Astro 404: Stellar Astrophysics

Syllabus 2019

Class Times:
   Tuesday 1:30 — 2:20 pm (ECS 160)
   Wednesday 1:30 — 3:30 pm (Elliott 161)

Office Hours: TBD (in Elliott 111)

Textbook: Stellar Astrophysics by F. LeBlanc

Additional References
   1. Introduction to Modern Astrophysics (by Carroll & Ostlie)
   2. Structure & Evolution of Stars (by Eldridge & Tout)
   3. Stellar Structure & Evolution (by Prialnik)
   4. More TBD, and online materials

Grading Scheme
   2 midterms (20% each)
   4 problem sets (20% total)
   4 research assignments and one presentation (40% total)

Calendar
Jan 7+       Week 1: Introduction & Review (Ch 1)
Jan 14+      Week 2: Radiative Transfer (Ch 3)
Jan 21+      Week 3: Stellar Atmospheres (Ch 4)
Jan 28+      Week 4: Stellar Spectroscopy & Surveys
Feb 5+       Week 5: Globular clusters
Feb 12       Week 6: Midterm #1
Feb 18+      Break
Feb 25+      Week 7: Stellar Interiors (Ch 5)
Mar 3+       Week 8: Stellar Evolution (Prialnik Ch 7)
Mar 10+      Week 9: Nucleosynthesis (Ch 6)
Mar 17+      Week 10: Heavy elements, Supernovae, Compact binaries
Mar 23+      Week 11: Star Formation (TBD, exoplanets, debris disks)
Mar 31+      Week 12: Midterm #2 (if unanimous, else in Exam Week)
Apr 6+ **Exam week: Presentations (selected from the term research projects)

Engagement
You are encouraged to work together on the problem sets and research assignments, though you will hand in your own work for grading. You are also expected to have a copy of the primary textbook and be reading along/ahead in it. Finally, you will need to have a passing grade on both midterms to pass the course.