COLORADO MOUNTAIN COLLEGE - SPRING 2013
ASTRONOMY 101 w/LAB WEB COURSE SYLLABUS

I. Course and Instructor Information

Course Code: AST101	**Synonym**: 71272
Section #: AST-101-DS21	**Credits:** 4 semester hours
Course Dates: 01/14/13 - 05/03/13 (see assignment schedule)	**Refund Date**: 01/30/13
Instructor: Professor Jimmy Westlake	**Census Date**: 02/04/13
Phone/Voice Mail: (970) 870-4537	**Withdrawal Date**: 04/07/13
CMC Alpine FAX: (970) 870-4535	**E-mail**: jwestlake@coloradomtn.edu
Mailing Address: P.O. Box 773443 Steamboat Springs, CO 80477	**Date of Latest Syllabus Revision:** 11/22/13

If you have general questions about online learning, please contact **Colorado Mountain College Online Learning** at 800-621-8559, extension 8341 or virtual@coloradomtn.edu.

Computer Access: Online courses require frequent computer use and access to the Internet. It is highly recommended that students have a personal computer for use in online courses. If you need to use a computer at your local Colorado Mountain College location, you will be able to do so during open lab hours. Please check with your local site for times.

II. Course Description

Focuses on the history of astronomy, the tools of the astronomer, and the contents of the solar system, including the planets, moons, asteroids, comets, and meteoroids. This course incorporates laboratory experience. Text required. Students should contact the instructor individually for orientation. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1 Prerequisite: College-level reading.

III. Required Materials

Textbook: **Astronomy Today**, 7th Ed., by Chaisson and McMillan, ISBN 9780321696236 (includes Mastering Astronomy access code)
Mastering Astronomy: Homework assignments will be completed online at www.MasteringAstronomy.com.
Sky Journal: A bound, blank, artist's sketchbook containing at least 25 pages and no larger than 8.5"x11" is required for your Sky Journal (loose leaf will not be accepted).
Lab Manual: None; lab materials will be mailed out to each student after the beginning of the semester
Galileoscope: Order your Galileoscope refracting telescope kit on Amazon.com *so that you have it in hand before February 3*. The cost is about $50 plus shipping. You will also need an ordinary camera tripod for mounting your Galileoscope.
Videos: Selected videos will be required viewing for this class. These videos will stream over the Internet, so you will need to watch them on a computer with a sufficiently fast Internet connection.
Calculator: A *scientific* pocket calculator is required for this class.
Orientation: Email Professor Westlake for specific orientation information after registering for this course.

Ordering Your Books:

Colorado Mountain College has chosen to partner with Follett Virtual Bookstores to operate textbook services. You will find the official textbook list at **www.coloradomtn.bkstr.com**. If you ever have any online bookstore questions, you can email coloradomtn@fvb.follett.com or call 800-621-4088.
Students can sell back books anytime online or in-person at Follett's CMC buyback events. Sign up for the online store's email list at **www.coloradomtn.bkstr.com/email** for more information on future buyback dates/times and to receive other important messages from Follett.
Ordering Textbooks with Financial Aid: Students wishing to use their Financial Aid to purchase their textbooks from the Colorado Mountain College Online Bookstore (Follett) may be set up with a *CMC Flex*

Pay account. Contact your local CMC Accounts Manager for instructions and your specific username and password information. If you are not close to a CMC site, contact CMC Online Learning at 970-947-8341, or virtual@coloradomtn.edu.

Canvas Information

Canvas by Instructure is the online learning management system (LMS) used by Colorado Mountain College. You access Canvas via your web browser, i.e.: Mozilla/Firefox, Internet Explorer, Opera, etc. Students, faculty and staff members use the CMC Canvas site to access course announcements, documents, research links and library resources, to receive and deliver completed assignments, take tests, and to communicate with each other via email, discussion boards and chat. For instructions on How to Access your Canvas Account, Canvas How To's, and who to contact for all your Canvas questions and support needs, please visit: **www.coloradomtn.edu/web/departments/faq-for-students**.

