STATE OF HAWAII
UNIVERSITY OF HAWAII

UNIVERSITY OF HAWAII AT MANOA
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

APPENDIX I

SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

FUNCTIONAL STATEMENTS

OFFICE OF THE DEAN

The Office of the Dean plans and directs the programs of the School of Ocean and Earth Science and Technology, provides the focus of leadership and direction for the marine sciences, and fosters an environment supportive of excellent research and education. It provides executive leadership in planning, policy formulation and implementation, program development and direction, and budget development and execution. In addition, it will coordinate, focus and facilitate the ongoing activities of the individual organizational units, including curricular, personnel and budget affairs of the School and the ancillary support components such as staff supervision and community relations, and represents the School nationally and internationally.

The Dean serves under the Office of the Vice-Chancellor for Research and Graduate Education of UH Manoa and will be the primary spokesperson for all activities of the School, and functions with authority as delegated by the President.

The principal functions of the Dean's office include the following:

Provides liaison between the School and the Office of the Vice Chancellor for Research and Graduate Education of UH Manoa, the University Administration, the Director of the Research Corporation of the University of Hawaii (RCUH), and represents the School at the State, National and International levels.

Approves all appointments, proposals, tenure and promotion actions, salaries, etc. for all components of the School.

Establishes, directs and maintains the SOEST annual expenditure plan and budget requirements for ensuring years in conjunction with the Office of the Vice Chancellor for Research and Graduate Education of UH Manoa and the UH Manoa Budget Office.

Chairs the SOEST Research Council and Executive Committee.

Provides direction to the school research effort, the graduate, undergraduate and research components of the School and serves in an ex-officio capacity on SOEST special committees as appropriate.

Provides policy guidance and reviews and evaluates SOEST programs.

STATE OF HAWAII
UNIVERSITY OF HAWAII

UNIVERSITY OF HAWAII AT MANOA
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

ASSISTANT TO THE DEAN

This office provides assistance to the Dean and Associate Dean in all aspects of SOEST operations. The principal functions of this office include the following:

Assures coordination of the Dean's administrative affairs.

Provides liaison and coordination for legislative matters.

Assists in SOEST Public Information and Relations affairs.

Provides recording and logistical support of Executive Committee, and Research Council, and other meetings as assigned.

Prepares reports and other correspondence as required.

Conducts special projects as assigned.

SECRETARY TO THE DEAN

This position functions as an executive Secretary to the Dean, providing secretarial services through maintenance of the Dean's calendar, managing and booking his/her travel, and provides administrative and office management services which include the following:

Distribution of mail and correspondence to all school units.

Supervision of secretarial and clerical help within the Dean's office.

Provides office management and telephone services to the Dean and his staff.

Assures maintenance of the Dean's files.

Coordinates the Dean's correspondence.

Facilitates communications between the Offices of the Dean, Associate Dean and the Director of Administration.

STATE OF HAWAII
UNIVERSITY OF HAWAII

UNIVERSITY OF HAWAII AT MANOA
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

FUNCTIONAL STATEMENTS

OFFICE OF THE ASSOCIATE DEAN FOR ACADEMIC AFFAIRS

Under the policies and guidelines approved by the Dean, this office is responsible primarily for providing the central focus and accommodating the needs of the instructional components of the School.

Among the instructional programs under the Associate Dean are four academic departments: Geology and Geophysics; Meterology; Oceanography; and Ocean and Resources Engineering; as well as the Joint Institute for Marine and Atmospheric Research and the International Pacific Research Center. The Associate Dean also oversees the instruction-related functions of the research institutes and research divisions. This overlap is intended and necessary for the effective integration of education and research. In providing an overview for these functions, the Associate Dean is responsible for:

Faculty Development

Oversees SOEST faculty in the instructional and supervisory roles; academic recruiting; development of programs to attract excellent graduate and undergraduate students to SOEST Departments.

Curriculum Development

Maintains an overview of all SOEST instructional program needs, including curriculum development, establishing innovative educational programs, evaluation of course proposals, course schedules, and student advisement.

Academic Program Review

The Associate Dean is responsible for identifying new educational directions, and methodologies, development of new educational programs, advising the Dean on academic matters relating to SOEST research programs, and Federal and State relations.

Program Administration, Planning, Representation and Consultation with Dean

Continuing interaction is maintained to ensure that the Dean and the Associate Dean each remain aware of problems and opportunities concerning the School's academic program and operations. The Associate Dean is also responsible for administration of the SOEST Library.

The Associate Dean represents SOEST on educational matters at the state, national and international levels, as appropriate and represents the Dean on educational matters to the offices of the Chancellor, the Vice

Chancellor, the Dean of Natural Sciences, the Dean of Engineering, and other appropriate units within the University. The Associate Dean chairs the SOEST Education and Outreach Council.

Other responsibilities as required by the Dean shall be fulfilled by the Associate Dean. These may include such matters as public relations, fund raising, budgeting, planning, and international cooperative programs of the School.

JOINT PROGRAMS

Joint Institute for Marine and Atmospheric Research (JIMAR) – jointly sponsored by the University of Hawaii and the National Oceanic and Atmospheric Administration, JIMAR pursues research involving both theoretical and observational studies on climate, equatorial oceanography, and tsunamis.

International Pacific Research Center (IPRC)
Sponsored by the University of Hawai'i, the National Oceanic and Atmospheric Administration, the National Aeronautics and Space Administration, the National Science Foundation, the U.S. Department of Energy, the Japan Marine Science and Technology Center, and the (Japan) National Space Development Agency, IPRC pursues research on the nature and predictability of climate variability and regional aspects of global environmental change in the Asia-Pacific region.

OFFICE OF THE ASSOCIATE DEAN FOR RESEARCH

Under the policies and guidelines approved by the Dean, this office is responsible primarily for providing the central focus and accommodating the needs of the research components of the School.

