

COURSE SYLLABUS

PHY1105 - Online

Classical Physics and Thermodynamics Lab

1 CREDIT HOUR

Fall 2017

1. LOCATION OF CLASS MEETING

None – this is an on-line class.

2. CLASS MEETING TIMES

THIS IS AN ON-LINE CLASS. THERE IS NOT A SCHEDULED CLASS TIME.

3. INSTRUCTOR

The instructor for this class is Dr. Charles R. Meitzler.

4. OFFICE LOCATION

313 Farrington Bldg., Physics Dept., Sam Houston State University, Huntsville, TX, 77341.

5. INSTRUCTOR CONTACT INFORMATION

Because this is an on-line lab, the best way to contact me is on-line at my e-mail address. The instructor may be contacted in one of several ways:

- 1) Phone 936.294.1606 – Please leave a message and I will call back. Leave a time that I can return your call. Depending on your requested callback time, the phone number will come up as a Skype phone number from California.
- 2) E-mail: crmeitzler@shsu.edu – I check my e-mail at roughly 6:00 Central Time, 12:00 Central Time and 18:00 Central Time on weekdays. Weekends have a more restricted schedule, but I usually check email at least once each day.

The following rules and suggestions apply for e-mail correspondence.

Do not assume that I know who you are by simply giving your first name.

Please state which course you are taking so that I can respond in a timely manner. E-mail without a course number will be answered with a generic message asking for which course you are taking.

You must use your SHSU e-mail account when corresponding with me.

I have no way of knowing who SHSU389@obscureisp.co.uk is, or if it is a phishing attempt.

Avoid sending email from your smartphone when you get stuck or have a question.

The advent of smartphones provides a significant advantage in that you have almost instant communication with anyone on Earth. On the other hand, it is too easy to fire off a message without thinking about what you are writing, or using proper English. If you do use your smartphone, take a moment to think about what you want to say, then review your message to avoid using texting abbreviations and emoji's.

6. COMPUTER HELP

If you have computer problems or technical problems with the Blackboard software please contact the Delta Center Help Desk at 936.294.2780. They are available Monday through Saturday during the hours of 7:00 to Midnight. **DO NOT CALL THE SAM HOUSTON COMPUTER SERVICES HELP DESK!**

Be aware that the instructor has a limited ability to solve your computer problems. If you do decide to write to me about a computer problem you are having, you need to include the following information so that I can ask the Delta Center Help desk:

- 1) Computer Manufacturer
- 2) Operating System and version
- 3) Browser and version information
- 4) The make and model of any peripheral hardware you are using.

7. OFFICE HOURS AND CONTACT INFORMATION

The office hours for this course are quite open because of the fact that communication will be primarily via e-mail over the Internet, although other online options are available.

E-mail is generally checked at approximately 6:00 in the morning Central Time, noon Central Time, and 18:00 Central Time in the evening. You must use your SHSU e-mail account when corresponding with me. This is so that I can identify you when you forget to include your name. I have no way of knowing who SHSU389@obscureisp.co.uk is. Please try to be as specific as possible.

It is also possible to set up Skype sessions as needed. My Skype username is dr_m_shsu_physics. Google Hangouts is also available with a bit of notice.

8. COURSE DESCRIPTION

This course is an on-line lab course to accompany PHYS1305 (Online) - Classical Physics and Thermodynamics. Prior to starting this lab you might want to consider the following questions:

What is an online course?

The idea behind taking a course online is to provide students with a more flexible learning environment by allowing students to learn material and complete assignments when it is convenient for them. You should be aware, however, that

there are still deadlines for individual assignments.

How does this differ from a traditional lab class?

All of the “labs” will occur online or in your home. You will need to complete worksheets and then write a report about what you did and learned. You also need to be able to attempt to solve problems on your own without having a TA standing over your shoulder to help you if you get stuck you will need to ask me a question or try to work through the problem yourself; consequently, you will see your problem-solving skills develop significantly during the semester. If you require constant or frequent face-to-face contact with the instructor, then this course is not for you.

You will submit your assignments in drop boxes within the online course. When you submit work you will be required to submit it in PDF form so that it can be graded online. Other formats are not acceptable. It is assumed that you have sufficient knowledge about how to use basic word processing, printing, and photo-manipulation software.

What will be expected of me online?

You will be expected to read the lab introductions, complete a number of online labs and submit a summary of the lab that you complete each week as well as scans of your worksheets and graphs. While there will be deadlines for each of these assignments, you will have the flexibility to work on them whenever you want; however, you must meet all of the deadlines!

How do I know if this online format is right for me?

Success in online courses depends on self-discipline and time management skills. If you are self-disciplined enough to work on your own without the motivation of scheduled classes, then you may find this format a welcomed change.

Can I wait until the last minute to start an assignment?

That is answered with an emphatic NO! Remember, if you get stuck, you will need to contact me by email which can take somewhere between zero and twelve hours to get a response.

