

ASTR 4811 - Observational Astronomy 1

Fall 2026 Syllabus, Section 01, CRN 43548,

Credit hours: 3

Instructor

John Feldmeier

Email: jjfeldmeier@ysu.edu

Public Instructor Information

Dr. John Feldmeier, Professor

- Distinguished Professor, Youngstown State University, 2019
- Astronomy and Astrophysics Postdoctoral Fellow, National Science Foundation, 2003
- Ph.D. Astronomy and Astrophysics, Pennsylvania State University, 2000
- B.S. Physics, University of Texas, Austin, 1994
- B.A. Astronomy, University of Texas, Austin, 1994

Office Location: Ward Beecher Hall, 2021

Office Phone: 330-941-1381

Course Description

4811. Observational Astronomy 1. Photoelectric photometry, photographic and CCD imaging techniques, spectroscopy, methods of data reduction. Some night observatory work included. Prereq.: PHYS 2611 and MATH 2673. 3 s.h.

Course Readings

Group	Title	Author	ISBN
Required	To Measure the Sky, 2nd Edition	Chromey, F.	9781107572560
Required	A Student's Guide to Python for Physical Modeling: Second Edition	Kinder, J. and Nelson, P.	0691223653

Both books will be used in the following class (ASTR 4812), so hold onto your copies!

"CHR" means Chromey, and "KN" means Kinder-Nelson

Unit 1 - CHR: 1(all), OL: 1905.13189.pdf (sections 1, 2.1, 3), KN 1(all, but skim the Spyder material), Appendix B, CHR 10.5.1, 10.5.2, 10.5.3, 10.5.4, CHR 10.7.1, 10.7.2, 10.7.3

Unit 2 - CHR 2(all), KN 2(all), KN 3(all)

Unit 3 - CHR 3.1, 3.2, KN 4, OL: 1905.13189.pdf (sections 4), CHR 3.3, 3.4, 4(all)

Unit 4 - CHR 5(all)

Unit 5 - CHR 6(all)

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
8/24		Introduction	
8/31	Unit 1		

9/7	Unit 2	Properties of Light Luminosity and Magnitudes
9/14		Extinction and Reddening
9/21	Unit 3	Statistics and Uncertainty
10/5	Unit 4	Astrometry Project
10/12		Image Surveys and Historical Data
10/19	Unit 5	Astronomical Time
11/2	Unit 6	Telescope Optics
11/9		Telescope Types
11/16		Telescope Tours
11/30		Student Presentations
12/7	Final Exams	

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.