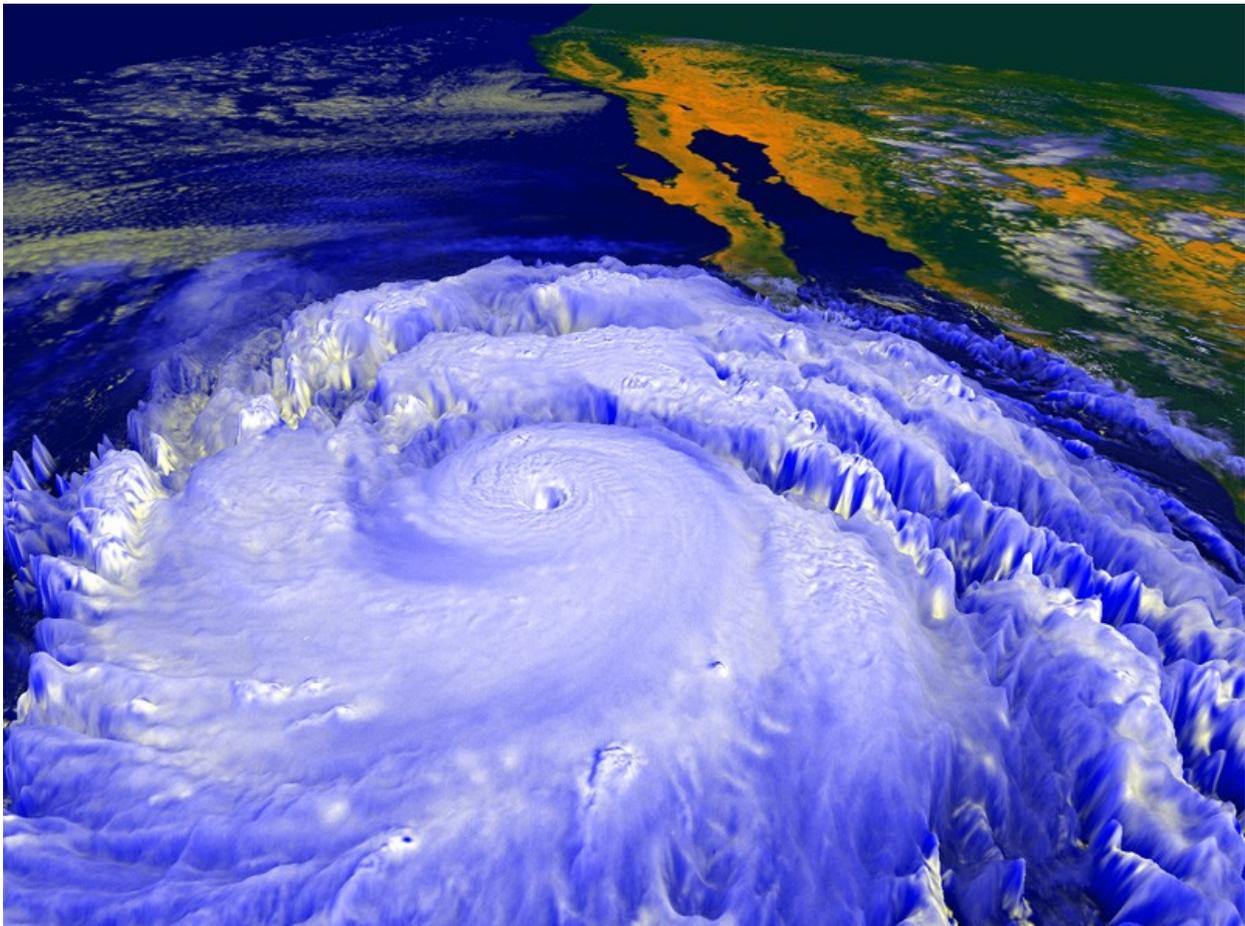


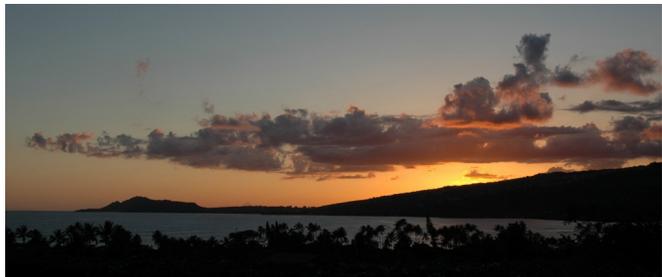
UNIVERSITY OF HAWAI'I
DEPARTMENT OF
ATMOSPHERIC SCIENCES
Information for Prospective
Undergraduate Students

