

CASPER COLLEGE COURSE SYLLABUS  
**ASTR 1050 N1: Survey of Astronomy**

**Semester/Year:** Fall 2015

**Lecture Hours:** 3

**Lab Hours:** 2

**Credit Hours:** 4

**Class Time:** N/A

**Days:** N/A

**Room:** N/A

**Instructor's Name:** Jared Bowden

**Instructor's Contact  
Information:**

**Office Phone:**  
(307)268-2064

**Email:**  
jbowden@caspercollege.edu

**Office Hours:** T 9:30 – 11:00 AM; Th 10:30 – 11:30 AM; F 12:00 – 1:00 PM

**Web Conference Hours:** M 2:00 – 3:00 PM; Th 9:30 – 10:30 AM

**Course Description:** A survey of astronomy and the universe. Topics will include astronomical concepts, terms, and history, as well as a study of stellar evolution, galaxies, cosmology, and the solar system. The lab is an exercise into the concepts and methods used by astronomer in their study of the universe.

**Statement of Prerequisites:** MATH 0900

**Goal:** The Department will instruct students on knowledge gathering techniques and the understanding of basic physical concepts at a level appropriate to the class level and the student's individual career goals. A well instructed science student will be able to take a problem, analyze it both qualitatively and quantitatively, find a solution, and present the solution to others in an appropriate manner conducive to the knowledge level of the audience.

In Astronomy 1050, students will gain a working knowledge of basic physical world and the universe around them. Students will use both qualitative and quantitative problem-solving skills to answer a variety of physics problems based around concepts in astronomy.

**Outcomes:** The bolded outcomes below apply from the Casper College General Education outcomes.

1. Demonstrate effective oral and written communication
- 2. Use the scientific method**
- 3. Solve problems using critical thinking and creativity**
4. Demonstrate knowledge of diverse cultures and historical perspectives
5. Appreciate aesthetic and creative activities
6. Use appropriate technology and information to conduct research
7. Describe the value of personal, civic, and social responsibilities
- 8. Use quantitative analytical skills to evaluate and process numerical data**

**Course Objectives:**

Passing students should:

- Be proficient in SI unit conversions
- To become familiar with the scientific method and how it works by using it in experimental contexts
- Understand physical properties of objects, such as volume, density, and weight/mass
- Understand the differences between astronomy and astrology

- Qualitatively describe the science of stellar spectra and how it is used in astronomy
- Qualitatively describe planetary atmospheres (both of the Earth AND other planets)
- Be able to explain current theories on the creation of the solar system at an acceptable level
- Compare and contrast terrestrial and jovian planets
- Qualitatively describe the life cycle of stars of varying masses
- Describe in depth our sun, including atmosphere and energy sources

**Methodology:** The course will be done **entirely** on the Internet. The material for this course will be accessed by readings from the text along with content provided online or on the website accompanying the text/text cd-rom. The laboratory portion of the course will involve projects and experiments performed by the student at home and on the internet.

**Evaluation Criteria:**

This class will have a Quiz and a Homework Assignment each week. Lab assignments will be graded upon completion of the exercise. All homework and quizzes are found on the masteringastronomy website and will be graded there. Your top 12 quizzes, top 12 homeworks, and 10 lab assignments will be scored in the final grade.

On the Moodle course page, students will be required to participate in a variety of manners on a multitude of topics. There will be 3 options each week to participate in: A weekly Astronomy Picture of the Day forum, a weekly topic forum discussing topics relevant to the course, and a survey about the week’s material. The student’s **best** 25 participation moments will be scored.

Method	Points for Each	Total Points	% of Total Grade
12 Best Quizzes	30	360	36%
12 Best HW Assignments	30	360	36%
10 Lab Assignments	18	180	18%
25 Participation Moments	4	100	10%
<b>TOTAL FOR THE COURSE</b>		<b>1000</b>	<b>100%</b>

Grading Scale for the Course:

- 900 ≤ A ≤ 1000
- 800 ≤ B ≤ 899
- 700 ≤ C ≤ 799
- 600 ≤ D ≤ 699
- 0 ≤ F ≤ 599

**Casper College may collect samples of student work demonstrating achievement of the above outcomes. Any personally identifying information will be removed from student work.**

**Required Text, Readings, and Materials:**

**The Cosmic Perspective, 7<sup>th</sup> Edition, Bennett, Donahue, Schneider, and Voit**

**Exploring the Universe, A Laboratory Guide for Astronomy, Reynolds & Bakich**

**MasteringAstronomy:** See <http://www.masteringastronomy.com/>

**Class Policies:**

ALL homework and quizzes are due on Sundays at 11:59 PM MDT the week they are assigned unless otherwise stated.

Homework and Laboratories have the following late policy: 0.5% will be deducted for each hour the assignment is late. 1 minute late is your first hour deduction, 1 hour and 1 minute is your second hour deduction, and so on.

Quizzes are timed and will not be accepted if late. You have 60 minutes per quiz, so the latest you should begin to take your quiz is 10:59 PM on Sunday.

**Last day to change to an audit or withdraw from the course:** November 12<sup>th</sup>, 2015.

**Student Rights and Responsibilities:** Please refer to the Casper College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Casper College Student.

**Chain of Command:** If you have any problems with this class, you should first contact the instructor to attempt to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take the matter through the appropriate chain of command starting with the Department Head/Program Director, the Dean, and lastly the Vice President for Academic Affairs.

**Academic Dishonesty:** (Cheating & Plagiarism) Casper College demands intellectual honesty. Proven plagiarism or any form of dishonesty associated with the academic process can result in the offender failing the course in which the offense was committed or expulsion from school. See the Casper College Student Code of Conduct for more information on this topic.

**Official Means of Communication:** Casper College faculty and staff will employ the student's assigned Casper College email account as a primary method of communication. Students are responsible to check their account regularly. This is also, where you will find course evaluation links during course evaluation periods.

**ADA Accommodations Policy:** If you need academic accommodations because of a disability, please inform me as soon as possible. See me privately after class, or during my office hours. To request academic accommodations, students must first consult with the college's Disability Services Counselor located in the Gateway Building, Room 344, (307) 268-2557, [bheuer@caspercollege.edu](mailto:bheuer@caspercollege.edu). The Disability Services Counselor is responsible for reviewing documentation provided by students requesting accommodations, determining eligibility for accommodations, and helping students request and use appropriate accommodations.

**Calendar or schedule indicating course content:** (be as complete here as possible, at least a grid showing week by week topics to be covered, assignments, due dates, readings etc. This can always be modified with a new handout later in the semester – better to send out a revised schedule than to trust verbal announcements by themselves)

**TENTATIVE COURSE SCHEDULE (Subject to Change)**

<b>Week</b>	<b>Chapters Covered</b>	<b>Topics</b>
1	1	A Modern View of the Universe
2	2	Discovering the Universe for Yourself
3	7	Our Planetary System
4	8	Formation of the Solar System
5	9	Planetary Geology
6	11	Jovian Planet Systems
7	12	Asteroids, Comets, and Dwarf Planets
8		Midterms, Make-up Week
9	13	Other Planetary Systems
10	14	Our Star
11	16	Star Birth
12	17	Star Stuff
13	18	The Bizarre Stellar Graveyard
14	19	Our Galaxy
15	20	Galaxies and the Foundation of Modern Cosmology
16		Make-Up Week
Dec 14 – Dec 17	Finals Week	