Among the research programs under the Associate Dean are seven research divisions: Biological Oceanography, Geophysics and Tectonics, Marine and Environmental Geology, Marine Biology and Coastal Ecosystems, Marine Geochemistry, Physical Oceanography, and Volcanology, Geochemistry and Petrology; as well as the Hawaii Undersea Research Laboratory. The Associate Dean also oversees the research-related functions of the academic departments and the research-related aspects of the operations of the University Marine Center/Ship Operations, the Engineering Support Facility, and the Analytical Support Facility. This overlap is intended and necessary for the effective integration of education and research. In providing an overview for these functions, the Associate Dean is responsible for:

COORDINATION OF RESEARCH ADMINISTRATION ACTIVITIES

Fosters collaboration, coordinates activities and develops policy for the SOEST Research Divisions; secures institutional funding for SOEST research infrastructure; together with Associate Dean for Academic Affairs, plans and develops coordinated research and education programs; seeks interdisciplinary solutions to research problems; ensures proper allocation of resources to meet the infrastructure needs of the research enterprise.

STATE OF HAWAII
UNIVERSITY OF HAWAII

UNIVERSITY OF HAWAII AT MANOA
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

Program Administration, Planning, Representation and Consultation with Dean

Continuing interaction is maintained to ensure that the Dean and the Associate Dean each remain aware of problems and opportunities concerning the School's research programs, research infrastructure and operations. The Associate Dean chairs the SOEST Research Council.

The Associate Dean represents SOEST on research matters at the state, national and international levels, as appropriate and represents the Dean on research matters to the offices of the Chancellor, the Vice Chancellor, and other appropriate units within the University.

STATE OF HAWAII
UNIVERSITY OF HAWAII

UNIVERSITY OF HAWAII AT MANOA
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

JOINT PROGRAM

Hawaii Undersea Research Laboratory (HURL) –
established by a cooperative agreement between the National Oceanic and Atmospheric Administration (NOAA) and the University of Hawaii, HURL primarily supports research projects that require data acquisition at depths greater than scuba limits and concentrates its research efforts using submersibles in these areas; fisheries; pollution; sea floor properties and processes; and ocean technology and services.

RESEARCH DIVISIONS

Physical Oceanography

The Division's members include internationally recognized leaders in physical oceanographic research. Research activities range from small-scale internal waves to the general circulation of the oceans and its effect on climate, and from seagoing observation programs to theoretical modeling and computer simulations. The Division includes a nationally-mandated Sea Level Center that maintains tide gauges and sea level archives from the Pacific, Indian and Atlantic Oceans. Division members are studying the complementary uses of tide gauge and satellite altimetry data, and their application to problems concerning ocean circulation variability. Satellite imagery is collected and archived locally by the Satellite Oceanography Laboratory for worldwide distribution and for studies by Division and Department faculty and students. The Division boasts the first archive in the world for shipboard Acoustic Doppler Current Profiler measurements of the ocean's currents; this is a joint effort with the U.S. National Oceanographic Data Center.

Volcanology, Geochemistry and Petrology

The University of Hawaii is uniquely situated to study all major aspects of volcanic systems. Active Hawaiian volcanoes are natural laboratories of intraplate volcanism and hydrothermal activity. Eroded fossil volcanic systems on the older islands provide windows into deeper volcanic structures. Hawaii is at the center of the Pacific "Ring of Fire". Researchers in VGP study submarine volcanoes using the University's research vessel, and remotely monitor volcanoes on Earth and other planets with ground-based and space-borne observatories. The Hawaii Center for Volcanology is housed at SOEST; it includes scientists from the USGS Hawaiian Volcano Observatory and the Center for the Study of Active Volcanoes at UH Hilo, facilitating collaborative projects to monitor active volcanoes. Additionally, VGP has a wide range of modern, well-equipped analytical laboratories that provide data on the chemical composition and physical properties of igneous materials.

Geophysics and Tectonics

Members of the Geophysics and Tectonics Division take advantage of the University of Hawaii's mid-Pacific setting to investigate a wide variety of geodynamic, tectonic, and geophysical phenomena that operate over a broad range of scale. Research areas in Geophysics & Tectonics at the University of Hawaii include plate tectonics and plate evolution, seismology, geophysical fluid dynamics, rock fracture mechanics, structural geology, and engineering geology.

STATE OF HAWAII
UNIVERSITY OF HAWAII

UNIVERSITY OF HAWAII AT MANOA
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

Marine Biology and Coastal Ecosystems

Researchers in the Marine Biology and Coastal Ecosystems Division seek to understand the biology, ecology and biogeochemistry of marine microorganisms, which are the base of the multi-cellular food chain. Novel methods in molecular biology, combined with satellite- and sea-based remote sensing technologies, link microbial process studies at spatial scales ranging from genes to entire Pacific Ocean. At the Hawaii Institute of Marine Biology several research programs are related to the health and vitality of tropical coral reefs – from gene flow, to community structure, to dispersal patterns. In partnership with NOAA, HIMB is the "brain trust" for improving stewardship of the NW Hawaiian Islands National Monument, as well as for understanding the foraging patterns of top predators such as tuna and sharks. Marine Biology and Coastal Ecosystems researchers also study the sensory and perceptual processes of marine mammals.

Biological Oceanography

Division of Biological Oceanography offers a broad range of exciting research opportunities in diverse marine habitats and ecosystems around the globe, from tropical to polar oceans and from the air-sea interface to the deep-ocean floor. Upper water-column programs include studies of primary productivity and bio-optics, color satellite imagery, plant pigments as tracers of biogeochemical processes, microbial food-web interactions, phytoplankton and zooplankton community structure, and the roles of biota in vertical transport and re-mineralization of particulate and dissolved organic matter. Mid-water column studies focus on the community ecology and dynamics of meso-pelagic shrimp, squid and small fishes unique to oceanic island systems. Benthic research programs involve coral reef ecology and evolution, effects of environmental disturbances on deep-sea community dynamics and recruitment, chemical cycling, burial, and bioturbation in the sediments, and the microbial ecology of tube-building animals and bioturbation in the sediments, and the microbial ecology of tube-building animals and hydrothermal vent systems.