Revised February 2017



DEPARTMENT OF
ATMOSPHERIC SCIENCES
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Web Page <http://www.soest.hawaii.edu/MET>
Weather Server <http://weather.hawaii.edu>



INTRODUCTION

Thank you for your interest in undergraduate studies in our department. We are always seeking to recruit excellent students for our undergraduate program. Atmospheric Sciences has been an academic discipline at University of Hawai'i at Manoa for over 50 years. The department has built an enviable national and international reputation for research and education, offering both undergraduate (B.S.) and graduate (M.S. and Ph.D.) degree programs. The B.S. degree qualifies graduates for professional appointment to either the civilian or military and federal weather services. Since 1965 the University has been a member of the University Corporation for Atmospheric Research, in effect, accrediting our graduate program.

Today the department has grown to have 14 full-time faculty, one part-time faculty, approximately 40 undergraduate and 35 graduate students, and it is part of one of the world's most active schools in the geosciences - the University of Hawai'i School of Ocean & Earth Science & Technology (SOEST). SOEST has a total about 170 faculty members who study an enormous variety of phenomena related to the physics, chemistry and biology of the solid earth, the ocean, the atmosphere. Atmospheric Sciences faculty and student offices are located in both the Hawai'i Institute of Geophysics (HIG) building and the adjacent Pacific Ocean Sciences and Technology (POST) building. The department's program in tropical meteorology is recognized as one of the three best in the world, fostered by the peculiar advantage and challenge presented by our mid-Pacific location. The quality of our program attested to by generous support of our research by federal agencies, our international student body, and the significant leadership of national and international science planning activities provided by many of our faculty.

Department faculty have participated in a series of field experiments on the island of Hawai'i and elsewhere. These experiments have generally emphasized investigations of cloud physics, and more recently, of convective and mesoscale phenomena, including tropical cyclones. We helped organize and conduct the Hawaiian Rainband Project (HaRP) in 1990. Faculty and students also have participated in the Experiment on Rapidly Intensifying Cyclones in the Atlantic (ERICA) in 1989, the Convection and Precipitation/Electrification Experiment (CaPE) in 1991, the Tropical Ocean Global Atmosphere (TOGA) Coupled Ocean Atmosphere Response Experiment (COARE) in 1993, the Aerosol Characterization Experiment (ACE) in 1995, Atmospheric Investigation, Regional Modeling, Analysis and Prediction (AIRMAP) in 2004, and Terrain-influenced Monsoon Rainfall Experiment (TiMREX) in 2008. Many students find thesis topics in the analysis of results of such specialized field campaigns, or in related modeling activities.

We are fortunate that the National Weather Service Honolulu Forecast Office is located in the HIG building, providing access to real time weather data and allowing interactions with the operational forecasters. Several of our students have worked part-time at the forecast office. Some of the department's research activities are directly related to improving short-term weather forecasts for the Hawaiian Islands, including high resolution experimental forecasts for the entire State of Hawaii and major individual islands for the Hawaiian Island chain, and specialized forecasts for use by astronomers

operating the world renowned observatories on Mauna Kea on the Island of Hawai‘i. The high-resolution experimental model output is provided to the forecasters of the National Weather Service for the preparation of graphic forecast products for the State of Hawaii, and is also used by ocean modelers to drive ocean circulation and wave models, and the US Forest Service for wild fire risk assessment and management. The department maintains an online weather server (<http://weather.hawaii.edu>). Practical applications of meteorological information for the State of Hawai‘i are also provided by the State Climatologist Office, which is directed by Prof. Chu (<http://www.soest.hawaii.edu/MET/Hsco/index.html>), in our department and through interactions of our faculty and students with the local office of the U.S. Forest Service.

