



Course Name: Special Topics: Solar Eclipse

Course Number: PH 299

Term Offered: Summer 2017 – Session 4

Credits: 1

Instructor name: Kathryn Hadley

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Link to instructor bio or website: khadley.com

Course Description

This special topics course will focus on the Solar eclipse, with emphasis on the August 21, 2017 eclipse event, where Corvallis Oregon lies within the path of totality. The Solar eclipse will be treated in the context of the Sun-Earth-Moon system, as well as an example of transits in general, including the lunar eclipse. Scientific knowledge gained via eclipse events will be discussed, including information learned regarding the Sun's corona, the role of the Solar eclipse in verification of General Relativity, and the transit method of detecting exoplanets. (Bacc Core Course)

Prerequisites/Corequisites There are no separate pre- or co-requisites. However, students should have a working knowledge of basic algebra, logarithms, and scientific notation.

Communication

Please post all course-related questions in the General Discussion Forum so that the whole class may benefit from our conversation. Please email your instructor for matters of a personal nature. I will reply to course-related questions and email within 24-48 hours. I will strive to return your assignments and grades for course activities to you within seven days of the due date.

Course Credits

This course combines ~ 30 hours of instruction, online activities, and assignments for 1 credit.

Technical Assistance

If you experience errors or problems while in your online course, contact 24-7 Canvas Support via chat, phone, or e-mail through the Help link within Canvas. If you experience computer difficulties, need help downloading a browser or plug-in, or assistance logging into a course, contact the OSU Help Desk for assistance. You can call (541) 737-3474, email osuhelpdesk@oregonstate.edu or visit the OSU Computer Helpdesk online.

Learning Resources

Textbook: There is no required text for this class. If you wish to purchase a textbook, I suggest Astronomy Today 9th Ed by Eric Chaisson and Steve McMillan, Pearson ISBN 978-0-13-445027-8. An electronic version is available via RedShelf: ISBN 978-0-13-458368-6. Earlier versions are acceptable as well. Course material will be delivered via Canvas and via the instructor's website khadley.com.

This course is offered through Oregon State University Extended Campus. For more information, contact:
Web: ecampus.oregonstate.edu Email: ecampus@oregonstate.edu Tel: 800-667-1465

Canvas

This course will be delivered via Canvas where you will interact with your classmates and with your instructor. Within the course Canvas site, you will access the learning materials, such as the syllabus, class discussions, assignments and homework. To preview how an online course works, visit the [Ecampus Course Demo](#). For technical assistance, please visit [Ecampus Technical Help](#).

Measurable Student Learning Outcomes

PH 299 is a Baccalaureate Core course in the Perspectives–Biological and Physical Sciences category. Students taking a course in this category will:

1. Recognize and apply concepts and theories of basic physical sciences.
2. Apply scientific methodology and demonstrate the ability to draw conclusions based on observation, analysis, and synthesis.
3. Demonstrate connections with other subject areas.

These items will be measured through homework, quizzes and discussion assignments.

Specifically, students taking PH 299 will:

1. Recognize, explain, and apply concepts and theories of the Sun-Earth-Moon system, Solar structure, astronomical transits in general.
2. Apply scientific methodology employed in the field of solar system astronomy/astrophysics.
3. Demonstrate the ability to draw conclusions based on observation, analysis, interpretation, comparison, and synthesis.
4. Demonstrate connections with physics, chemistry, optics, and space sciences.

These items will be measured through homework, quizzes and discussion assignments.

Evaluation of Student Performance

Your course grade is determined entirely from the total number of points accumulated. The distribution of points is as follows: There are no midterms or final exam in this course.

Homework:	40%
Discussions:	30%
Quizzes:	30%

At the end of the term, the lower cutoff for an A– will be set no higher than 90%, that for a B– will be set no higher than 80%, that for a C– will be set no higher than 70%, and that for a D– will be set no higher than 60%. The cutoff may go lower than this. For example, 80% is guaranteed to be at least a B–.

Weekly homework sets, discussions and quizzes will be delivered via Canvas.

Homework sets will have no time constraint, that is, you may exit the assignment without saving and return later to finish and submit your Homework assignment.

Discussions will investigate topics connected to the material of the course. The weekly conversation will take place inside a discussion thread, where you will submit a main post and replies to your classmates and instructor.

Weekly quizzes will be timed, with a 60-minute limit, and will be open book, open note, etc.

Course Content

Week	Topics	Learning Activities	Due Dates
1	Cosmic perspective Sun-Earth-Moon system Moon phases Orbital alignment Solar vs. Lunar eclipses partial eclipses	Intro discussion Hw 1 Quiz 1	Th,Sun Sat Sun
2	Eclipse event Aug 21, 2017 Shadow maps Viewing and eye protection SOHO satellite	Discussion Hw 2 Quiz 2	W,F,Sun Sat Sun
3	Lunar eclipses Transits in general Mercury and Venus Eclipses on other planets - Saturn	Discussion Hw 3 Quiz 3	W,F,Sun Sat Sun
4	Scientific gains through eclipses Solar structure – the corona Exoplanet detection Observational test for General Relativity Ancient astronomers	Discussion Hw 4 Quiz 4	W,F,Sun Sat Sun

Schedule dates are tentative and may be subject to change.

All due dates refer to midnight, Pacific Time.