Marine and Environmental Geology

Members of the Marine and Environmental Geology Division have research programs ranging from field studies of deep sea processes to theoretical analyses of elemental distributions in the universe. A major theme underlying much of the research concerns past and postulated future changes in the global environment, and the effects of these changes on the planet Earth as an integrated geophysical system. Much of the research addresses processes at the boundaries of the major plates which comprise the Earth's crust; these studies include analysis of trace metal distributions, mineral formation and diagenesis, circulation and reaction of hydrothermal fluids, and geomicrobiology. Open ocean studies include research on the use of geochemical tracers of oceanic circulation and chemical reactions in the sea, the formation of ferromanganese deposits on the sea floor, and isotopic and organic geochemistry. Nearshore research programs involve biogeochemical cycling, especially in coral reefs and estuaries, and human effects on this cycling. Atmospheric studies include the analysis of gas and aerosol distributions, and the effect of these materials on the Earth's radiation budget. All of these studies combine field measurements with laboratory experimentation and conceptual modeling.

STATE OF HAWAII
UNIVERSITY OF HAWAII

UNIVERSITY OF HAWAII AT MANOA
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

OFFICE OF THE DIRECTOR OF ADMINISTRATION

The Office of the Director of Administration is responsible for providing the planning and management functions required to effectively support the administration and facilities operations of the School under policies and guidelines approved by the Dean. Administrative and facilities management responsibilities include management of SOEST fiscal, personnel, contracts and grants management, and the Scientific Computer Facility. Administrative and facilities management responsibilities are shared with the Associate Dean for Research for the University Marine Center and research vessel operations, the Hawaii Undersea Research Laboratory, the Engineering Support Facility and Analytical Support Facility. The position, with both line and staff responsibilities, reports directly to the Dean of the School. Major functions include the following:

Provides administrative and fiscal management oversight to division heads who report directly to the Director of Administration in the following offices:

Program and Budget Office
Personnel Office
Financial Management Systems Office

Which provide the following services:

Program and Budget Office

The SOEST Program and Budget Office provides financial planning, for the SOEST annual appropriated funds budget of $ 18 million, fiscal services to all units, and, together with the Director of Administration, monitors financial aspects of SOEST as well as SOEST State General, Tuition, Special and Facilitating Services Funds and position count allocations to all School components.

The principal functions of this Office include the following:

Responsibility for the financial planning, management, and control of all SOEST appropriated (State) funds.

Maintains an overview of the financial conditions of the School.

Advises and assists the Dean and Director of Administration in

financial planning and preparation of the SOEST budget and is the focal point for all SOEST budgetary planning and execution.

Maintains an overview of purchases, payments, transfers of funds and other fiscal transactions of the School.

Serves on the SOEST Budget Committee.

Acts as budgetary liaison contact between the SOEST Administration and the University Business Office, the Manoa Budget Office and SOEST Administrative Officers in management of SOEST fiscal matters.

Supervises expenditures of appropriated (State) funds allocated to SOEST Departments, Institutes and Programs.

Maintains, in coordination with the SOEST Personnel Officer, the SOEST personnel inventory for all personnel classifications.

Personnel Office

The principal duties of the SOEST Personnel Office include central coordination of personnel programs of the school and maintains liaison with the UH Office of Human Resources and provides the following service functions:

Maintains recruitment, appointment, classification and compensation, training, promotion, tenure, leave and benefits systems for the School based on established rules and policies and contractual provisions of collective bargaining agreements.

Provides personnel services to all SOEST units in matters of UH and RCUH personnel administration.

Maintains a central personnel records system.

Conducts and/or oversees recruitment, placement, and enrollment activities; processes and/or reviews the processing of position actions; and advises staff in these matters.

Performs other classification related functions including study and review of new specifications, RCUH and contractual hiring, etc.

Establishes and supervises the maintenance of a centralized system of recording and reporting personnel transactions.

Provides guidance, consultation and staff assistance to management in the orientation, training, and planned development of employees to satisfy immediate and/or long-range needs of the School.

Provides labor-management staff and advisory services to all organizational components of the school, and ensures that the terms of the negotiated collective bargaining contract are properly implemented.

Financial Management Systems Office

The principal duties of the Financial Management Systems Office for Sponsored Projects and Financial Management Systems are 1) to assure the efficient management of research and training contracts and grants within SOEST (currently 275 in number valued at $42 million) and the pursuit of such funds; 2) to provide financial planning, reporting, and accounting functions to monitor the viability of the enterprise revolving funds required to finance the operations of the specialized support facilities including the Research Computer Facility, the Engineering Support Facility, the national oceanographic facilities of Ship Operations and the Hawaii Mapping Research Group, and the internal service facilities including the Publications Program, the SOEST Library, the Geo-Analytical Facilities, and the Physical Plant Support Facility; and 3) to provide management reports on the status of SOEST resources including all funds and personnel; exercise direct management responsibility for SOEST CIP and R&M projects.

Major functions of this office include the following:

Recommends organizational and management systems changes and innovative management practices to improve the effectiveness of program operations, and staffing plans in accordance with program plans, needs and priorities.

Develops management reports on the financial condition of the organization.

Advises and assists the Director of Administration and Program and Budget Office as appropriate and oversees the control of SOEST matching fund commitments in research proposals.

Serves on the SOEST Budget Committee:

Manage, in coordination with the Facilities Management Office, all CIP and Repair and Maintenance projects for SOEST, and directs the operational and fiscal activities of the SOEST Physical Plant Maintenance Facility.

