PHYSICS 1091 ``Stars and Galaxies Lab'' Spring 2023

CRN: 31899
Credits: 1.00
Department: Physics and Astronomy
Class Home page: http://jpastro.net/AST1091/syll-phys1091.html (this page!)

Instructor: **Dr. Jason Pinkney**
Office Hours in 111 Science Annex at 10 am Tues, 1-3 pm T, and 9 am - 11 am on Thu.
Email j-pinkney@onu.edu or call 419-772-2740.
Observatory Phone: 419-772-4028
Instructor's Home page: https://jpastro.net

Class time and place:
Weekly meeting at 108A Sci Annex (Astro Lab): Monday 2:00 pm, OR Tuesday 9:00 am.
Default observing time: Tues, about 7:15-8:30 pm (will shift to 8:30-9:45 pm after DST).
Backup observing: Thurs, about 7:15-8:30 pm.

- We will try to observe once per week, but clouds inevitably interfere.
- We use the Weekly meeting to assign new indoor and outdoor labs, turn in labs, and go over labs. (Every other Wednesday, the Astronomy Club meets at 9 pm, so Wednesday will not always work as a backup.)
- Physical Plant will need to give you key card access to SA 108A and SA 117. (I'll tell Krista Frimel.)

NEW STUFF (The place for any additions.)

Lab on Proper Motion.
PowerPoint file to insert CCD images into. (Or sketch on.)

Lab:
This is the lab associated with introductory astronomy course Physics 1061, "Stars and Galaxies". There is only 1 section, since only astronomy minors (or physics majors with astronomy concentrations) really have to take this lab. You will have an informational meeting with me on the second week where you will be assigned your first lab.

Textbook and Notebook: No textbook is required. (Handouts will be provided for some labs while others will be computer-based.) However, you should have a notebook for the lab. Use it to record notes on our weekly meetings, and to write out a description of the computer-based labs.

Course Description:
Astronomy labs requiring math at the algebra level. These labs will reinforce the material presented in the Stars and Galaxies class (PHYS 1061), including: the celestial sphere, coordinate systems, proper motions of stars, the HR Diagram, Cepheid stars, Galaxy rotation and the Hubble Law. The course combines indoor, computer based labs with observing sessions at the ONU Observatory. The outdoor sessions intend to give you practice in finding your way in the night sky, and also give you experience in using telescopes and CCD detectors for imaging.

Here is a link to the ONU Observatory web site (including maps): https://jpastro.net/astro/ONUObservatory.html

Grading:

Telescope & sky quiz	Telescope & sky quiz	5%
Labs	Indoor and outdoor labs (see schedule)	95%
Total		100%