ASTR 101L Section 501
Astronomy Laboratory
www.unm.edu/~astro1/101lab

UNM – Valencia Fall 2015

Instructor	**Location**	**Times**
Stephen Klinksiek	VACTC 111	M 7:30 - 9:30 pm

Office	**Hours**	**Email**	**Phone**
Academic Office	M - W 5:30 pm or appointment	saklink@unm.edu	925-8600

Overview

Course Description: Intended as an adjunct to ASTR 101, this course deals with elementary techniques in astronomical observations. *Pre or co-requisite: ASTR 101.*

Course Objectives:

1. Students will be aware of models and theories, for example, heliocentric and geocentric models of the universe and the Big Bang theory. Students will be able to recognize how the scientific process was involved in the development and acceptance or rejection of such models and theories.
2. Students will be able to use basic laws of physics related to astronomy to estimate answers to various problems. Students will be able to recognize metric units and correct units in which to measure various astronomical properties.
3. Students will understand basic everyday concepts like seasons, the rising and setting of the Moon and its appearance, and our place in the universe. Students will recognize valid explanations of these phenomena.
4. Students will understand environmental issues that arise in the context of astronomy, namely greenhouse gases, the ozone layer and light pollution.
5. Students will understand the origin and nature of the universe - subjects with relevance to contemporary societal issues.
6. Have fun.

Required: There are no required texts for this course, but students are required to have a 6 to 12 inch transparent ruler.

Recommended: Basic scientific calculator.

Students with Disabilities: If you have a documented disability, please provide me with a copy of your letter from Equal Access Services as soon as possible to ensure the necessary accommodations are provided for you in a timely manner.

Note on Academic Dishonesty: I take academic dishonesty very seriously and may fail you the instant you are caught cheating. This is allowed under guidelines of the University as outlined in the section on academic dishonesty in the UNM Valencia Catalogue:

> *Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, including*

dismissal, against any student who is found responsible for academic dishonesty. Any student who has been judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course.

Academic dishonesty includes, but is not limited to, dishonesty in quizzes, tests or assignments; claiming credit for work not done or done by others; hindering the academic work of other students; and misrepresenting academic or professional qualifications within or outside the University.

Class Guidelines

Attendance: Labs can only be done in class so attendance is mandatory to pass. Please see grading below.

Grading: Your grade will be based on completion of all labs. Each lab missed reduces your grade by one letter. All students begin the course with an A, so missing one lab drops that student to a B at best. There will also be a component of one half of a letter grade based on performance. Students having performance issues may have their grades reduced by up to one half letter such as going from a B to a C+.

Tentative Course Schedule

There are 14 labs to be completed and a suggested schedule is shown. Students are responsible for all fourteen labs as well as their observing project and may complete them in a different order than the one shown here *with permission.*

Week	**Date**	**Laboratory / Notes**
1	Aug. 17	Foundations
2	Aug. 24	Properties of Planets
3	Aug. 31	Kepler's Laws
4	Sept. 7	**Holiday**
5	Sept. 14	Parallax
6	Sept. 21	Atomic Spectra
7	Sept. 28	Images and Photometry
8	Oct. 5	Itroduction to Stars
9	Oct. 12	Properties of Stars
10	Oct. 19	Binary Stars
11	Oct. 26	Star Clusters
12	Nov. 2	Galaxies and Cepheids
13	Nov. 9	Cosmology
14	Nov. 16	Quasars
15	Nov. 23	Extraterrestrial Life
16	Nov. 30	**Final Exam**