Physical Science 303
Mechanics and Heat

Instructor: Jeff Olson

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Office: RLM 9.312

Office Hours: MW 11-12, or by appointment

Location: RLM 8.322

Sections: #56090 MW 3-5 pm
#56110 MW 5-7 pm

This is a laboratory-based course taught by the inquiry method of instruction. Students will perform simple experiments and will be led by questions to infer the conclusions logically permitted by their observations. All students are expected to participate in the procedures, observations, measurements, and discussions. Part of the class grade will be based on participation. Class work will be done in two-person teams.

Texts: *Motion and Matter: PS 303 Lab Manual*, R. N. Little
Conceptual Physics, 9th ed., Paul G. Hewitt

Labwork: The lab manual will be filled out during class and checked for completion at the end of class. I may occasionally ask you to turn in sections of the lab manual, so please keep your manual in a loose 3-ring binder

Quizzes/Homework: There will be in-class quizzes given approximately once a week (typically on Wednesdays) covering current material. Homework will be assigned periodically from Hewitt and/or the lab manual. Your lowest quiz score will be automatically dropped.

Exams: There will be two in-class exams (dates to be announced), as well as a comprehensive final.

Attendance: Because of the participatory nature of this class, **attendance is required**. A maximum of two absences will be allowed before points start being deducted.

Materials: 3-ring notebook, a *scientific* calculator (i.e. cell phones don't count), a ruler and protractor, and graph paper.

Grading:

Labwork----------25%
Quizzes/Homework -------15%
Three exams ----------60% (20% each)

Exam Schedule

Exam 1	Wednesday, March 3	
Exam 2	Wednesday, April 21	

Final Exam

#56090 (2-5)	Tuesday, May 18	2:00–5:00 pm
#56110 (5-7)	Friday, May 14	7:00–10:00 pm

Suggested Reading

Unit	Title	Hewitt	Lab Manual
I	Measurement	Ch. 1	App. I
II	Time and Space	App. A, C	App. II, III
III	Volume, Mass, and Density	Ch. 11, 12	
IV	Displacement, Velocity and Acceleration	Ch. 3, App. B, D	
V	Newton's Laws of Motion	Ch. 2, 4, 5	App IV
VI	Energy	Ch. 7	
VII	Forces, Torques and Equilibrium	Ch. 5, 8, App. D	
VIII	Some Fundament Forces	Ch. 9, 22, 24	
IX	Heat and Temperature	Ch. 15, 16, 17	