THE UNIVERSITY OF TEXAS AT EL PASO
COLLEGE OF SCIENCE
DEPARTMENT OF PHYSICS

Course #:	PHYS 3331; CRN: 23540
Course Title:	Thermal Physics
Credit Hrs:	3
Term:	Spring 2016
Course Meetings & Location:	TR 3:00-4:20pm; PSCI 218
Prerequisite Courses:	PHYS 2421, MATH 2313
Instructor:	Tunna Baruah
Office Location:	PSCI 225 B
Contact Info:	Phone # 915-747-7529 E-mail address: tbaruah@utep.edu Fax # 915-747-5447
Office Hrs:	TR 12:00 – 1:00 pm; Or through appointments
Textbook(s), Materials:	Required: ***Thermodynamics and Statistical Mechanics, 2nd edition*** by Keith Stowe Suggested: ***Fundamentals of Statistical and Thermal Physics*** by F. Reif; ***Thermal Physics*** by Ralph Baerlein; ***Thermal Physics*** by C. Kittel and Kroemer
Course Objectives (Learning Outcomes):	This course on Thermal Physics covers statistical mechanics and thermodynamics. The topics to be are covered probability distribution, entropy, temperature, ensemble, ideal gas, kinetic theory of gases, Laws of thermodynamics, Thermodynamic potentials, Boltzmann distribution, Fermi-Dirac distribution, Bose-Einstein distribution.
Course Activities/Assignments:	The grades will be determined from two midterm tests, final and quizzes. Home-works will be assigned. Quizzes will be held regularly every week. No repeat tests, no makeup tests or quizzes.
Assessment of Course Objectives:	Assessments will be based on quizzes, homeworks and tests.
Grading Policy:	Grades will be determined from three tests: two midterms and final (60%), quizzes (20%) and homework (20%).
Make-up Policy:	No makeup tests or quizzes.
Attendance Policy:	None.
Academic Integrity Policy:	See http://academics.utep.edu/Default.aspx?tabid=23785
Civility Statement:	No cell phone, no chatting with classmates, active participation in class activity.
Disability Statement:	If a student has or suspects he/she has a disability and needs an accommodation, he/she should contact the Disabled Student Services Office (DSSO) at 747-5148 or at <dss@utep.edu> or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any DSS accommodation letters and instructions.

Military Statement: If you are a military student with the potential of being called to military service and/or training during the course of the semester, please contact me within the first two weeks of class to arrange in advance for makeup exams, etc.

The UTEP Spring 2015 drop deadline is April 6, 2015. The College of Science will remain aligned with the University and not approve any drop requests after that date.

All grades of Incomplete must be accompanied by an Incomplete Contract that has been signed by the instructor of record, student, departmental chair, and the dean. Although UTEP will allow a maximum of one year to complete this contract, the College of Science requests it be limited to one month based upon completion data. A grade of Incomplete is only used in extraordinary circumstances confined to a limited event such as a missed exam, project, or lab. If the student has missed a significant amount of work (e.g. multiple assignments or tasks), a grade of Incomplete is not appropriate or warranted.

Course Schedule:

General Timeline:	Weeks
Binary systems and Gaussian distribution	:1-3
Entropy, and temperature, laws of thermodynamics	:4,5
Thermodynamic potentials, ideal gas, special processes	:6,7
Heat and work, engines	:8
Chemical potential, Gibbs free energy, chemical reactions	:9,10
Boltzmann's distribution, partition function	:11
Kinetic theory	:12
Fermi and Bose gases, thermal radiation	:13-15

Three midterms :

Midterm I	: Feb 18
Midterm II	: Mar 17
Midterm III	: Apr 21

Final : According to exam schedule. :