

**OAKLAND UNIVERSITY, COLLEGE OF ARTS AND SCIENCES,
DEPARTMENT OF PHYSICS**

COURSE INFORMATION

PHY 3060-OBSERVATIONAL ASTRONOMY, SEC# 44872

FALL 2020, 101 MSC, 7:30-9:17PM, 2.0 CREDIT HOURS

SEPTEMBER 8-DECEMBER 7 (EXAM WEEK DECEMBER 9-15)

Course description: Lecture/Laboratory course providing basic training in astronomical techniques

Course format: on-campus, in-person

INSTRUCTOR INFORMATION

Name: Dr. Ilias Cholis

My ONLINE student hours are on Mondays and Wednesdays 3:00-4:00 p.m. or by appointment.

You can reach me at 248-370-3417 or at cholis@oakland.edu

Prerequisites: PHY 1040 or PHY 1050

THE GOALS of the course include acquiring a basic training in amateur astronomy and also develop an understanding of modern day astronomy.

To deepen the understanding of concepts, a number of tools will be used:

- **Lectures** .
- **Computer Laboratories** – Meetings in room MSC 101.
- **Outside Observations** – weather permitting we will perform observations outside the lab room

PROTECTING STUDENTS, FACULTY AND CAMPUS: IMPORTANT INFORMATION

Students must comply with the University mandated health protocols. For face-to-face classes, students must wear face coverings in the class and keep 6 feet apart from each other and from the professor. Students who are unable to wear a face covering should provide documentation of this to the Dean of Students office. If a student refuses to comply with this classroom

requirement, the student will be reported to the Dean of Students and not allowed to return to the face-to-face classroom environment until and appropriate face covering is used.

See the [Return to Campus website](https://www.oakland.edu/return-to-campus/) for up-to-date information. (URL: <https://www.oakland.edu/return-to-campus/>)

LEARNING OUTCOMES

Upon completion of the course the students will be able to:

- Locate the positions of stars and planets in the sky.
- Understand how the positions of objects change throughout the year.
- Be able to perform Observations of the Moon
- Understand the concepts of parallax and how to measure the size of distant objects
- Understand concepts of spectroscopy
- Understand the concept of Doppler redshift and blueshift
- Determine the ages of star clusters using the Hertzsprung-Russell (H-R) diagram

REQUIRED MATERIALS:

Stellarium Program (in the lab), plainsphere, scientific calculator. Use of pen.

TEXTBOOKS:

EDMUND SCIENTIFIC STAR AND PLANET LOCATOR EDITION 3 — REQUIRED

Author: EDMUND

ISBN: 9780131402355

Publisher : PEARSON

STRAGAZING BEGINNERS GUIDE TO ASTRONOMY — REQUIRED

Author: Radmila Topalovic, Tom Keress.

ISBN : 9780008196271

Publisher : Collins

Available options for purchasing the textbook:

- Campus bookstore – Barnes & Noble – at the Oakland Center
- You may purchase online

Teaching Method:

We will use a variety of activities which allow students with different learning styles and strengths to demonstrate what they are learning.

- short lecture, addressing the most difficult/least understood concepts
- problem-solving tasks via computer
- observations in the field

Clearly, this requires ***staying in course*** but also ***paying attention*** and ***asking questions***. Please remember that there will be ***no 'extra credit'*** for making-up missed activities.

Computer Labs: Labs PDF files will be posted via Moodle before the class meets.

Study Tips: In order to develop an understanding of the material participation in the labs is required. Before coming to class make sure that you check for announcements (sent via e-mail). In some of the weeks we will be conducting outside observations. That will depend on the exact sky and weather conditions of that day. Keep in mind that in October evenings are quite cold and you may need to bring a proper jacket.

TECHNOLOGY HELP:

- For help using Moodle, use the Get Help link at the top of the Moodle page (moodle.oakland.edu).
- For access to technology and in-person assistance, call or visit the [Student Technology Center](https://www.oakland.edu/stc/) (Link to Student Technology Center: <https://www.oakland.edu/stc/>).
- For general technology assistance, consult the [OU Help Desk](https://www.oakland.edu/helpdesk/) (Link to Help Desk: <https://www.oakland.edu/helpdesk/>).

RESPECT RULES OF NETIQUETTE

- Identify yourself. Begin messages with a greeting and close with your name.
- Respect your peers and their privacy.
- Use professional, respectful language. Do not swear, use profanity or other inappropriate language.
- Avoid sarcasm, which can be misinterpreted and cause hurt feelings.

Exams: There will be a total of two exams, to be done on the computer lab. You can bring your books and will be able to make use of stellarium.

The two midterms and the final exam are worth 30% of the final grade in total. There is NO final exam.

