshall.edu

### Health and Safety Information

All members of the Marshall University community are expected to always observe health and safety protocols. This includes general health and safety protocols as well as specific protocols that might emerge in response to community and campus health conditions.

## Required and/or Recommended Texts and Materials

### Required Texts and Materials

*General Physics PHY 204 Lab Manual* 11th edition by MU Physics Department  
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non-programmable calculator (mostly for Exams)

much of our Lab Data analysis will be done on Spreadsheets (Excel)

email access : I will use your marshall email address for official communications

emails sent from another account might be treated as spam by my computer

web browser able to display html files, to see 204 Lab FAQ commentary

via course home page at [www.science.marshall.edu/foltzc/20424sD.htm](http://www.science.marshall.edu/foltzc/20424sD.htm)

attendance in each class, ready to participate with pencil & manual & calculator

study time outside class,  $\geq 2$  effective hours/week to do readings & writings

### Recommended/Optional Texts and Materials

computer able to write & edit Excel spreadsheet files for graph data-fitting

## Course Student Learning Outcomes

<b>Course student learning outcomes</b> <b>Students will:</b>	<b>How students will practice each outcome</b>	<b>How student achievement will be assessed</b>
recognize that science is based on observation & measurement	in-class labwork, answering questions in lab manual	Lab Exams
control, manipulate, & measure via devices	labwork & questions	Lab Exams
collect & analyze data, notice uncertainties	labwork & questions	Lab Exams
formulate hypotheses & design exp'tal tests	labwork & questions	Lab Exams
interpret & communicate results	labwork & questions	Lab Exams
discuss a conclusion's validity from calibration, precision, accuracy	labwork & questions	Lab Exams
judge whether uncontrolled variables muddle an experiment's interpretation	labwork & questions	Lab Exams
learn principles of equipment design & use	labwork & questions	Lab Exams
explain by relating concepts via math logic	labwork & questions	Lab Exams
compose reasons using correct vocabulary	labwork & questions	Lab Exams
create numerical predictions of observable quantities	labwork & questions	Lab Exams

## Course Requirements/Due Dates

Each Lab Manual Report is due at start of next class meeting

you will receive the graded Lab Report at the following class meeting

Exam 1 (in-class) W Jul.10 ; covers Labs 1 – 6

Exam 2 (in-class) F Jul.26 ; covers Labs 7 – 12

## Grading & Evaluation

50% - Lab Reports in manual & its analysis (12 reports × 10 pts/report = 120 pts)

50% - Lab Exams ( 2 Exams × 60 points/Exam = 120 points)

Letter grades: 100% > A > 90% > B > 80% > C > 70% > D > 60% > F > 0%

## Attendance/Participation Policy

Attendance at all class meetings is expected. Students are expected to cooperate with their Lab Partner, to assist each other in the doing of the lab and in the understanding of its results.

If you miss a Tuesday Lab, email me to arrange a make-up (afternoons)

University policies (below) allow University Excused Absences for a variety of Personal Health issues and Safety issues related to Inclement Weather, etc.

## University Policies

By enrolling in this course, you agree to the University Policies. Please read the full text of each policy (listed below) online at [MU Academic Affairs: University Policies](https://www.marshall.edu/academic-affairs/university-policies/). (URL: <https://www.marshall.edu/academic-affairs/policies/> )

- Academic Dishonesty Policy
- Academic Dismissal Policy
- Academic Forgiveness Policy
- Academic Probation and Suspension Policy
- Affirmative Action Policy
- Pre-Finals Week Policy
- D/F Repeat Rule
- Excused Absence Policy for Undergraduates
- Inclement Weather Policy
- Sexual Harassment Policy- Title IX prohibits the harassment of students based on sex, which includes pregnancy, childbirth, and related conditions. This includes that students will not be penalized for taking medically necessary leave related to pregnancy, childbirth, or related conditions. Marshall's Title IX Office may be contacted at [TitleIX@marshall.edu](mailto:TitleIX@marshall.edu)
- Students with Disabilities (Policies and Procedures)
- University Computing Services Acceptable Use Policy

## Course Schedule

date	Lab	Due
Jun.17	Lab 1 – Electric Charge & Force	Jun.21
Jun.21	Lab 2 – Electric Field & Potential	Jun.24
Jun.24	Lab 3 – Charge on Capacitor Plates	Jun.26
Jun.26	Lab 4 – Current Thru Resistors	Jul.01
Jul.01	Lab 5 – Magnetic Field & Force	Jul.03
Jul.03	Lab 6 – Faraday’s Law	Jul.05
Jul.05	Lab 7 – RLC Resonance Circuit	Jul.08
Jul.08	Lab 8 – Reflection & Refraction	Jul.10
Jul.10	<b>Lab Exam 1</b> (Labs 1 – 6)	Jul.10
Jul.12	Lab 9 – Thin Lenses	Jul.14
Jul.14	Lab 10 – Telescope & Microscope	no class
Jul.15	Lab 11 – Diffraction & Interference	Apr.02
Jul.17	No lab	
Jul.19	Lab 12 – H Balmer Spectrum & Rydberg’s $R$	Jul.22
Jul.24	<b>Lab Exam 2</b> (Labs 7 – 12)	Jul.24