Functions in support of funds seeking:

Serves as the focal point for the administrative and fiscal control and coordination aspects for all SOEST research and training proposals preparatory to the Dean's approval. Supervises SOEST Administrative Officers in preparing research proposal budgets.

Participates in the negotiation of contracts and grants with federal auditors, and federal contracting officers.

Responsible for the development of and oversight of the maintenance of a data bank on pending proposals for extramural funds, and for preparation of management reports on the status of said proposals and SOEST matching fund commitments.

Management of extramural funds:

Responsible for the financial management of all SOEST sponsored

research activities, and supervision of SOEST Administrative Officers and Fiscal Accounting Specialists in the management and administration of extramural awards.

Functions as liaison between SOEST and the UH Office of Research Services, on matters pertaining to contract negotiations, and to the administration of extramural funds and revolving funds, and on submission and receipt of extramural projects.

Management of revolving funds:

Oversight responsibility for the management and administration of SOEST revolving funds which currently number 33.

Generates reports of long range fiscal plans and manpower projects for specialized service facilities and for major contracts and grants.

Maintains cognizance of SOEST financial position with regards to the enterprise and internal service funds, and prepares regular reports to management on the status of these funds.

Provides administrative, fiscal, and management oversight assistance to the Following Division Heads who report to the Director of Administration:

University Marine Center/Ship Operations
Engineering Support Facility
Publications Facility
Research Computing Facility
Analytical Support Facility

For the following functions:

University Marine Center/Ship Operations

The University Marine Center (UMC) which husbands three ships and shore support facilities provides ship operational support to all SOEST and other University research programs as required. The UMC is administrated by a Marine Superintendent.

The principal functions of this center are as follows:

Provides ship operational, logistical, and maintenance services to maintain ship's schedules developed by the SOEST Scientific Coordinator for Marine Operations.

Provide shipboard marine technician (electronic and deck) services in support of SOEST marine geophysics and oceanography research programs.

In conjunction with the SOEST Scientific Coordinator's Office, maintains liaison with U.S. and foreign port authorities, the U.S. Navy Hawaiian Sea Frontier and the U.S. Coast Guard.

Engineering Support Facility

The principal function of this unit are as follows:

To provide machine shop design and production services in support of SOEST research contracts and grants in the fabrication and repair of precision scientific instruments.

To provide electronics design, production, and maintenance service in support of SOEST research contracts and grants.

To provide electromechanical design and development services for SOEST scientists having unique scientific instrumentation development requirements.

Publications Facility

The principal functions of this unit are as follows:

To provide editorial review of all technical manuscripts submitted by researchers and edit for clarity, continuity, coherence and grammatical construction.

To provide national and international distribution of and exchange of SOEST publications with other research institutions.

To proofread galley and pages of materials from publishers of HIGP papers.

To collect and organize material for the SOEST annual report, which describes SOEST research programs and accomplishments for each year.

To provide photographic services to researchers, staff and students for scientific publication, instruction, presentation, or display.

Research Computing Facility

The purpose of this facility is to provide specialized computing capability for SOEST researchers and other campus-wide researchers in need of these specialized facilities. Current computers in this facility are a SUN Network and an Alliant FX8. They are connected to terminals in various offices and laboratory areas.

Analytical Support Facility

This facility provides central management of various chemical analytical activities that take place school-wide. The equipment managed by this facility includes an induction coupled plasma spectrophotometer, atomic absorption spectrophotometer, scanning and transmission microscopes, an electron microprobe, an autoanalyzer and various other equipment as assigned.

All SOEST facilities have an Oversight Committee comprised of users which advise the Director of Administration as to the operational efficiency and future direction of each facility.

STATE OF HAWAII
UNIVERSITY OF HAWAII

UNIVERSITY OF HAWAII AT MANOA
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

RESEARCH COUNCIL

Divisions within SOEST are headed by chairs who are chosen by the Dean in consultation with their research constituencies and who, taken together, form the Research Council of the School. They will advise the Dean on allocations of resources and on programmatic priorities and be expected to keep abreast of federal activities in their field and to routinely inform division members and the Executive Committee of development in the field.

EXECUTIVE COMMITTEE

Department Chairs and SOEST Directors, constitute the Executive Committee of the School, which provides advice to the Dean in administrative and operational matters, and in an advisory status participates in policy making, long range planning, and program development.

EXTERNAL ADVISORY COUNCIL

The External Advisory Council is comprised of business, government and academic luminaries to organize and develop the interaction between the School and the Legislature as well as the private sector, and to advise the Dean on national and international trends in funding in response to advances in science and technology

STATE OF HAWAII
UNIVERSITY OF HAWAII

UNIVERSITY OF HAWAII AT MANOA
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

FUNCTIONAL STATEMENT
DEPARTMENT OF GEOLOGY & GEOPHYSICS

Chair

The Department of Geology & Geophysics is organized on the basis of a Departmental Chair, Standing Committees, and Ad Hoc Committees, as agreed by the faculty of the Department during the re-establishment of the Department in 1971 and revised in 1985 and1990.

The purpose of the Department of Geology & Geophysics is to provide, through its faculty for instruction, research , and services as follows: (a) provide a properly-taught undergraduate curriculum in geology and geophysics, including introduction, core, and advanced courses and laboratories; (b) conduct research and provide graduate-student instruction in scientific areas in which Hawaii has certain natural advantages by virtue of its geography and existing faculty interests, namely Hydrology, and Engineering Geology, Marine Geology and Geophysics, Seismology and Solid-Earth Geophysics, and Volcanology-Geochemistry-Petrology; and (c) provide public service in the earth and marine sciences at the local, national, Pacific-wide, and world-wide levels.

The Departmental Chair presides at Departmental meetings. Departmental policy is decided at Departmental meetings. The agenda for these meetings is established by the Chair in consultation with the chair of the standing committees.

