Thermal Physics

PHY B52 - Winter 2018

Lecture Tues ay p p
Tutorial e u p p IC AA 6

"A t ory s t or pr ss v t r at r t s p ty of ts pr s s t or r nt n s of t n s t r at s an t or xt n ts ar a of app ab ty T r for t p pr ss on t at ass a **thermodynamics** a upon It s t on y p ys a t ory of un v rsa ont nt w I a onv n w n v r b ov rt rown w t n t fra wor of app ab ty of ts bas on pts"

A b rt E nst n

Instructor: Jo ann Bay r **Email:** j bay r uts utoronto a
O ce: B
Phone Number:

Required Materials

Textbook: *An Introduction to Thermal Physics* by Daniel V. Schroeder, Pearson

The schedule provided at the end of this document indicates the chapters and sections you must read **before** each lecture. The textbook also provides conceptual questions and detailed problems that will be the subject of the weekly problem sets, reading quizzes, and tutorial quizzes.

Calculator: A scientific non-programmable calculator is required.

Grading Scheme - Preliminary

Component	Points	Due Date
Reading Quizzes		Ongoing - Pre Lecture
Concept Maps		Ongoing - Post Lecture
Outcome Reflections		Ongoing - Post Tutorial
Tutorial Work	[illegible]	Ongoing - Weekly Tutorials
Test #1	[illegible]	Week [illegible] - Tentative
Test #2		Week 9 - Tentative
Final Examination	[illegible]	Exam period - April [illegible]

Grade Components

Reading Quizzes (5%)

Each week on the course website you will be assigned a set of questions from the assigned readings for the upcoming week. You will have until **11:55 pm** on [illegible]day to submit your answers. Each quiz is worth **5 points**, and your final grade is the total sum of all quizzes up to a maximum of **50 points**. See the **Class Schedule** found at the end of this document to prepare for the lectures and reading quizzes.

Concept Maps (5%)

At the **start** of each Tuesday lecture discussion and based on the **previous week** of lecture discussions you will submit a concept map. Each map is worth **2 points**, and your final grade is the total sum of all maps up to a maximum of **20 points**. There is an **extra 2% bonus** for each student that submits, no later than the last tutorial session, a **Full-Course Map** that includes all the course material from **Chapters 1 - 6.** All maps must be well designed in a useful, readable, and [illegible] manner.

Test #1 (15%)

Ths **90-minute** long test wll be s he ule **tentatively** ur ng **Week 5.** Content n lu es all le ture s uss ons, textboo re a ngs, an problem sets up to an n lu ng the mater al s usse n **Week 4.**

Test #2 (20%)

Ths **2-hour** long test wll be s he ule **tentatively** ur ng **Week 9.** Content n lu es all le ture s us s ons, textboo re a ngs, an problem sets up to an n lu ng the mater al s usse n **Week 8.**

Both tests wll n lu e on eptual quest ons n mult ple ho e or short answer form at, an eta le problems. The only a s allowe are your non programmable s ent al ulator, an a han wr tten, ouble s e , an letter s e a sheet. Note that photo op es or omputer pr ntouts are not allowe .

Final Examination (35%)

The nal exam nat on wll be s he ule ur ng the exam per o of **April 11 - 26.** Content for the nal exam nat on n lu es all the top s s usse n the ass gne textboo re a ngs, le ture presentat ons, problem sets, an tutor al qu es. The nal exam nat on wll be **3 hours** long an the format n lu es on eptual, mult ple ho e an short answer quest ons as well as eta le problems. The only a s allowe are your non programmable s ent al ulator, an **one** han wr tten, ouble s e , an letter s e a sheet. lease note that photo op es or omputer pr ntouts are not allowe .

Class Policies

Absences

In or er to ensure fa rness n the assessment of all stu ents, there wll be no ma eup opt ons for tutor al wor or the tests. In the ase of a **valid** an **documented** problem that supports an absen e to a tuto r al, the gra e wll be al ulate on the bas s of all other wor . In the ase of a **valid** an **documented** problem that supports an absen e to the rst test, the se on test wll have ts we ght n rease a or ngly. In the ase of a **valid** an **documented** problem that supports an absen e to the se on test, the nal exam nat on wll have ts we ght n rease a or ngly. If the problem s health relate use the al form: http: www.utoronto.a reg strar resour es p f gen eral C me al ert ate.p f.

