

**Syllabus
Astronomy 101L
Astronomy Laboratory
(1-Credit Hour)
UNMV, Spring 2017**

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COURSE DESCRIPTION

Astronomy 101L is a laboratory course for the investigation of the principles and phenomena discussed in Astronomy 101 lecture course. This course includes laboratory experiments concerning the nature of light, laws of motion, and introduction to the internet and computer simulations of data taking and analysis similar to current research in astronomy.

PRE- or CO-REQUISITE: AST 101.

TEXT/MATERIALS

NAAP computer based labs located on the web at:

<http://astro.unl.edu/naap/>

COURSE OBJECTIVES

- Concepts presented in Astronomy 101 will be reinforced through the completion of various laboratory investigations.
- The student will gain familiarity with common research tools and the methods by which astronomical research is conducted.
- The student will develop the skills necessary for making accurate measurements, collecting data and, ultimately, analyzing and interpreting this data.

GRADE:

You may work in groups. Each group may be up to four students. But, each student needs to submit one lab report. No late labs are accepted.

Each lab report is graded. The midterm or the final grade is based on the average grade of all labs.

Since the seeing in the sky may vary, the scheduled labs may change depending on the sky condition.

10 computer based Labs 100 points	Grading Scale
5 night labs 50 points	97-100 A+
Total 150 points	93-96.9 A
	90-92.9 A-
	87-89.9 B+
	83-86.9 B
	80-82.9 B-
	77-79.9 C+
	73-76.9 C
	70-72.9 C-
	67-69.9 D+
	63-66.9 D
	60-62.9 D-
	0-59.9 F

SCHEDULE OF LABS BY WEEK:

Week	Date Week of	Labs
1	1/16	Introduction to NAAP labs http://astro.unl.edu/naap/ No Lab (Review on your own)
2	1/23	Basic Coordinates and Seasons Lab http://astro.unl.edu/naap/motion1/motion1.html
3	1/30	Rotating Sky Lab http://astro.unl.edu/naap/motion2/motion2.html
4	2/6	Motions of the Sun Lab http://astro.unl.edu/naap/motion3/motion3.html
5	2/13	Lunar Phases Lab http://astro.unl.edu/naap/lps/lps.html
6	2/20	Solar System Models Lab http://astro.unl.edu/naap/ssm/ssm.html
7	2/27	Planetary Orbits Lab http://astro.unl.edu/naap/pos/pos.html
8	3/6	Blackbody Curves & UBV Filters Lab http://astro.unl.edu/naap/blackbody/blackbody.html SPRING BREAK
9	3/20	Hertzprung-Russell diagram Lab http://astro.unl.edu/naap/hr/hr.html
10	3/27	Eclipsing Binary Stars Lab http://astro.unl.edu/naap/ebs/ebs.html
11	4/3	Cosmic Distance Ladder lab http://astro.unl.edu/naap/distance/distance.html
12	4/10	Night lab
13	4/17	Night Lab
14	4/24	Night Lab
15	5/1	Night Lab
16	5/8	Make up lab