Will there be lots of math?

There will be some mathematical and numerical work associated with this course, but nothing exceeding simple arithmetic operations on a calculator and high-school level math.

9. COURSE OBJECTIVES

The objective of this course is to gain some lab experience that complements the knowledge you gain in PHYS1305 – Classical Physics and Thermodynamics.

10. REQUIRED TEXTBOOKS

There is no required textbook for this lab. All of the procedures are provided on-line.

11. REQUIRED SUPPLIES

The following supplies are required for this course:

- 1) Writing instrument such as a pen or pencil
- 2) Scientific calculator with the following functions: sine, cosine, square root, exponentiation, scientific notation.
- 3) Notebook or ring binder with appropriate paper.
- 4) Textbook

- 5) Access to a computer with internet access and a suitable browser installed. MS-Word (or equivalent word processing software) installed, and capability to produce PDF files.
- 6) Access to a flatbed scanner or high-resolution digital camera.
- 7) String
- 8) A wooden dowel or rod.
- 9) A heavy fishing sinker.
- 10) A straight-edge, ruler, or engineering rule.
- 11) Golf ball
- 12) Soft foam ball
- 13) Yard stick, meter stick, or tape measure

12. OPTIONAL TEXTS, REFERENCES, AND SUPPLIES

None Required.

There are several recommended study aids which students might want to use. You should have your PHYS1305 textbook handy as a reference.

13. ATTENDANCE POLICY

Classroom attendance is not used to calculate the final course grade.

14. ASSIGNMENTS

One of the differences between a face-to-face lab and an on-line lab is in the reporting process. The on-line lab reports will tend to have a bit more preparation required so that you can demonstrate what you have done. See Section 19 for the lab report format.

The due dates for the labs are given in the Due Dates content area in the left-hand bar.

Lab reports must be submitted as a pdf file. Submitting in any other file format is a mandatory 25 point deduction

Do not put your name on your paper or in the filename. There is a mandatory 25 point deduction if you include of your name on your paper.

If your files are so large or are corrupted so that the Blackboard grading software can't read them, then a 75 point penalty will be assessed. You should always use the preview option to check your submission before submitting your work.

Lab reports must be submitted as a single document with the worksheets FIRST.

Lab Reports will not be accepted at full credit after 23:59:00 Central Time on their due date: labs submitted after the due date (even by one minute) will be assessed a 10 point penalty plus one point per late day.

Example: You submit your paper at 12:09:00 A.M on the morning after the paper is due. The penalty will be:

$$\text{Late Penalty} = 10 \text{ pt} + \left(1 \frac{\text{pt}}{\text{d}}\right) (1 \text{ d}) = 11 \text{ pt.}$$

Your raw grade from the rubric is a 92. Then after the penalty, your grade will be

$$\text{Grade} = \text{Raw Grade} - \text{Penalty} = 92 - 11 = 81$$

Any work missing at 23:59:00 on the official last class day of the semester as defined by the University's Academic Calendar will be given a grade of zero.

15. Lab Grading

A grading rubric is provided for grading the labs. This rubric is available for you to look at for each assignment. Use the rubric as a guide for report preparation. You should review both the rubric and my comments on your paper of your graded lab report to find out what you did wrong.

16. EXAMS

A short quiz is given to ensure that you read the syllabus.

17. GRADING PLAN

The final grades will be calculated as an un-weighted average of all lab grades. The official grades are maintained on my computer.

After obtaining the average, letter grades will be assigned according to the following scale:

$$90 \leq A \leq 100$$

$$80 \leq B < 90$$

$$70 \leq C < 80$$

$$60 \leq D < 70$$

$$F < 60$$

"Curving" may be used only at the end of the course at the instructor's discretion. The fact that curving may be used is not a guarantee, either expressed or implied, that curving will be used.

Extra credit is not available for this course.

18. Key Phrase

xyzyy

19. Lab Report Format

The lab reports for this course follow as standard format that is more than just filling in a worksheet. The purpose of the lab report is **not** for you to simply summarize the written directions that told you what to do during the lab. It **is** for you to synthesize the information you obtained from the lab exercise. (Generally, this is when you fully understand what you did, or realize you don't have a clue what you did).

The lab report must be written in complete, grammatically correct sentences. At the very least, you should use grammar and spell check. If you have problems writing, visit the writing center on the first floor of the Farrington Building. ***Your lab report must be typed with a 12-point font, double-spaced, and fit on 8 1/2" x 11" paper.*** (There will be a mandatory 25 point deduction if you do not follow this requirement.)

THE LAB REPORT MUST BE FORMATTED AND EXACTLY FOLLOW THE PRESCRIBED ORDER

DO NOT PUT YOUR NAME ON THE REPORT OR IN THE FILE NAME! MANDATORY 25 POINT DEDUCTION IF YOU DO

EACH SECTION MUST BE LABELED WITH A SECTION HEADER ON A SEPARATE LINE.

