# Astronomy 201 Tier 2 Natural Sciences: Cosmology (Fall 2015)

Lectures: 3:00PM-3:50PM MWF in Steward N210

Instructor: Prof. Dan Stark

Office: Steward 322 TA: Michi Bauböck

Class Email: ASTRStark@as.arizona.edu

#### Office hours:

Prof. D. Stark: Tuesday 2:00-3:00pm (Steward 322)

TA. M. Bauböck: Tuesday 10:00-11:00am, Thursday 2:00-3:00pm (Steward N317)

# **Course Description**

Extragalactic astronomy and cosmology are among the fastest developing fields in astronomy. This course presents cosmology as a modern, quantitative science. It describes what we know about galaxies, the large scale structure of the universe and the beginnings and evolution of the Universe.

### Topics to be covered

History of Modern Cosmology
Stars and Black holes
Expanding Universe
Special and General Relativity
Dark Matter
Dark Energy
The Early Universe
The First Stars and Galaxies
Large Scale Structure in the Universe
Fate and Evolution of the Universe

**GRADING:** Your course grade will be based on the following items:

- Homework and online quizzes (drop lowest two scores): 30%
- In class activities / writing (drop lowest score): 10%

- In class tests (drop lowest score): 40%
- Final Exam: 20%

The class will not be curved, grades are absolute. The correspondence between final percentages and letter grades will be: A: 85%-100%, B: 70%-85%, C: 50%-70%, D: 30%-50%, E: 0%-30%.

**TEXTBOOK:** For this course we will use "21st Century Astronomy, 4th Edition," by Kay, Palen, Smith, & Blumenthal. You are only required to purchase the "Stars and Galaxies" split, available in the bookstore.

MIDTERM TESTS: There will be THREE in class tests during the semester. Only your best TWO scores will count. No makeup tests without a prior approved Dean's excuse. They will be held on the following days:

- Wednesday, September 23
- Wednesday, October 21
- Wednesday, November 18

**FINAL EXAM:** The final exam will be held on Wednesday, December 16 at 3:30-5:30pm.

## **Course Conduct and Expectations**

Please come to class ready to learn and engage with your peers. Student participation is required. In order to ensure a productive learning envi2ronment for all students, please note the following rules:

- 1. No cellphones in class. They must be kept in a bag or pocket and on silent.
- 2. Laptops / tablets must only be used for note taking. All students using such devices should sit in the front of the lecture hall.
- 3. No class disruptions (talking, note passing, etc.)
- 4. Follow the University of Arizona Code of Academic Integrity
- 5. Bring your student photo-ID to class every day and to the final exam.

#### **Course Email and Websites:**

In this class we will make regular use of D2L. It is your responsibility to check D2L regularly for course notifications / updates / and assignments.

Email: All emails regarding the course should be sent to

ASTRStark@as.arizona.edu. We will aim to respond to all emails in 48 hours or less.

Students with disabilities who require reasonable accommodations to fully participate in course activities or meet course requirements are encouraged to register with the Disability Resource Center (http://drc.arizona.edu) and contact Prof. Stark to discuss accessibility issues.

Code of conduct: Students are expected to understand and follow the Student Code of Conduct, which is available at https://deanofstudents.arizona.edu/policies-codes.

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