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## ASTR 323: Extragalactic Astronomy and Cosmology

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University of Washington, Spring Quarter 2014

**Location and Time:** Tuesday, Thursday: 2:30-3:50, PA A110

**Office Hours:** Tuesday after class, or any other time when my office door is *open*

**Grading:** closed-book mid-term exam 30%, closed-book final exam 30%, 4 homeworks 10% each  
key: >90%=A, >80%=B, >70%=C, >50%=D.

**Class web site:** [http://www.astro.washington.edu/ivezic/t\\_astr323.html](http://www.astro.washington.edu/ivezic/t_astr323.html)

**Required Textbook:** Ryden & Peterson: *Foundations of Astrophysics*

### Tentative Class Schedule

- 1) Tue: April 1 L1: Introduction, review of stellar astrophysics
- 2) Thu: April 3 L2: The Milky Way (structure, ISM)  
READING DUE: Ch.19
- 3) Tue: April 8 L2: The Milky Way (SDSS and kinematics)
- 4) Thu: April 10 L3: Introduction to galaxies, the Hubble sequence  
READING DUE: Ch.20 (sections 1-3)
- 5) Tue: April 15 L3: Spiral Galaxies (Tully-Fisher, Virial Theorem)
- 6) Thu: April 17 HW1 due, L3: Elliptical Gal's (Faber-Jackson, Fundamental Plane)  
READING DUE: Ch.20 (sections 4-5)
- 7) Tue: April 22 L4: Extragalactic Distance Scale
- 8) Thu: April 24 \*\*\* NO CLASS \*\*\*  
READING DUE: Ch.21
- 9) Tue: April 29 HW2 due, L5: Observed Properties of AGNs and quasars
- 10) Thu: May 1 L5: The Unified AGN Model  
READING DUE: Ch.22
- 11) Tue: May 6 \*\*\* MIDTERM EXAM: 2:30-3:50pm, PA A110 \*\*\*
- 12) Thu: May 8 L6: Galaxy Clusters, Gamma-ray bursts, Lensing  
READING DUE: Ch.23 (sections 1-4)
- 13) Tue: May 13 L7: Expansion of the Universe

- 14) Thu: May 15 L7: Newtonian and Relativistic Cosmology  
READING DUE: Ch. 23 (section 5), Ch.24 (sections 1-2)
- 15) Tue: May 20 HW3 due, L7: Observational Cosmology
- 16) Thu: May 22 L8: CMB and other evidence for the Big Bang  
READING DUE: Ch.24 (sections 3-4)
- 17) Tue: May 27 L8: Early Universe and Inflation
- 18) Thu: May 29 HW4 due, L9: Astronomical Surveys
- 19) Tue: June 3 L10: Recap of statistics
- 20) Thu: June 5 Free discussion about the class and other topics
- 21) Tue: June 10 \*\*\* FINAL EXAM: 4:30-6:20pm, PA A110 \*\*\*

**Notes:**

**Exams** will be based on the material from the textbook AND the lecture notes.

**The lecture notes** will be available from the class website on the morning of the day of the corresponding class – the lecture notes are not to be mistaken for the textbook! See the READING assignments above!

**Homeworks** will be posted at the class website no later than the first day of the week prior to the due date week (e.g. HW 1 is due on April 17, 2014, and will be posted no later than April 7, 2014).