Ex 1: 15.0%, Ex2: 15.0%

Exam Make-up Policy: In order to be fair to the majority of students who take the exams on time the general policy is: No make-up exams will be given. A score of zero will be entered for missed a test. If you cannot be present for an exam due to documentable serious and unavoidable circumstances, contact me before the exam, if possible, or as quickly as possible after the exam to see if an exception can be made. Students who miss in-person class meeting (i.e. regular lab or outside observation) due to serious and unavoidable circumstances, should contact me.

Grading: Course grades will be posted on Moodle.

Laboratories and Outside Observations

70.0%

Exam 1 15.0%

Exam 2 15.0%

Grading Scale:

A	96-100
A-	90-95
B+	85-89
B	80-84
B-	75-79
C+	70-74
C	65-69
C-	60-64
D+	55-59
D	50-54
F	< 50

CLASSROOM AND UNIVERSITY POLICIES

STUDENT CONDUCT

1. **IN-CLASS BEHAVIOR.** Be respectful of other students during class. If you arrive to class tardy, please enter the classroom as quietly as possible. Cell phone usage will not be tolerated during class for any reason. Refrain from talking while someone has the floor but please do not hesitate to participate when questions are asked. **Students are not permitted to take notes or record lectures for the purpose of sale.**
PLAGIARISM. Plagiarism will not be tolerated. Although you will be working in groups for many activities, you are required to do writing assignments independently and to acknowledge assistance where appropriate. Copying each other's written work will be considered plagiarism and will result in being referred to the Academic Conduct Committee.
2. **ACADEMIC CONDUCT POLICY.** All members of the academic community at Oakland University are expected to practice and uphold standards of academic integrity and honesty. Academic integrity means representing oneself and one's work honestly. Misrepresentation is cheating since it means students are claiming credit for ideas or work not actually theirs and are thereby seeking a grade that is not actually earned. Following are some examples of academic dishonesty:
 - a. **Cheating.** This includes using materials such as books and/or notes when not authorized by the instructor, copying from someone else's paper, helping someone else copy work, substituting another's work as one's own, theft of exam copies, falsifying data or submitting data not based on the student's own work on assignments or lab reports, or other forms of misconduct on exams.
 - b. **Falsifying records** or providing misinformation regarding one's credentials.
 - c. **Unauthorized collaboration** on computer assignments and unauthorized access to and use of computer programs, including modifying computer files created by others and representing that work as one's own.

For more information, review OU's [Academic Conduct Regulations](https://www.oakland.edu/deanofstudents/policies/). (Link to Academic Conduct Regulations: <https://www.oakland.edu/deanofstudents/policies/>)

Academic Integrity confirmation statement for students taking this course.

"I pledge that all work I do in the course and on my assignments and tests are my own work and I received no unauthorized assistance. I also understand that if I am unclear about the appropriate or allowable use of any support materials to complete my required coursework, I will contact the faculty for clarification before using said materials.

All alleged violations of Academic Misconduct will be reported to the Academic Conduct Committee. Any students found responsible for violations of Academic Misconduct will be subject to disciplinary measures by the University up to and possibly including expulsion (permanent separation) from the University."

2. **BEHAVIORAL CODE OF CONDUCT.** Appropriate behavior is required in class and on campus. Disrespectful, disruptive and dangerous behavior are not conducive to a positive learning environment and may result in consequences. Core Standards for Student Conduct at OU includes
 - a. **Integrity.** See academic conduct policy points above.
 - b. **Community.** Policies regarding disruptive behavior, damage and destruction, weapons, and animals.
 - c. **Respect.** Policies regarding harassment, hazing, and [sexual misconduct](#) (Link to Sexual Misconduct policy: <https://www.oakland.edu/policies/health-and-safety/625/>)
 - d. **Responsibility.** Policies regarding alcohol, drugs, and other substances
See the [Student Code of Conduct](#) for details. (Link to Student Code of Conduct: <https://www.oakland.edu/deanofstudents/student-code-of-conduct/>)

ACCOMMODATION AND SPECIAL CONSIDERATIONS

Oakland University is committed to providing everyone the support and services needed to participate in their courses. Students with disabilities who may require special accommodations should make an appointment with campus [Disability Support Services](#) (DSS). If you qualify for accommodations because of a disability, please submit to your professor a letter from Disability Support Services in a timely manner (for exam accommodations provide your letter at least one week prior to the exam) so that your needs can be addressed. DSS determines accommodations based on documented disabilities. Contact DSS at 248-370-3266 or by e-mail at dss@oakland.edu. The office of DSS office is located in room 103A North Foundation Hall.

For information on additional academic support services and equipment, visit the [Study Aids](#) webpage of Disability Support Services website. (Link to Disability Support Services website: <https://www.oakland.edu/dss/>).