Name and Student Number

Any wor you han n must learly n ate your name an stu ent number, th s n lu es tutor al qu es, mater als for the rea ng proje t, tests, an the nal exam. Any wor you subm t that fa ls to meet th s requ rement wll be penal e w th a . ! e u t on, prov e we are able to ent fy the wor as yours. If we are unable to ent fy the wor as yours, a gra e of ero wll be awar e .

e-mail

If you want to as a quest on v a ema l, please rst he the ele tron forums n the **Discussion Board** of the ourse webs te. u te l ely, you are not the only person w th that same quest on, an f that quest on has alrea y been as e , you wll n the answer there. If the quest on has not been as e , go ahea an post t yourself nstea of sen ng t by ema l. Ths way you wll also help other stu ents fa ng the same ssue. The forums n the s uss on boar are mon tore regularly by the ourse nstru tor an your peers, ma ng t the best way of ommun at ng for var ous quer es of a verse nature.

However, f the ele tron forums are not the best pla e for your query, ma e sure you sen your ema l from an al **utoronto.ca** a ress. ot ema l a ount as all other a resses wll be lterer out automat ally. For a qu er resp ep eput

In-class Conduct

Lectures start at [illegible] pm and end at [illegible] pm. Tutorials start at [illegible] pm and end at [illegible] pm. Late arrival or early departure from class is inappropriate and disruptive so please be considerate.

Regarding anything that you want to use in the classroom: if you are not using it to perform a task specifically related to what we are doing in class at that very moment, you must put it away. This includes but is not limited to: cell phones, laptop computers, tablets, and other electronic devices.

Do not bring or consume food in the classroom as this creates unwanted distractions that will negatively affect the learning environment.

Academic Integrity and Respect for the Academic Endeavor

Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. The University of Toronto's **Code of Behaviour on Academic Matters:**

http://www.governingcouncil.utoronto.ca/policies/behaveac.htm

outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences. Potential offences include, but are not limited to:

In papers and assignments: Using someone else's ideas or words without appropriate acknowledgement; submitting your own work in more than one course without the permission of the instructor; making up sources or facts; obtaining or providing unauthorized assistance on any assignment.

On tests and exams: Using or possessing unauthorized aids; looking at someone else's answers during an exam or test; misrepresenting your identity.

In academic work: Falsifying institutional documents or grades; falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes.

All suspected cases of academic dishonesty will be investigated following procedures outlined in the **Code of Behaviour on Academic Matters.** If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, you are expected to seek out additional information on academic integrity from your instructor or from other institutional resources (see resources such as: http://www.utsc.utoronto.ca/vpdean/academic-integrity)

Course Support

Access*Ability*

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the Access**Ability** Services Office as soon as possible. I will work with you and Access**Ability** Services to ensure you can achieve your learning goals in this course. Enquiries are confidential. The UTSC Access**Ability** Services staff (located in [illegible]) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations [illegible] or ability@utsc.utoronto.ca

Discussion Board

The course website supports electronic forums useful for questions and discussions on course content, conceptual and detailed problems, textbook readings, as well as any issues relating to administrative details of the course such as deadlines, future topics, and scheduling. It is recommended that you check the forums on a regular basis to keep on top of current issues. You can subscribe to the various forums in order to receive email notifications when new posts are available, and there are also options for posting anonymously.

Class Schedule

This schedule is *tentative* and might change during the term in order to accommodate for variations in the lectures in response to performance and feedback from the students.

Some topics might be removed and others added to adjust for variations in the background of the class. Announcements will be made whenever needed.

Please note that it is your responsibility to read the assigned sections and chapters **before** each lecture.

During the lectures we will concentrate on the most important and difficult aspects of the theories and concepts from your textbook readings.

Failing to complete the textbook readings before each lecture will negatively affect your ability to understand and participate in the class discussions.

Dates	**Tuesday Lecture** [illegible]pm [illegible]pm	**Wed. / Thu. Tutorial** [illegible]pm [illegible]pm
Jan. 9 Jan. [illegible]	**Energy in Thermal Physics** Chapter [illegible]	**Energy in Thermal Physics** Chapter [illegible]
Jan. [illegible] Jan. [illegible]	**Energy in Thermal Physics** Chapter [illegible] 6	**Problem Set # 01** Tutorial # [illegible]
Jan. [illegible]		