The Departmental Chair is responsible to the Dean of the School of Ocean and Earth Science and Technology for the functions listed in the Faculty Handbook, and to the faculty of the department for the functions listed in its Departmental Organization. The more important functions are listed below:

- Direct the activities, curricula, and personnel of the Department of Geology & Geophysics

- Represent the Department when asked for comment or contribution ex-officio by the University Administration, or other bodies outside the Department.

- With the assistance of ad hoc and standing committees, recruit, evaluate, accept, confer with, and assign advisors of new graduate students; assign study space; evaluate yearly the progress of existing students; coordinate appointments to research assistantships and fellowships for qualified and deserving graduate students; coordinate with Hawaii Institute of Geophysics and Planetology, Water Resources Research Center, other university institutes, other departments, state and federal agencies, and private companies regarding joint projects, possible employment, and equipment, and equipment used by graduate students; award departmental computer funds to graduate students; organize the weekly departmental seminar.

- Provide service to the Department by acting on its standing and ad hoc committees; to the University through committee work and special assignments; to the State of Hawaii in the manner of the Geological Surveys of the other states or as otherwise requested; to the United States as requested; to local, national, and international professional organizations as requested; provide professional services on an overload fee basis as allowed by current regulations.

STATE OF HAWAII
UNIVERSITY OF HAWAII

UNIVERSITY OF HAWAII AT MANOA
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

Department of Geology & Geophysics

Graduate Teaching Assistants have these functions:

- Under supervision, assist in laboratory sections of undergraduate courses; assist instructors in preparation of teaching materials, audiovisual aids, and related tasks; assist in grading examinations and counseling students in classes.

Operational and Administrative Support

Operational support for research in marine and earth sciences is provided through operation and maintenance of research laboratories, instruments, and data reduction, analysis , and synthesis. Assist in appropriate educational specialist tasks.

Secretarial support is provided as follows: Organize and supervise operations of the Departmental Office; type, mail, and file departmental correspondence; maintain security of files, reproduce examinations; assure availability of office supplies; prepare requisitions and maintain expenditure records; maintain student and faculty records; take and forward messages; dispose of routine requests and reports; assist chair or committee chair in assembling information to respond to unusual requests; supervise student help, type manuscripts, grant applications, and reports of departmental faculty; other duties as requested by departmental faculty.

STATE OF HAWAII
UNIVERSITY OF HAWAII

UNIVERSITY OF HAWAII AT MANOA
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

FUNCTIONAL STATEMENT
DEPARTMENT OF METEOROLOGY

Chair

Directs and coordinates instructional and research activities curricula and personnel in the Department of Meteorology. The Department offers B.S., M.S. and Ph. D. degrees emphasizing tropical meteorology.

Serves as graduate chair of the Meteorology area of study.

Prepares unit's budget requests and administers budgets allocated to the unit.

Reviews and makes recommendations in regard to all personnel actions involving members of the Department.

Acts as administrative liaison with the School of Ocean and Earth Science and Technology.

Conducts individual research and provides leadership in pursuing new research initiatives both within the State and nationally.

Acts as liaison with federal and international meteorological agencies. Represents the University at the University Corporation for Atmospheric Research annual meetings.

Departmental Functions

Provides instruction; conducts sponsored and unsponsored research into tropical meteorology, emphasizing synoptic and dynamic meteorology, satellite meteorology, monsoon systems and meteorology of the Hawaiian Islands as related to rainfall, hazardous weather and alternate energy resources; undertakes community and consultant service pertaining to the weather and climate of Hawaii and the Pacific Basin.

Operational and Administrative Support

Operational support for research conducted in the department is provided through operation and maintenance of the research laboratories, instrumentation, data reduction analysis, and synthesis.

Secretarial support for research conducted in the department is provided through operation and maintenance of student and faculty records and assistance in preparation of instructional and research materials for faculty.

Secretarial services to the department include: consultation with the department chair concerning administrative matters, typing personnel forms, supervising and coordinating the work of several student helpers, answering the telephone and answering inquiries from students and visitors to the office.

STATE OF HAWAII
UNIVERSITY OF HAWAII

UNIVERSITY OF HAWAII AT MANOA
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

FUNCTIONAL STATEMENT
DEPARTMENT OF OCEANOGRAPHY

Chair

Directs and coordinates teaching and research activities, curricula, and personnel in the Department of Oceanography. The Department is a graduate department providing instruction and performing research in biological, physical, chemical and geological oceanography leading to the M.S. and Ph.D. degrees. Six undergraduate service courses are offered, and have a total enrollment of approximately 2,000 each year. In addition to formal instructional activities, department faculty are actively involved in research supported by extramural grants.

These research functions are essential to graduate and undergraduate education, and provide the facilities and opportunities for thesis and dissertation research. Research is also important to the economic development of the State of Hawaii in terms of resource evaluation and environmental protection.

The Chair coordinates departmental, instructional and research activities; prepares departmental budget requests; reviews and makes recommendations in regard to all personnel actions involving members of the department; and serves as contact point for the department to other marine programs at the University.

Departmental Functions

Provide instruction, conduct research, and undertake community service pertaining to all branches of oceanography (physical, chemical, biological, and geological). These include formal instruction, symposia, advising, and thesis and dissertation research direction.

The Department of Oceanography presently has 25 graduate faculty who advise students, serve on students' committees, and serve on appropriate college and university committees.

Operational and Administrative Support

Operational support for research conducted in the department is provided through operation and maintenance of research laboratories, instrumentation, data reduction analysis, and synthesis.

Secretarial services are provided to the department chair in addition to servicing the graduate faculty and the department's graduate students and preparing instructional materials for the large undergraduate courses. Other services include: overall operation of the department office, maintenance of student and faculty records and assist with preparation of instructional and research materials for faculty, consultation with the chair concerning administrative matters, typing personnel forms, supervising and coordinating the work of several student helpers, answering the telephone and answering the many queries posed by students and visitors to the office.

