

ASTR 300b – Radiation & Matter

Fall 2020

TThW 2:00

Virtual via Zoom

Instructor:

Prof. Chris Walker

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Office Hours: Byappointment

Course Website:

Course material including handouts and notes will be posted on the D2L course website. You can find the syllabus, the schedule for the term (including any changes or updates to the schedule), handouts, and information about papers there.

Course Description:

This course will cover basics of radiative transfer, atomic and molecular spectroscopy, line diagnostics, phases of the ISM, dust physics, basics of star formation, stellar winds, supernovae and shocks.

Classroom:

The course will meet via Zoom.

Textbook:

There is no required textbook for this class; however, useful references include:

Draine, *Physics of the Interstellar and Intergalactic Medium*

Tielens, *The Physics & Chemistry of the ISM*, Ch. 1

Spitzer, *Physical Processes in the ISM*, Ch. 1

C. Walker, *Terahertz Astronomy*, Ch. 1, 2, 3, 4

Burton, in *The Galactic ISM*, pp. 1-20

Elmegreen, in *The Galactic ISM*, pp. 157-173

Grading Policy:

The final grade will be determined by:

Homework: 50%

2 Exams: 50 %

Grading Scale:

A 90% overall grade will guarantee an A.

Incompletes will only be given if a student has satisfactorily completed the majority of the work in the class and has a valid reason, such as medical, for not completing the remainder of the course. Students must make arrangements with the instructor in order to receive an incomplete.

Assignments and Exams:

There will be weekly or biweekly homeworks, which will account for 50% of the final grade. The homeworks will be due at the beginning of class on the days indicated on the schedule. There will be no credit for late homework, but you will be able to drop the homework set with the lowest score.

There will also be two exams, a midterm and final, which will account for 50% of the final grade. Both will be orals.

Additional Information:

Students with disabilities who require accommodations to fully participate in course activities or meet course requirements are encouraged to register with the Disability Resource Center and contact us to discuss access issues.

Students are expected to follow all of the university-wide student policies, which are available at <http://catalog.arizona.edu>

Students are also expected to understand and follow the Student Code of Academic Integrity: <http://deanofstudents.arizona.edu/codeofacademicintegrity>

Other than grade and absence policies, the information contained in this syllabus may be subject to change with reasonable advance notice.