Studies of the basic physics of tropical atmospheric circulations on seasonal and longer timescales, notably the El Niño phenomenon and the Asian monsoon circulations, have a long and distinguished history in the department and in our sister Oceanography Department. In 1997, our endeavors in climate studies were significantly enhanced by the advent of the International Pacific Research Center (IPRC), now located in the POST building. The IPRC is a joint US-Japan research center for the study of climate variations and long-term climate change in the Asian-Pacific region. Five Atmospheric Sciences Department faculty members also have appointments in the IPRC along with a similar number of Oceanography Department faculty.

The remainder of this brochure provides information on our requirements for applicants and current undergraduates (pages 4-6), key information about our course offerings (pages 7-9), our faculty and their research interests (page 10).

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UNDERGRADUATE PROGRAM

The **Bachelor of Science (B.S.)** in Atmospheric Sciences is designed to prepare a graduate for professional employment as a meteorologist, and meets the requirements specified by the federal meteorological agencies. A new graduate may be commissioned as a meteorological officer in the Air Force or Navy or appointed to a meteorological internship in the National Oceanic and Atmospheric Administration (NOAA). A few of our graduates have made careers in computer science (e.g., the former Director of the University's Computing Center). The current Meteorologist in Charge at the National Weather Service Forecast Office in Honolulu received both his B.S. and M.S. from the department.

In addition to the fundamental courses in mathematics, physics, chemistry, theoretical atmospheric sciences, instruments and observations, and analysis, students may complete their meteorological requirements in a number of ways, and may emphasize, for example, tropical meteorology, climatology, statistics, or computer applications. Forty-three credit hours are required in the major field selected from among not only atmospheric sciences courses but also from appropriate courses offered in engineering, geography, geology and geophysics, information sciences, mathematics, oceanography, physics, and soil science. Thoughtful advising promotes the advantage of the program's flexibility, while preserving academic standards. Whenever possible, we utilize courses taught in other departments, eschewing duplication and broadening the educational experience. Total: 120 credit hours for B.S. degree.

This is a Sample Four Year Academic Plan (<http://manoa.hawaii.edu/ovcaa/programsheets/2012-2013AllPDFs/FourYearPlans/SOEST/BSMeteorology4.pdf>). Undergraduate Students need to meet with an academic advisor prior to registration to formulate their own plan.

Here is a SOEST Student Academic Services Planning Sheet to assist SOEST Undergraduates with their academic planning. (<http://www.soest.hawaii.edu/oceanography/GES/course-planning.pdf>)

APPLICATION INFORMATION

To obtain application forms and related information about the University of Hawai'i, please visit <http://www.hawaii.edu/admrec/> for complete details. An on-line catalog is available at www.catalog.hawaii.edu.

Incoming freshmen (and some transfer students) **are required to take placement exams** for Math and Chemistry. The schedule for placement exams is provided in the UH Registration Guide booklet: http://www.hawaii.edu/myuh/manoa/Fall_2013_Registration_Guide.pdf
Mandatory advising is required every semester.

Current students at the University of Hawai'i need to contact the Atmospheric Sciences Undergraduate Advisor for a Curriculum Transfer Request (CTR) form to transfer from your current degree program to a Bachelor of Science degree in Atmospheric Sciences.

EXPECTATIONS FOR CONDUCT IN THE DEPARTMENT

The department, like the University and scientific community at large, expects and depends on a respectful, fair, and ethical behavior by its members, including students. In turn, each student should expect to be treated in such a manner.

Every student is responsible for reading, understanding, and abiding by the UH Student Conduct Code Policy E7.208. (http://studentaffairs.manoa.hawaii.edu/policies/conduct_code/) as well as other school and university policies. Students are required to complete and sign the Code of Student Conduct Affirmation Form when joining the department. University Policy (http://www.hawaii.edu/offices/eeo/policies.php?policy=sexual_harassment) concerning sexual harassment includes information on discerning appropriate from inappropriate behavior and the procedure for submitting a complaint. Each new student should take the following on-line program to be familiar with this serious issue. (<http://training.newmedialearning.com/psh/uhawaii/index.htm>)

ATMOSPHERIC SCIENCES COURSE OFFERINGS AND DESCRIPTIONS

Please the University of Hawaii at Manoa Department of Atmospheric Sciences list of courses is available online at <http://www.catalog.hawaii.edu/courses/departments/met.htm>

FACULTY

Department of Atmospheric Sciences Faculty

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Yi-Leng Chen, Ph.D., Illinois. Mesoscale meteorology, heavy rainfall. email: yileng@hawaii.edu

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