IV. CCCNS Course Objectives

1) Define each of the related vocabulary words.
2) Recognize the appropriate symbols used.
3) State the concepts introduced.
4) Distinguish between different concepts within a topic.
5) Interpret tables or graphs.
6) Collect and organize data in a systematic manner.
7) Present data by construction of charts and graphs.
8) Evaluate the relevancy of data.
9) Write a formal report.
10) Set up and solve problems using geometry, algebra, and trigonometry as required.
11) Apply concepts to new situations.
12) Demonstrate the ability to select/apply contemporary forms of technology to solve problems or compile information.

V. IDEA Student Ratings of Instruction

Basic Cognitive Background

1. Gaining factual knowledge (terminology, classifications, methods, trends) *(Essential)*
   Objective's focus: building a knowledge base
2. Learning fundamental principles, generalizations, or theories *(Essential)*
   Objective's focus: connecting facts, understanding relationships

Application of Learning

3. Learning to apply course material (to improve thinking, problem solving, and decisions) *(Important)*
   Objective's focus: applying what you have learned in this class to clarify thinking or solve problems

Intellectual Development

4. Learning to analyze and critically evaluate ideas, arguments, and points of view *(Important)*
   Objective's focus: higher level thinking skills (either within or outside of a disciplinary context)

Lifelong Learning

5. Acquiring an interest in learning more by asking questions and seeking answers *(Important)*
   Objective's focus: developing attitudes and behaviors to support lifelong learning

VI. Grading Procedure

In determining your grade, class assignments will be weighted as follows:

3 Tests = 45%
14 HW grades = 20%
11 AstroLab grades = 20%
1 Final Exam = 15%
TOTAL = 100%

Grading Scale: Information about the CMC grading scale is available in the College Catalog. You will receive a grade report for current semester courses at the end of each term, mailed to your permanent mailing address approximately two weeks after the end of the academic term. Additional information is available at: http://catalog.coloradomtn.edu/content.php?catoid=3&navoid=620#Grading_System_and_Options_

VII. The Semester at a Glance

Week of	Textbook Chapter	Video #	Assignments for This Week
1/14 – 1/20	1: "Charting the Heavens"	1	**Mastering Astronomy HW Set #1 and AstroLab #1 -** "Introduction to Star Charts"
1/21 – 1/27	2: "The Copernican Revolution"	2	**Mastering Astronomy HW Set #2 and AstroLab #2 -** "Kepler's 3 Laws"
1/28 – 2/3	3: "Radiation"		**Mastering Astronomy HW Set #3 and AstroLab #3 -** "Planetary Alignments"
2/4 – 2/10	4: "Spectroscopy"		**Mastering Astronomy HW Set #4 and AstroLab #4 -** "Optics and the Telescope"
2/11–2/17	5: "Telescopes"	3	**TEST #1 - Chaps 1, 2, 3, 4 and Mastering Astronomy HW Set #5**
2/18 - 2/24	6: "The Solar System"	4	**Mastering Astronomy HW Set #6**
2/25 - 3/3	7: "Earth"		**Mastering Astronomy HW Set #7 AstroLab #5 -** "The Orbit of the Moon"
3/4 - 3/10	8: "The Moon and Mercury"		**Mastering Astronomy HW Set #8 and AstroLab #6 -** "Exploring the Moon"
3/11 - 3/17	**☺ SPRING BREAK! ☺**	***	***
3/18 - 3/24	9: "Venus"		**TEST #2 - Chaps 5, 6, 7, 8 and Mastering Astronomy HW Set #9**
3/25 - 3/31	10: "Mars"		**Mastering Astronomy HW Set #10 and AstroLab #7 -** "A Trip to Mars"
4/1 - 4/7	11: "Jupiter"	5	**Mastering Astronomy HW Set #11**
4/8-4/14	12: "Saturn"	6	**Mastering Astronomy HW Set #12**
4/15-4/21	13: "Uranus and Neptune"	7	**TEST #3 - Chaps 9, 10, 11, 12 and Mastering Astronomy HW Set #13 and Completed Sky Journal and AstroLab #8 -** "The Moonplot Project"

4/22-4/28	14: "Solar System Debris"		**Mastering Astronomy HW Set #14**
4/29-5/3	15: "The Formation of Planetary Systems"		**Mastering Astronomy HW Set #15 and FINAL EXAM** – Comprehensive w/Emphasis on Chapters 13, 14, 15

