PHYS:3730: Statistical Physics, Fall 2019  
Department of Physics and Astronomy  
University of Iowa

Instructor: Prof. Scott D. Baalrud  
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Course Website: www.physics.uiowa.edu/~sbaalrud/3730f19.html

Time and Location: MWF 12:30P - 1:20P in 65 VAN

Textbook: *Fundamentals of Statistical and Thermal Physics* F. Reif (Waveland Press, 1965)

Office Hours: Mondays 10:30 am-12 noon, Wednesdays 10:30 am – 12 noon, or by appointment.

DEO Contact: Prof. Fred Skiff, 203 Van Allen Hall  
Email: frederick-skiff@uiowa.edu, Phone: (319) 335-1689

Homework: Usually assigned Fridays and due the following Friday (in class) except exam weeks. Lowest 2 homework scores will be thrown out in determining your grade (best 10 of 12). No credit for late work. (20%)  

Exams:  
Midterm 1: October 9, in class (20%)  
Midterm 2: November 20, in class (20%)  
Final Exam: Time and location to be determined (40%)

Grading: Grading will follow CLAS guidelines. Plus (+) and minus (-) scores will be used, but the score A+ will only be awarded in a case of extraordinary performance. Homework solutions and grades will be posted on ICON.

Attendance: Attending lectures is *highly* recommended. Midterm exams will be held during normal class hours. Homework must be handed in during or before class. Students must request permission for a makeup exam at least one week before the originally scheduled exam time. Makeups will only be available for excused absences and must be planned with the instructor on a case-by-case basis.

Resources: *Free Help!*: The Department runs a tutorial room - 310 VAN.  
Schedule at: http://www.physics.uiowa.edu/resources

Other references: *Thermodynamics*, Enrico Fermi, Dover 1956

Course Description and Estimated Schedule  
A detailed description and estimated schedule can be found on the course website. Topics to be covered include: Introduction to statistical methods, systems of particles, statistical thermodynamics, macroscopic thermodynamics, ensembles, equipartition, kinetic theory, phase equilibrium and quantum statistics of ideal gases. Students are expected to obtain a conceptual grasp of these topics, as well as the ability to apply the concepts to obtain a deeper understanding of the physical world (i.e., solve physics problems).

Policy on collaboration  
The homework for this course is designed to help you master your knowledge related to the topics covered during lecture. You may work on the homework problems with others and use online resources. However, please be aware that to master the skills needed for this class, practice is required and that to do well on exams you will need to work many of these problems multiple times without help. Test your knowledge by doing much of the homework on your own. Each student must submit his or her own solutions.

Advice  
– Read the assigned book sections *before* lecture. This will enable more effective use of your time since
lectures can then be used to fill in gaps in your initial understanding of the material.
– Use office hours. I’m here to help.
– Ask questions, both of the instructor and your peers.

The College of Liberal Arts and Sciences Policies and Procedures

Administrative Home
The College of Liberal Arts and Sciences is the administrative home of this course and governs matters such as the add/drop deadlines, the second-grade-only option, and other related issues. Different colleges may have different policies. Questions may be addressed to 120 Schaeffer Hall, or see the CLAS Academic Policies Handbook at http://clas.uiowa.edu/students/handbook.

Electronic Communication
University policy specifies that students are responsible for all official correspondences sent to their University of Iowa e-mail address (@uiowa.edu). Faculty and students should use this account for correspondences (Operations Manual, III.15.2, k.11).

Accommodations for Disabilities
A student seeking academic accommodations should first register with Student Disability Services and then meet privately with the course instructor to make particular arrangements. See www.uiowa.edu/sds/ for more information.

Academic Honesty
All CLAS students or students taking classes offered by CLAS have, in essence, agreed to the College’s Code of Academic Honesty: “I pledge to do my own academic work and to excel to the best of my abilities, upholding the IOWA Challenge. I promise not to lie about my academic work, to cheat, or to steal the words or ideas of others; nor will I help fellow students to violate the Code of Academic Honesty.” Any student committing academic misconduct is reported to the College and placed on disciplinary probation or may be suspended or expelled (CLAS Academic Policies Handbook).

CLAS Final Examination Policies
The final examination schedule for each class is announced by the Registrar generally by the tenth day of classes. Final exams are offered only during the official final examination period. No exams of any kind are allowed during the last week of classes. All students should plan on being at the UI through the final examination period. Once the Registrar has announced the date, time, and location of each final exam, the complete schedule will be published on the Registrar’s web site and will be shared with instructors and students. It is the student’s responsibility to know the date, time, and place of a final exam.

Making a Suggestion or a Complaint
Students with a suggestion or complaint should first visit with the instructor (and the course supervisor), and then with the departmental DEO. Complaints must be made within six months of the incident (CLAS Academic Policies Handbook).

Understanding Sexual Harassment
Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community have a responsibility to uphold this mission and to contribute to a safe environment that enhances learning. Incidents of sexual harassment should be reported immediately.
See the UI Comprehensive Guide on Sexual Harassment for assistance, definitions, and the full University policy.

Reacting Safely to Severe Weather
In severe weather, class members should seek appropriate shelter immediately, leaving the classroom if necessary. The class will continue if possible when the event is over. For more information on Hawk Alert and the siren warning system, visit the Department of Public Safety website.

Nondiscrimination in the Classroom
The University of Iowa is committed to making the classroom a respectful and inclusive space for all people irrespective of their gender, sexual, racial, religious or other identities. Toward this goal, students are invited to optionally share their preferred names and pronouns with their instructors and classmates. The University of Iowa prohibits discrimination and harassment against individuals on the basis of race, class, gender, sexual orientation, national origin, and other identity categories set forth in the University’s Human Rights policy. For more information, contact the Office of Equal Opportunity and Diversity, diversity@iowa.edu or visit diversity.uiowa.edu.