



UNIVERSITY OF CALGARY

DEPARTMENT OF PHYSICS AND ASTRONOMY COURSE OUTLINE SUMMER 2024

1. **Course:** SCIE 507 Hawai'i: Maunakea Observatories; Topics in Modern Observational Astrophysics; Hands-on experiential learning on major modern observatories

Lecture Sections:

B01: May 20-27, 2024; Location: Hawaii, U.S.A.

Instructors: B01 Dr. Phil Langill, Dr. Matthew Taylor

Website: <https://www.ucalgary.ca/international/study-abroad/SCIE-Hawaii>

Department of Physics and Astronomy SB 604, 403-220-8600, science.ucalgary.ca/physics-astronomy,
phasoffice@ucalgary.ca

2. **Prerequisites:** ASPH307 plus consent of the Department.
3. **Grading:** The University policy on grading and related matters is described in sections [F.1](#) and [F.2](#) of the online University Calendar. In determining the overall grade in the course the following weights will be used:

Assessment components in this course include field-based assignments during field work, pre-course preparation, course participation, post-field trip presentation which includes a written report based on an analysis of data collected during the trip.

Assessment Component	Grade Weight
Participation in pre-course preparatory activities	10%
Individual notebook/journal based on hands-on activities and presentations by observatory staff	10%
Data collection/reduction/analysis	20%
Instructors' assessment** of individual participation and punctual engagement	10%
Post-trip group-based written report	30%
Individual report on social implications of astronomy on the Big Island including light pollution analysis and impact on indigenous communities.	20%

Note: components highlighted in blue and green represent individual and group work, respectively.

**Instructors' assessment will be based on a rubric that will be posted to the course D2L page and shared with students. Instructors will perform their own individual assessments and combine them into a final score for this component upon course completion.

Each piece of work submitted by the student will be assigned a percentage score. The student's average percentage score for the various components listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade. Students will need to obtain a passing grade (50%) in all the assessment components listed above.

The conversion between course percentage and letter grade is given below.

Letter Grade	Percent
A+	94-100
A	88-94
A-	83-87
B+	78-82
B	73-77
B-	69-72
C+	65-68
C	61-64
C-	56-60
D+	53-55
D	50-52
F	<50

4. **Missed Components of Term Work:** This is a field based course. The course cannot be completed successfully without attending the field work component of the course. There are no make-up exercises for missing field work. Students must ensure that their travel documents are for entering United States so as not to miss the field work component of the course.

The regulations of the Faculty of Science pertaining to this matter are found in the Faculty of Science area of the Calendar in [Section 3.6](#). It is the student's responsibility to familiarize himself/herself with these regulations. See also [Section E.6](#) of the University Calendar

5. **Scheduled out-of-class activities:**

- (a) **Safety orientation, time and location TBD (This is a mandatory meeting)**
- (b) **Post-field trip meeting for final presentations (date TBA after consulting with students)**

REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY. If you have a clash with this out-of-class-time-activity, please inform your instructor as soon as possible so that alternative arrangements may be made for you.

6. **Course Materials:**

There is no recommended textbook for this course. A field guide containing essential maps for navigation will be provided to the students. Students will have to follow field discussions as well as read materials online.

7. **Examination Policy:** There will be no formal examinations in this course. Students should also read the Calendar, [Section G](#), on Examinations.

8. **Approved Mandatory and Optional Course Supplemental Fees:** Students are required to pay some supplemental fees as directed by the Group Studies Program. Students are responsible for their own food costs during the entire course.

9. **Writing across the curriculum statement:** In this course, the quality of the student's writing in the geologic report and in legend descriptions will be a factor in the evaluation of those reports. See also [Section E.2](#) of the University Calendar.

10. **OTHER IMPORTANT INFORMATION FOR STUDENTS:**

- (a) **Misconduct: Academic misconduct** (cheating, plagiarism, or any other form) is a very serious offence that will

be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under [Section K](#). Student Misconduct to inform yourself of definitions, processes and penalties.