Course Policies

Discussion Participation

Students are expected to participate in all graded discussions. While there is great flexibility in online courses, this is not a self-paced course. You will need to participate in our discussions each week, with your first post due no later than Wednesday evening, your reply posts due Friday and Sunday. First week introduction discussion posts are due by Thursday with a reply by Sunday.

Incompletes

Incomplete (I) grades will be granted only in emergency cases (usually only for a death in the family, major illness or injury, or birth of your child), and if the student has turned in 80% of the points possible and has a passing percentage of at least 70% on the work that has been turned in. If you are having any difficulty that might prevent you completing the coursework, please don't wait until the end of the term; let me know right away.

Lateness Policy

Homework exercises and quizzes will be accepted after the due dates, with a 10% deduction during the first week after the due date, and 20% afterward. Discussion posts will receive a 10% deduction for each day late, and will not be accepted after the end of the week (Sunday).

Guidelines for a Productive and Effective Online Classroom

Students are expected to conduct themselves in the course (e.g., on discussion boards, email) in compliance with the university's regulations regarding civility.

Civility is an essential ingredient for academic discourse. All communications for this course should be conducted constructively, civilly, and respectfully. Differences in beliefs, opinions, and approaches are to be expected. In all you say and do for this course, be professional. Please bring any communications you believe to be in violation of this class policy to the attention of your instructor.

Active interaction with peers and your instructor is essential to success in this online course, paying particular attention to the following:

- Read your posts carefully before submitting them.
- Be respectful of others and their opinions, valuing diversity in backgrounds, abilities, and experiences.
- Challenging the ideas held by others is an integral aspect of critical thinking and the academic process. Please word your responses carefully, and recognize that others are expected to challenge your ideas. A positive atmosphere of healthy debate is encouraged.

Statement Regarding Students with Disabilities

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at <http://ds.oregonstate.edu>. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

Accessibility of Course Materials

All materials used in this course are accessible. If you require accommodations, please contact [Disability Access Services \(DAS\)](#).

Additionally, Canvas, the learning management system through which this course is offered, provides a [vendor statement](#) certifying how the platform is accessible to students with disabilities.

Expectations for Student Conduct in this Online Classroom

Students are expected to conduct themselves in the course (e.g., on discussion boards, email postings) in compliance with the university's regulations regarding civility. Student conduct is governed by the university's policies, as explained in the [Student Conduct Code](#).

Academic Integrity

Students are expected to comply with all regulations pertaining to academic honesty. For further information, visit [Student Conduct and Community Standards](#), or contact the office of Student Conduct and Mediation at 541-737-3656.

OAR 576-015-0020 (2) Academic or Scholarly Dishonesty:

- a) Academic or Scholarly Dishonesty is defined as an act of deception in which a Student seeks to claim credit for the work or effort of another person, or uses unauthorized materials or fabricated information in any academic work or research, either through the Student's own efforts or the efforts of another.

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- b) It includes:
- i) CHEATING - use or attempted use of unauthorized materials, information or study aids, or an act of deceit by which a Student attempts to misrepresent mastery of academic effort or information. This includes but is not limited to unauthorized copying or collaboration on a test or assignment, using prohibited materials and texts, any misuse of an electronic device, or using any deceptive means to gain academic credit.
 - ii) FABRICATION - falsification or invention of any information including but not limited to falsifying research, inventing or exaggerating data, or listing incorrect or fictitious references.
 - iii) ASSISTING - helping another commit an act of academic dishonesty. This includes but is not limited to paying or bribing someone to acquire a test or assignment, changing someone's grades or academic records, taking a test/doing an assignment for someone else by any means, including misuse of an electronic device. It is a violation of Oregon state law to create and offer to sell part or all of an educational assignment to another person (ORS 165.114).
 - iv) TAMPERING - altering or interfering with evaluation instruments or documents.
 - v) PLAGIARISM - representing the words or ideas of another person or presenting someone else's words, ideas, artistry or data as one's own, or using one's own previously submitted work. Plagiarism includes but is not limited to copying another person's work (including unpublished material) without appropriate referencing, presenting someone else's opinions and theories as one's own, or working jointly on a project and then submitting it as one's own.
- c) Academic Dishonesty cases are handled initially by the academic units, following the process outlined in the University's Academic Dishonesty Report Form, and will also be referred to SCCS for action under these rules.

Conduct in this Online Classroom

Students are expected to conduct themselves in the course (e.g., on discussion boards, email postings) in compliance with the [university's regulations regarding civility](#).

Tutoring

[NetTutor](#) is a leading provider of online tutoring and learner support services fully staffed by experienced, trained and monitored tutors. Students connect to live tutors from any computer that has Internet access. NetTutor provides a virtual whiteboard that allows tutors and students to work on problems in a real time environment. They also have an online writing lab where tutors critique and return essays within 24 to 48 hours. Access NetTutor from within your Canvas class by clicking on the NetTutor button in your course menu.

OSU Student Evaluation of Teaching

Course evaluation results are extremely important and are used to help me improve this course and the learning experience of future students. Results from the 19 multiple choice questions are tabulated anonymously and go directly to instructors and department heads. Student comments on the open-ended questions are compiled and confidentially forwarded to each instructor, per OSU procedures. The online Student Evaluation of Teaching form will be available toward the end of each term, and you will be sent instructions via ONID by the Office of Academic Programs, Assessment, and Accreditation. You will log in to "Student Online Services" to respond to the online questionnaire. The results on the form are anonymous and are not tabulated until after grades are posted.