VIII. Additional Course Information

IMPORTANT: **No-show reporting and financial aid:** If you have not completed your introductory assignment(s) in Canvas by **Tuesday, January 22nd** you will be reported as a no-show and dropped from the course. The resultant loss in credit hours may cause a reduction and/or cancellation of your financial aid award. Neither financial aid awards nor class reinstatement can occur after this point without significant documented extenuating circumstances. If you have questions or concerns about this please contact your campus financial aid specialist. (www.coloradomtn.edu/web/departments/financial_aid)

1) **Mastering Astronomy Information**: Weekly homework assignments will be completed online at www.MasteringAstronomy.com. Students who purchase their course materials through Follett will have their Mastering Astronomy access code included in their bundle. Students who do not order through Follett must purchase their access code online with a credit card. Access www.MasteringAstronomy.com on your computer and follow the student instructions to log on and enter (or purchase) your access code. You will be prompted to choose your own user ID and password. The course code to enter to enroll yourself in our class is: **AST101WSP12**.

   All online MA HW assignments must be submitted before the published deadline or Mastering Astronomy will not accept them for grading. You will normally have one week to complete each assignment. You will get **two** attempts to answer each question correctly. **Every student gets to drop his/her lowest Mastering Astronomy HW grade at the end of the semester.**

2) **AstroLabs** – During the first week of the course, you will receive a packet of information in your mail containing everything you need to know about completing the eight AstroLabs, the semester-long Moonplot Project, and the Sky Journal Project. You will download the AstroLab assignments themselves from the "Assignments" section of our Canvas web page and you will then use the various charts in the AstroLab packet mailed to you to complete the assignments. Your completed AstroLabs are to be sent to Prof. Westlake as email attachments in MS Word (.doc or .docx) format. Before submitting, please name your AstroLab files like this (using YOUR name): **WestlakeJ_ALAB1.docx**. If you do not receive a confirmation email within 24 hours after submitting an AstroLab, it is your responsibility to double check with Prof. Westlake and make certain that your assignment went through. Like Mastering Astronomy HW sets, your AstroLab assignments are due on Sundays before 11:00 PM. **Every student gets to drop his/her single lowest AstroLab grade at the end of the semester** (Moonplot Lab, Star Party, and Sky Journal grades are excluded from this and cannot be dropped)**.** Your completed **Sky Journal** and **AstroLab charts** must be mailed (postmarked) to Prof. Westlake no later than **Monday April 22** or will be subject to a 20-point late penalty. AstroLab #8 (The Moonplot Lab) and your completed Sky Journal will each count as a **double lab grade**, because of the amount of work that you will put into each of these projects.

3) **Tests** – The three TESTS and the comprehensive FINAL EXAM that you will take during this semester will be administered as timed tests on our Canvas web page. Additional instructions will be sent to you prior to each test.

4) **Videos** - We will use an online system called "Films on Demand." Just go to this link: http://digital.films.com/play/PEDDU4 and it will take you directly to our list of required videos where you can select the title that you want to view and watch it on your computer just like you would watch a "You Tube" video.

5) **Late Assignments –** Late Mastering Astronomy homework assignments will not be possible, so you **must** complete and submit them before the posted deadlines (normally Sunday nights at 11:00 PM). Under *very extenuating circumstances* (severe illness, death in the immediate family, etc.), the deadline may be extended to accommodate a student, however, special arrangements must be made with the instructor in advance of the due date.
Late AstroLab assignments will be accepted **up to one week after the posted deadline**, but not thereafter. Also, late assignments will be docked 20%, so it is most definitely to the student's advantage to turn in all assignments before the deadlines.
Late Tests will not be accepted under any circumstances. Students are encouraged to start and submit their assignments early each week to allow time for contacting the instructor with questions and to allow for technical problems that might occur at the last minute.

6) **Group Star Party/Field Trip** – Our class will meet together on two evenings during the semester for a "Star Party," where I am able to assist you, in person, with the use of the star charts. We will learn to locate stars and constellations together, learn how to do your Moonplot Project properly, and have the opportunity to look through a telescope at some cool stuff (like Jupiter and its moons!). The *tentative* dates for our class Star Parties (weather permitting) are **Fri 2/15 and Sat 2/16 near Leadville, CO**. Please mark your calendar NOW and set aside one or both of these two dates to attend. **NOTE:** Your participation in ONE of our class Star Parties is *mandatory* and will count as a single AstroLab grade. **Failure to attend will result in an AstroLab grade of zero that cannot be dropped.**