STATE OF HAWAII
UNIVERSITY OF HAWAII

UNIVERSITY OF HAWAII AT MANOA
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

FUNTIONAL STATEMENT
DEPARTMENT OF OCEAN AND RESOURCES ENGINEERING

Chair

Administers a balanced program of instruction and research in ocean engineering. The academic program is a graduate program and leads to the degrees of M.S. and Ph.D., but the department has responsibility for the instruction of both graduate and undergraduate courses in the field. The instructional program also involves curriculum planning and advising of students in their research. The research program consists of carrying out research in accordance with the purpose for which the proposals were funded. The research effort blends with the instructional effort in that it provides students with support through research assistantships, and provides students with research subjects for their thesis. As part of their function, faculty members serve in committees at the College and University level and participate in other service activities.

Research Support

J.K.K. Look Laboratory of Oceanographic Engineering is a research and instructional laboratory that provides research facilities and services to faculty, students, and staff involved in academic research, including extramural, intramural, and/or in-house studies relating to ocean engineering. Assistance is provided to state and federal agencies in solving many ocean-related problems; in educating the graduate students in all aspects of physical and mathematical modeling techniques as applied to waterways, harbors, coastal engineering, and shop hydrodynamics through an ocean hydrodynamics laboratory course and on-the-job training; in educating the public on the awareness of marine science and ocean engineering by making the Look Laboratory facilities and researchers available to study-tour groups or individuals. Advisory services to a variety of organizations and/or general public in the field of ocean engineering are also provided.

STATE OF HAWAII
UNIVERSITY OF HAWAII

UNIVERSITY OF HAWAII AT MANOA
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

FUNCATIONAL STATEMENT
HAWAII INSTITUTE OF GEOPHYSICS AND PLANETOLOGY

Director

The Director establishes research objectives, unit policy, and direct research, administrative and support activities of the Hawaii Institute of Geophysics and Planetology (HIGP). The Institute serves primarily as the technological and applied research arm of the University in the earth and marine sciences.

Primary objectives of the Institute are to provide research and public service through individual and focused research activities at the local, national, and international levels.

The principal functions of the Director's Office are as follows:

- Reports to the dean of SOEST on HIGP research activities, budgets and expenditures and personnel matters. Liaison is also maintained with the University administration, the Director of the Research Corporation of the University of Hawaii (RCUH), and outside bodies with whom an official contact with HIGP is desirable.

- Recommends appointments, salaries, tenure, promotion, etc., and approves travel involving HIGP personnel.

- Establishes each year an expenditure plan for that year, the budget requirement for the following year, and the upgrading each year of the projected multi-year program.

- Handles all matters as specifically delegated to others on the HIGP administrative staff of to special committees, and serves in an ex-officio capacity on all internal HIGP committees; and appointments of Institute Safety and EEO Officers.

Secretarial Support

Secretarial support is provided in maintenance of the Director's calendar, managing and booking his travel, and provides administrative and office management services which include the following:

- Assures coordination of the Director's administrative affairs.

- Provides liaison and coordination for the Director in all University, outside agency, and legislative matters.

- Provides recording and logistical support for meetings as assigned.

- Prepares reports and other correspondence as required.

- Distribution of mail and correspondence to all HIGP units.

- Supervision of secretarial and clerical help within the Director's Office.

- Provides office management and telephone services to the Director and his staff.
- Assures maintenance of the Director's files.
- Coordinates the Director's correspondence.

Administrative Support

Administrative support office provides overall administrative, financial, operational and personnel management to the Director and the Institute. While handling all normal day-to-day management problems of the Institute, principal functions of the administrative support office are as follows:

- Provides administrative and fiscal oversight as follows:
  HIGP General and Extramural Funds
  Assists faculty in preparation of proposal budgets
  Procurement
  Assists the Director in the preparation of the HIGP budget
  Records Maintenance
- Provides fiscal and personnel management as well as liaison on all contracts and grants handled through RCUH.

Current Areas of Emphasis within the Hawaii Institute of Geophysics and Planetology

Sea floor mapping and imaging, and managing geophysical service programs for the State of Hawaii.

Development of new technologies and instrumentation for ocean, earth, atmosphere and space observation and monitoring.

Planetary sciences in the broadest sense, including study of Earth from space.

Administration of the Hawaii Space Grant College and the NASA Pacific Regional Data Center

Research and technological development in high pressure and temperature studies in mineral physics.

STATE OF HAWAII
UNIVERSITY OF HAWAII

UNIVERSITY OF HAWAII AT MANOA
SCHOOL OF OCEAN AND EARTH SCIENCE
AND TECHNOLOGY

FUNCTIONAL STATEMENT
HAWAII INSTITUTE OF MARINE BIOLOGY

Office of the Director

The Director administers the research, educational and service activities of the faculty, and performs a myriad of tasks that relate to the University and State, national and international research programs of the Hawaii Institute of Marine Biology (HIMB). The Director provides focus and leadership and encourages and maintains an environment supportive of excellence in research. The Director provides liaison between HIMB and the offices of the Dean of SOEST and the Office of the Vice-Chancellor for Research and Graduate Education of Manoa, as well as representing HIMB with local and state community groups and within the national and international research community.

The Director approves all appointments, proposals, tenure and promotion actions for the unit; establishes, directs and maintains the HIMB annual expenditure plan and budget projections for ensuing years; and provides policy guidance and reviews and evaluates HIMB programs. The Director also directs support and maintenance operations and support personnel at the Institute's facilities at Moku o Loe (Coconut Island).