I. Lab Worksheets

You need to scan your handwritten worksheets and insert them into your document. You are required to submit only one file so you will need to learn how to import pictures into MS-Word (Directions on how to include images in Word documents is included in the "How To's" content area.) or combine PDF files (free software available through Google Drive).

Print out the worksheets, and provide your answers on them. Do not use tablet or notebook paper.

Avoid using excessively large images because the Blackboard grading software cannot read them. A resolution of roughly 100 dots per inch (dpi) is sufficient (Images are 650 x 900 pixels).

Any calculation involving physical quantities that does not include the proper units used in the calculation will be considered wrong.

The images of the work sheets should be no smaller than 6.5 inches by 9 inches to be readable.

If you place the sheets in a side-by-side manner, then only the left-most sheet will count. The right-most sheet will be considered incorrect.

2. **Introduction** (1 paragraph)

Briefly outline the topic and purpose of the lab. It needs to introduce the topic the lab covered. In essence, the Introduction introduces me to the material that follows. In essence, it tells me what you are going to tell me in the remaining sections. It should be the last section written! For instance, if the lab topic had to do with the phases of the Moon, you would need to state and explain (briefly) why we see different moon phases. **This needs to be more than a single sentence long**

3. **Procedure** (1 paragraph for each major activity)

This should be a general overview of what you did during lab and how it relates to the topic you stated in the introduction. It is a story! You should be able to have someone who is not in the class read your Procedure and understand exactly what you did in lab. You should write one paragraph, no matter how short, for each separate activity.

- *It is not a step by step copying of the lab procedure*
- *Do not simply summarize the written directions of the lab. Tell me what you did, even if it deviated slightly from the directions!*
- *Do not write numbered or bullet-pointed lists without following the proper rules for presenting a list in a larger text.*
- *Do not write in the third person – use first person, singular pronouns. Do not use the word “we” or the phrase “the student” when you refer to yourself unless you normally refer to yourself with either of those words.*

4. **Conclusion**

Discuss what **you** learned from the lab; do not just simply repeat the objectives. Focus on the things you have learned, and give specific cases to illustrate your points. Be concise. What you write should be related to what you did in the lab exercise. (1 paragraph)

Here are things to avoid when writing your conclusion:

- *Do not tell me how much you did, or did not, enjoy doing the lab.*
- *Do not use the word “we” or the phrase “the student” when you refer to yourself unless you normally refer to yourself with either of those words.*
- *Do not simply state that you learned a vague “something” or “new things”. Be specific.*
- *Do not tell me you learned about a general physical principle or law – tell me specifically what you learned. Name dropping is not sufficient to tell me what you learned in the lab.*
- *Do not simply complain about the lab or the textbook.*
- *Do not tell me what you would do to help the students. Send those comments in via email.*

- *Do not tell me about how your abilities are different from those of other students.*
- *Do not tell me what your major is, and how this will enhance your understanding of whatever your major is.*
- *Do not tell me what type of learner you are.*
- *Do not tell me how you would have written the lab.*
- *Do not wander off into wild speculation or unrelated material. Your conclusion must be supported by the data in the lab.*

20. University mandated parts of syllabi:

Student Syllabus Guidelines: You may find on-line a more detailed description of the following policies. These guidelines will also provide you with a link to the specific university policy or procedure:

<http://www.shsu.edu/syllabus/>

Academic Dishonesty: Students are expected to maintain honesty and integrity in the academic experiences both in and out of the classroom. *See Student Syllabus Guidelines.*

Classroom Rules of Conduct: Students are expected to assist in maintaining a classroom environment that is conducive to learning. Students are to treat faculty and students with respect. Students are to turn off all cell phones while in the classroom. Under no circumstances are cell phones or any electronic devices to be used or seen during times of examination. Students may tape record lectures provided they do not disturb other students in the process.

Student Absences on Religious Holy Days: Students are allowed to miss class and other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. Students remain responsible for all work. *See Student Syllabus Guidelines.*

STUDENTS WITH DISABILITIES POLICY: It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should register with the Office of Services for Students with Disabilities located in the Lee Drain Annex (telephone 936-294-3512, TDD 936-294-3786, and e-mail disability@shsu.edu). They should then make arrangements with their individual instructors so that appropriate strategies can be considered and helpful procedures can be developed to ensure that participation and achievement opportunities are not impaired.

SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may affect adversely your work in this class, then I encourage you to

register with the SHSU Services for Students with Disabilities and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: No accommodation can be made until you register with the Services for Students with Disabilities. For a complete listing of the university policy, see:

<http://www.shsu.edu/dept/academic-affairs/documents/aps/students/811006.pdf>

Visitors in the Classroom: Only registered students may attend class. Exceptions can be made on a case-by-case basis by the professor. In all cases, visitors must not present a disruption to the class by their attendance. Students wishing to audit a class must apply to do so through the Registrar's Office.