7) **A Few Words About Microsoft Word -** Microsoft Word is the standard word processing program for the majority of CMC instructors.
Saving An Office 2007 File as an Office 2003 File - Some students have purchased new computers that have Microsoft Office 2007 applications such as Word, Excel and PowerPoint installed. By default, the new version of Office saves files with a ".docx" extension. This may create compatibility issues with someone using a previous version of Office. For this course, it is suggested that you save your Word files with a .doc extension. This is a simple process. When saving a file created in Office 2007, use the "Save As" feature rather than the "Save" feature. Choose Word 97-2003 format. Your document is saved as a .doc file rather than a .docx file and can be opened and read by older versions of Microsoft Word. You may use the same process when saving an Excel spreadsheet or PowerPoint presentation to insure compatibility with those viewing your file. For more information, including how to make the Word 97-2003 format your default, see
http://archive.coloradomtn.edu/Canvas/training/office_2007/office_2007.shtml.
Students without Microsoft Word may use the free software from www.OpenOffice.org to create Word-compatible documents. The program also includes spreadsheet, presentation, drawing, and database applications. The program is available for Windows, Macintosh, or Linux operating systems. Microsoft Word is installed on computers available in computer labs at CMC locations.

8) **Math Skills -** Although this astronomy course is intended for non-science majors, it does require a basic understanding of the principles of algebra to manipulate simple equations. You will be expected to solve a simple formula for any variable in the formula, for example, solving the Small Angle Formula for the variable "D:" $\frac{A}{206{,}265} = \frac{d}{D}$ becomes $D = \frac{(206{,}265)\,d}{A}$
Another example is solving Kepler's Third Law of Planetary motion for the variable "a:"
$P^2 = a^3$ becomes $a = \sqrt[3]{(P^2)}$ *(a equals "the cube root of P squared").

9) I am **ALWAYS** ready to help you with any HW or AstroLab question that you do not understand. All you have to do is seek my help. *In a web class, the equivalent of raising your hand to ask the professor a question is to send an email or make a phone call!* I will make certain that you know how to get the answer before our conversation is over. I can be reached for help by email or telephone:
Email: jwestlake@coloradomtn.edu Telephone: (W) 970-870-4537

IX. Notice

A student judged to have engaged in academic misconduct as defined in the "Academic Policies and Requirements" section of the Colorado Mountain College Student Handbook will, at a minimum, receive a "zero" for the work in question. The student may also be removed from the class, resulting in a failing grade. All student course material may be submitted to Turnitin (or another anti-plagiarism program) at the instructor's discretion. "Academic Expectations," the "Student Code of Conduct and Judicial Process" and more information about academic misconduct can be found in the Student Handbook, online version at: www.coloradomtn.edu/File/student_handbook.pdf**.**

Students are responsible for course materials from assigned text(s) and reading, lectures, labs, and other assignments as required.

The instructor may alter any, or all, of this syllabus during the semester as the learning environment requires. Students will be notified of changes in the Canvas course shell.

If you have a disability protected by the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act and feel you may need classroom accommodations based on the impact of your disability, please contact the Disability Services Coordinator on your campus.

- Edwards and Steamboat Springs: Deb Farmer at 970-870-4450
- Aspen, Carbondale, Glenwood Springs (including Spring Valley), and Rifle: Dr. Anne Moll at 970-947-8256
- Breckenridge, Dillon, Leadville, and Chaffee County: Sandi Conner at 719-486-4200

Students wishing to withdraw from this course must INITIATE the course withdrawal/drop process at the site Registration Office.

This class could be cancelled one week prior to the census date if a sufficient number of students are not enrolled by that date.

Student Email

All CMC students enrolled in a credit-based class (0.5 hour credit class or more) will be assigned a CMC student email address through Google mail (Gmail). Please allow at least 48 hours after you register for this account to be activated. For more information on your CMC student email account, please visit the Student page of the MyCMC Portal: mycmc.coloradomtn.edu.

Virtual Library Information
http://library.coloradomtn.edu/content.php?pid=349163&sid=2891178

The Virtual Library has its doors open 24/7, providing access to thousands of online journals and newspapers, books and art images, downloadable videos and audio books, career resources and practice tests.

If you need help with the Virtual Library, email reference@coloradomtn.edu or call us at 800-621-8559, extension 2926.