Administrative and Facility Support

HIMB is largely an independent off-campus facility located off-shore on Coconut Island. The Assistant Director serves as chief administrative advisor to the Director; serves as Acting Director in the absence of the Director. The Assistant Director provides administrative/logistical and technical support for ongoing scientific activity within HIMB, is responsible for financial planning, management, and control of HIMB general fund and other accounts; assures the efficient management of research and training contracts and grants and other extramural funds at HIMB; provides personnel services and supervises the maintenance of records; and directs the maintenance and operation of the physical plant, which includes the responsibility for the shop and security staff and the vehicles, research vessels and equipment which are integral to the marine biology laboratory. The Assistant Director plans and supervises the work of professional and clerical staff; trains staff in policies and procedures; interacts directly with various local, state and federal agencies on contract and grant administration; and writes proposals to federal, state and private granting agencies for funds to support improvements in infrastructure and expansion of the overall educational and research activities of the Institute.

Coordination of Research and Instructional Activities. A central activity of HIMB is to support research and educational activities at the University. The Hawaii Institute of Marine Biology has twelve faculty members associated with various graduate faculties. They are major advisors for approximately forty-four graduate students whose research activities are focused mainly at Moku o Loe, Kaneohe Bay and coastal waters of the Hawaiian Islands. More than twenty-five undergraduate students are also typically involved in the research and educational activities of the Institute. The Hawaii Institute of Marine Biology has an international reputation in the areas of coral reef biology, marine chemistry, the behavior of marine animals, pelagic fisheries, environmental physiology, and endocrinology, the ecology of tropical near-short ecosystems, and tropical aquaculture.

The Institute also provides facilities at Moku o Loe for faculty members, graduate and undergraduate students of other units within the University, and for visiting scientists and students. Furthermore, it affords instructional facilities for introductory and advanced courses throughout the University system on Oahu. Since 1983, it has been the site of a graduate research and training summer program in selected topics. Though HIMB's activities are largely

based on Moku o Loe, it also has close interaction with the Departments of Animal Science, Botany, Oceanography and Zoology and with other organizations such as: the Hawaii Sea Grant College Program, the Department of Land and Natural Resources, Waikiki Aquarium, Bishop Museum, Oceanic Institute and the Universities of California and Tokyo.

Support Function. Administrative support relative to the operation of the Hawaii Institute of Marine Biology currently has a composite operational budget of approximately ~3 million dollars annually and involves over 100 people and approximately $3.7 million in research grants and contracts. Administrative/logistical and technical support for ongoing scientific activity within the Hawaii Institute of Marine Biology includes, but is not limited to, fiscal management of state, federal, and private funds, clerical support, i.e. typing, maintaining records and proposals, preparation of budgets and fiscal reports, reception, duplicating, procurement (purchasing/disbursing), and mail handling.

Facilities and Operations Management. The campus of the Institute comprises the 25-acre island, Moku o Loe, and the 64-acre patch reef that surrounds the island. Administrative responsibility extends to general maintenance of the buildings, and scientific and support equipment. These include laboratories, classrooms, conference rooms, vehicles, and the boat fleet. This is a considerable responsibility in as much as HIMB is an independent off-campus facility on an off-shore island and is excluded from many of the services provided on-campus by Facilities Management.

STATE OF HAWAI'I
UNIVERSITY OF HAWAI'I
UNIVERSITY OF HAWAI'I AT MANOA
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY
HAWAII NATURAL ENERGY INSTITUTE

FUNCTIONAL STATEMENT

Director

The Hawaii Natural Energy Institute Director is responsible for coordinating research to provide visibility, focus, and encouragement in the development of renewable energy and ocean resources technology that will:

- Contribute to the technology base for finding solutions to national and global energy and environmental challenges;
- Reduce Hawaii's near-total dependence on imported fossil fuels with minimal environmental degradation;
- Coordinate the Institute's work with the energy resource coordinator n carrying out duties pursuant to section 196-4 in the area of research and development of renewable energy sources; and,
- Assist the state to utilize its ocean resources.

The Director reports to the Dean of the School of Ocean and Earth Science and Technology, providing guidance and direction to the research faculty and staff of the Institute. To accomplish the mission of the institute, the Director:

- Provides direction and executive leadership to HNEI in administering its research activities;
- Ensures and maintains liaison and coordination with, and serves on committees in federal funding agencies, Hawaii Congressional Delegation, state agencies, and national and local energy consortiums and community groups;
- Exercises overall management responsibility including planning, development, implementation, supervision and evaluation of the approved programs and facilities;
- Serves as Principal Investigator on proposals/contracts for federal funding;
- Develops and stimulates scientific efforts toward significant research achievements;

Energy and Other R&D Programs

HNEI conducts applied research and development activities primarily in the areas of renewable energy and ocean resources. Related high technology areas such as fuel cells, alternative vehicles, and materials research, for which expertise exists within HNEI and which can impact economic development in the State, are also addressed. HNEI actively seeks interdisciplinary research partnerships with the State and federal governments, national and international research institutes and laboratories, and industry. The objectives of HNEI are carried out by:

- Conducting sponsored research and development activities in the areas of energy and ocean resources;

- Administering State, federal, and private funds allocated for renewable energy and ocean resources technology research;

- Pursuing and developing national and international collaborative research efforts in the furtherance of the mandate and goals of HNEI

and maintaining liaison with government funding agencies, industry, and private organizations with similar R&D interests;

- Interacting with State agencies, particularly DBEDT, to ensure coordination of university efforts with State goals and objectives;

- Providing representation on appropriate federal, State, and university committees;

- Disseminating pertinent information on its work to the university community and the public; and

- Sponsoring graduate students and post-doctoral fellows to provide training in renewable energy and ocean resources technology R&D.

HNEI's research and development activities are in several key areas.

- Fuel cells— Fuel cells, a high efficiency, clean power sources fueled by hydrogen are a key component of the current US Energy Plan with applications in both the commercial and military sectors. HNEI's programs support the development of advanced fuel cell technologies and the characterization of state-of-the-art cells in the Hawaii Fuel Cell Test Facility.

