
Instructor Richard Guarino	Phone (214) 768-4961	Email r Guarino@smu.edu	Office 26A Fondren Science
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Office Hours: Monday 2:00 p.m. to 3:00 p.m. and by appointment.
All office hours to be held via Zoom meetings.

Laboratory Room: Fondren Science 32

Laboratory Sections:

011 -- MWF 11:00 a.m. -- 1:50 p.m.
021 -- MWF 3:00 p.m. -- 5:50 p.m.

Course Format: *In Person with a Fully Remote Component:*

There are two components to each physics laboratory; the first hour is reserved for co-operative problem solving the remaining time is dedicated to the lab component. The co-op portion is done using Zoom with breakout rooms where students in the group can use a whiteboard, share their screen and use the chat feature. One person is selected in the group to complete and submit the solution form in Canvas. All students, both in-person and remote will attend the same co-op session synchronously.

There are six lab reports to be completed and submitted over the 13 lab sessions. All of the labs have digital components in Canvas that are to be reviewed by all lab students before coming to their scheduled labs. The components include Instruments, Pre-lab, Instructions, Questions and Discussions, Capstone and Spreadsheet files, Lab Report and Physics Intuition Game. Remote students will join an in person lab group by Zoom. Reports are due at midnight.

Materials to sanitize hands and lab equipment are provided in the lab room. Face coverings are optional.

Student Learning Outcomes:

- **Common Curriculum:** (ES) Students will demonstrate an ability to engage in scientific inquiry.
- **Course specific:** Students understand and apply error analysis to measurements in mechanics.

[Laboratory Rules:](#)

[Mechanics Laboratory Manual:](#)

Required Items:

- Laptop/Notebook with Office 365.
- PASCO Capstone (<https://www.pasco.com/downloads/capstone>) Key will be provided.
- [An Introduction to Error Analysis](#) 2nd Edition by John R. Taylor. ISBN: 093570275X
- Any scientific calculator.

Pre-Lab Exercises & Reading Quizzes: due **BEFORE** the Lab

Make-up Labs: There are no make-up labs in the summer.

[Generic Grading Rubric](#)

Grading:

- Lab write-ups - 70% (drop lowest)
- Co-op Exercises - 10% (drop lowest)
- Questions and Discussions - 10% (drop lowest)
- Reading Quizzes - 10% (drop lowest)
- Game - 5%

Letter Grade Break Points:

91.5 < A < 100
87.5 < A- < 91.5
83.5 < B+ < 87.5
79.0 < B < 83.5
75.0 < B- < 79.0
71.0 < C+ < 75.0
62.5 < C < 71.0
50.0 < D < 62.5
0.0 < F < 50.0

University Holidays:

- **May 31, Monday: Memorial Day.** University offices closed.

[Official University Calendar](#)

[Class Schedule](#)

[Error Analysis and Significant Figures in the Lab](#)

[Error on the Mean – A Derivation](#)

Disability Accommodations: Students needing academic accommodations for a disability must first register with Disability Accommodations & Success Strategies (DASS). Students can call 214-768-1470 or visit: <http://www.smu.edu/Provost/ALEC/DASS> to begin the process. Once registered, students should then schedule an appointment with the professor as early in the semester as possible, present a DASS Accommodation Letter, and make appropriate arrangements. Please note that accommodations are not retroactive and require advance notice to implement.

Religious Observance: Religiously observant students wishing to be absent on holidays that require missing class should notify their professors in writing at the beginning of the semester, and should

discuss with them, in advance, acceptable ways of making up any work missed because of the absence. (See University Policy No. 1.9.)

Excused Absences for University Extracurricular Activities: Students participating in an officially sanctioned, scheduled University extracurricular activity should be given the opportunity to make up class assignments or other graded assignments missed as a result of their participation. It is the responsibility of the student to make arrangements with the instructor prior to any missed scheduled examination or other missed assignment for making up the work. (University Undergraduate Catalogue)

Covid-19 Attendance Statement

Students who are experiencing COVID-19 symptoms or who have been notified through contact tracing of potential exposure and need to self-quarantine or isolate must follow the protocols laid out in SMU's Contact Tracing Protocol. To ensure academic continuity, students in these situations will not be penalized and will be provided appropriate modifications to assignments, deadlines, and testing. Please also note that SMUFlex classes might, in rare circumstances, go remote for two-week periods to accommodate COVID-related issues. To ensure these necessary accommodations, affected students must:

- Provide as much advance notification as possible to the instructor about a change in circumstances. Students must notify their instructor about a potential absence as well as plans for a return to class. For cases in which students test positive for COVID-19, they should fill out a [CCC form at this link](#).
- Communicate promptly with the instructor to establish, as necessary, alternative assignments and/or changes to deadlines and exams. Students are then responsible for meeting the expectations laid out in these alternative arrangements.
- Continue participation in class via Zoom, as health circumstances permit. Attend class regularly, when not in a situation outlined above, in accordance with safety measures laid out by SMU CAN in the [Pledge to Protect](#) (including wearing masks, maintaining social distancing, and cleaning personal space after class). In-person participation in SMUFlex classes is required on students assigned red/blue rotation days except in cases when students are experiencing illness, are in self-quarantine or in isolation.
- Students facing multiple or extended COVID-19-related absences or illness can work with the Office of the Dean of Students to consider options such as fully remote learning or medical withdrawal.

This policy, aligned with the SMU Honor Code and the SMU Pledge to Protect, relies on mutual trust and respect between students and faculty to ensure safety, academic integrity, and instructional continuity.