

Astronomy 125 – Stars in the ISM

Spring 2015

Syllabus

Topics:

Week 1: Review of stellar properties and relevant physics (Ch. 3)

Week 2: Stellar atmospheres and radiation transport (Ch. 9)

Week 3: Stellar interiors (Ch. 10)

Week 4: Post-main-sequence evolution (Ch. 13)

Week 5: Massive star evolution (Ch. 15)

Week 6: The Sun (Ch. 11, Basu paper on helioseismology)

Week 7: Compact objects (Ch. 16)

(Spring break)

Week 8: Midterm (in class)

Week 9: Star formation (including Shu)

Week 10: Dust in the ISM (Dyson & Williams, Draine review articles)

Week 11: HII regions (Osterbrock)

Week 12: HII regions: density diagnostics, M 42 case study (O'Dell review article)

Week 13: Hydrodynamics and shock waves (Harvard A145 notes)

Week 14: Multiphase ISM (Field, Goldsmith, & Habing and other articles)