ATTENDANCE POLICY

Attendance is important for this course due to its emphasis on student participation and in-class assignments. Students who miss class will forfeit participation points awarded during that class period. If you must miss a particular class for an emergency or illness you must **notify me within 24 hours** to avoid loss of participation points or to schedule a make-up exam. Upon your return, you must provide me with a note from your physician, etc., providing evidence of the reason for your absence. **There are no scheduled makeup labs or exams.** In the event that you miss an exam/quiz, I reserve the right to issue an alternative assignment/exam or to drop that score from your average. This will be handled on a case-by-case basis.

EXCUSED ABSENCE POLICY

This policy for university excused absences applies to participation as an athlete, manager or student trainer in NCAA intercollegiate competitions, or participation as a representative of

Oakland University at academic events and artistic performances approved by the Provost or designee. A student must notify and make arrangements with the professor in advance. For responsibilities and procedures see [Academic Policies and Procedures](https://www.oakland.edu/provost/policies-and-procedures/). (Link to Academic Policies and Procedures: <https://www.oakland.edu/provost/policies-and-procedures/>)

RELIGIOUS OBSERVANCES

Student should discuss with professor at the beginning of the semester to make appropriate arrangements. Although Oakland University, as a public institution, does not observe religious holidays, it will continue to make every reasonable effort to help students avoid negative academic consequences when their religious obligations conflict with academic requirements. See The [OU Diversity Calendar](https://www.oakland.edu/diversity/calendar/) for more information. (Link to calendar: <https://www.oakland.edu/diversity/calendar/>)

BEREAVEMENT POLICY

In the event of the death of certain members within families or among loved ones, the University grants necessary bereavement absences upon student request. For the official bereavement policy, see: <https://www.oakland.edu/provost/policies-and-procedures/>

PREFERRED NAME POLICY

The University recognizes that as a community many of its members use names other than their legal names to identify themselves. As long as the use of this different name is not for the purposes of misrepresentation, or a legal name is required by the University business, policy or legal need, the University acknowledges that a “preferred name” will be used whenever possible. The University reserves the right to not accept a preferred name if it is deemed inappropriate, including a preferred name that is vulgar, offensive, fanciful, or creates confusion with another person. [OU’s Preferred Name Policy](#) ensures a student’s university records can use a name that reflects the student’s identity (abbreviated name, name change etc.).

SEXUAL MISCONDUCT

Faculty and staff are responsible for creating a safe learning environment for our students, and that includes a mandatory reporting responsibility if students share information regarding sexual misconduct/harassment, relationship violence, or information about a crime that may have occurred on campus with the University. In such cases, the professor will report information to the campus’ Title IX Coordinator (Chad Martinez, chadmartinez@oakland.edu or 248-370-3496). Students who wish to speak to someone confidentially can contact the OU Counseling Center at 248-370-3465. Additionally, students can speak to a confidential source off-campus 24 hours a day by contacting Haven at 248-334-1274.

ADD/DROPS

The university policy will be explicitly followed. It is the student's responsibility to be aware of [deadline dates for dropping courses](#) and officially drop the course. (Link to deadlines for dropping courses: <https://www.oakland.edu/registrar/registration/dropornot/>)

EMERGENCY PREPAREDNESS

In the event of an emergency arising on campus, the Oakland University Police Department (OUPD) will notify the campus community via the emergency notification system. The professor of your class is not responsible for your personal safety, so therefore it is the responsibility of each student to understand the evacuation and "lockdown" guidelines to follow when an emergency is declared. These simple steps are a good place to start:

- OU uses an emergency notification system through text, email, and landline. These notifications include campus closures, evacuations, lockdowns and other emergencies. Register for these notifications at oupolice.com.
- Based on the class cellphone policy, ensure that one cellphone is on in order to receive and share emergency notifications with the professor in class.
- If an emergency arises on campus, call the OUPD at (248) 370-3331. Save this number in your phone, and put it in an easy-to-find spot in your contacts.
- Review protocol for evacuation, lockdown, and other emergencies via the classroom's red books (hanging on the wall) and oupolice.com/emergencies.
- Review with the professor and class what to do in an emergency (evacuation, lockdown, snow emergency).

Violence/Active Shooter: If an active shooter is in the vicinity, call the OUPD at (248) 370-3331 or 911 when it is safe to do so and provide information, including the location and number of shooter(s), description of shooter(s), weapons used and number of potential victims. Consider your options: [Run, Hide, or Fight](#).

TENTATIVE COURSE SCHEDULE

Monday 09/14 : Computer Lab

Monday 09/21 : Computer Lab

Monday 09/28 : Computer Lab OR Outside observation

Monday 10/05 : Computer Lab OR Outside observation

Monday 10/12 : Computer Lab OR Outside observation

Monday 10/19 : Exam 1

Monday 10/26 : Computer Lab OR Outside observation

Monday 11/02 : Computer Lab OR Outside observation

Monday 11/09 : Computer Lab OR Outside observation

Monday 11/16 : Computer Lab OR Outside observation

Monday 11/23 : Exam 2

Monday 11/30 : Computer Lab

Monday 12/07 : Final Lecture