Non-Academic misconduct (unprofessional behavior during field component of the course). Students are expected to conduct themselves in a professional manner and are expected to uphold the values of the University of Calgary during interactions between each other as well as with individuals outside the group. Unprofessional behavior including intolerance or abusive behavior towards group members or locals constitute non-academic misconduct and may lead to disciplinary action.

- (b) **Assembly Points:** In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on [assembly points](#). For assembly points during field components of the course, discuss with the instructor.
- (c) **Academic Accommodation Policy:** As a course conducted in the field, there are restrictions on the accommodations that can be incorporated in this course. If a student is in need of special accommodation, this should be discussed with the instructor and approved prior to the beginning of the course.

Students with documentable disabilities are referred to the following links: Students with Disabilities: <http://www.ucalgary.ca/pubs/calendar/current/b-1.html> [B.1](#) and Student Accessibility Services: <http://www.ucalgary.ca/access/>.

- (d) **Safewalk:** Campus Security will escort individuals day or night (<http://www.ucalgary.ca/security/safewalk/>). Call 220-5333 for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.
- (e) **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). As one consequence, students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information see also <http://www.ucalgary.ca/secretariat/privacy>.
- (f) **Student Union Information:** VP Academic Phone: 220-3911 Email: suvpaca@ucalgary.ca.
SU Faculty Rep. Phone: 220-3913 Email: sciencerep@su.ucalgary.ca; [Student Ombudsman](#)
- (g) **Internet and Electronic Device Information:** You can assume that in all classes that you attend, your cell phone should be turned off unless instructed otherwise. Also, communication with other individuals, via laptop computers, Blackberries or other devices connectable to the Internet is not allowed in class time unless specifically permitted by the instructor. If you violate this policy you may be asked to leave the classroom. Repeated abuse may result in a charge of misconduct.

For field safety reasons, students are not allowed to use cell phones in the field (but can carry them and use them in case of emergency).

- (h) **U.S.R.I.:** At the University of Calgary, feedback provided by students through the Universal Student Ratings of Instruction (USRI) survey provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses (www.ucalgary.ca/usri). Your responses make a difference – please participate in USRI Surveys.

Department Approval _____ Date _____

Associate Dean's Approval for
Alternate final examination arrangements: _____ Date: _____

Itinerary for 2024 SCIE 507 Hawai'i: Maunakea Observatories; Topics in Modern Observational Astrophysics; Hands-on experiential learning on major modern observatories

Day	Date	Location	Logistic Comments
0	TBD	U of C	Orientation meeting
1	20 May 2024	Travel Calgary-Hilo	Travel to Hilo, Light Pollution Analysis (LPA)
2	21 May 2024	'Imiloa Astronomy Center, Hilo	Hawaiian Indigenous Immersion, LPA
3	22 May 2024	Gemini North Observatory HQ, Hilo	Engage with Gemini Observatory staff, hands-on observational planning exercise, night observing/data collection, LPA
4	23 May 2024	Travel to/from Canada-France-Hawaii Telescope HQ, Waimea/Hilo	Engage with CFHT staff, hands-on observatory activities night observing/data collection, LPA
5	24 May 2024	Recap Opportunity, Location TBD, Hilo	Opportunity to share-out experience so-far, notebook development, LPA
6	25 May 2024	CFHT/Gemini facilities, Maunakea summit tour, Hale Pohaku / Maunakea	Dome facility tours to see equipment used from base-facilities, engage with technicians and engineers, LPA
7	26 May 2024	Light pollution analysis at MK summit, Hale Pohaku / Maunakea	Data analysis and special talks at HP, public engagement Maunakea Visitor Center, LPA
8	27 May 2024	Travel Hilo-Calgary	Flex day/Travel back to Calgary
9	TBD	U of C	Group project work, report hand-in, (presentations?)