- Hydrogen—HNEI's research objectives include development of low-cost, high-efficiency processes for renewable hydrogen production, including direct solar conversion, biological hydrogen production, and the gasification of biomass. Considerable emphasis is placed on the development of partnerships with the State and federal governments, military, industry, and public utilities for the deployment and demonstration of state-of-the-art, commercial-scale hydrogen technologies, including fuel cells.

- Biomass—Research is directed at developing cost-effective technologies to produce gaseous, liquid, and solid fuels and high-value chemicals from biomass, particularly agricultural crops, for energy applications and to create new uses for Hawaii's crop lands.

- Ocean resources—Studies on the sequestration of greenhouse gases in the deep ocean and of methane hydrates, a potentially vast energy resource, are the major components of HNEI's ocean-related research.

- Battery technology and electric vehicles—HNEI is continuing its development of instrumentation and computer simulations and controls for power systems, with specific applications to electric and hybrid vehicles.

- Photovoltaics—HNEI conducts research on the development of advanced materials and cost-effective processes for the manufacture of high-efficiency solar cells and visible and infrared sensors. These programs utilize HNEI's expertise in thin-films processing and characterization.

- Technology Integration – HNEI conducts research and manages partnerships to address grid reliability and stability issues associated with the deployment of renewable and other distributed energy technologies with the objective of allowing greater penetration of renewable energy technologies onto the electric grid.

HNEI's facilities include many state-of-the-art laboratories for the conduct of these research projects. HNEI researchers also cooperate on interdisciplinary projects with the College of Tropical Agriculture and Human Resources, College of Engineering, with other departments in SOEST and with industrial partners.

Support Services

HNEI's R&D program is supported by operational elements in the areas of administrative, fiscal and human resource management, computer support (hardware and software) for internal mainframe server, project management support to all HNEI facilities, and planning and development and preliminary logistical support of new initiatives selected by the Director.

State of Hawai' i
University of Hawai'i
University of Hawai'i at Manoa
School of Ocean and Earth Science and Technology
Sea Grant College Program

FUNCTIONAL STATEMENT

THE UNIVERSITY OF HAWAII SEA GRANT COLLEGE PROGRAM

Sea Grant College Program

The University of Hawaii Sea Grant College Program is housed within the School of Ocean and Earth Science and Technology on the campus of the University of Hawaii at Manoa. The program is part of a nationwide network of 32 institutional programs of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Sea Grant College Program, that promote the understanding, development, sustainable use and conservation of marine and coastal resources through University-based research, education, community outreach and communication services.

The program collaborates with a variety of governmental organizations, private and academic institutions, and industrial organizations. Sea Grant research provides scientific data to resource managers, policy makers, legislators and the public at large in Hawaii and the western Pacific. The Sea Grant Director represents the University of Hawaii on a number of interagency research and advisory committees.

The Sea Grant Director's Office manages the activities and programs of the University of Hawai'i Sea Grant College Program which include: 1) directing the development and submission of a biennial institutional proposal encompassing activities of research, education, and extension; 2) administering the projects and programs funded by Sea Grant and other cooperating agencies; and 3) coordinating the publication and dissemination of resulting information.

a. Marine Research

The Sea Grant College Program promotes and supports coastal and ocean science research at the University of Hawai'i that addresses state, regional and national priorities. It provides research opportunities and funding for traineeships to undergraduate, graduate and postdoctoral students pursuing education and degrees in marine and coastal-related physical and social sciences. Major areas of research are sustainable coastal development and resource use, aquaculture, biogeochemistry, coastal habitats, coastal and natural hazards, coral biology and coral reef ecology, ecosystem health, fisheries, marine biotechnology, marine natural products, marine technology, shoreline processes and erosion, tourism, water safety and public policy.

The Sea Grant College Program provides for the development, coordination, and budget administration of approximately 30 Sea Grant research projects at any one time. The Sea Grant College Program also provides funds for program and project planning under the responsibility of the Director.

The Sea Grant Advisory Council, composed of leaders from academia, industry, government, education and the community, provides essential guidance in the prioritization of goals and objectives for research, education and outreach.

The Director's Office provides review procedures that prioritize proposed research and evaluate projects to ascertain appropriateness for Sea Grant support and quality of research proposals. Proposals are vetted through a peer-review and referee system modeled after the National Science Foundation. Funding recommendations are made by an External Science Review Panel, which evaluates proposals on the basis of scholarly excellence, educational value, investigator productivity, and appropriateness to the Sea Grant mission. Smaller, program development funds allow the recruitment of proof-of-concept proposals that are aimed at developing projects to qualify for multi-year funding.

b. Marine Advisory Program

Sea Grant Coastal and Ocean Science Extension Activities, under the leadership of the Director via the Extension Leader, support information and training needs of decision-makers, marine and coastal resource users, industry, resource managers and the public at large in the following areas: sustainable coastal communities, coastal hazard mitigation, coastal ecosystem health, aquaculture industry development, coastal tourism and capacity building and training;;. In addition to Hawaii and its Exclusive Economic Zone, Sea Grant serves the U.S., flag territories and the U.S.-affiliated insular states of the Pacific. Extension faculty serve as conduits of information transfer between the University enterprise and stakeholders in the communities they serve; conduct educational events, lectures, workshops, and media presentations on marine and environmental topics; promote environmental stewardship through hands-on community service projects; help formal and informal educators with environmental and sustainable development principles; and help produce high quality courses in high schools, colleges, and universities throughout the region. A network of professional staff, extension specialists and agents carry out these activities in Hawaii, American Samoa, and the Republic of the Marshall Islands.

c. Marine Education and Training

The Sea Grant College Program collaborates in the development of a broad spectrum of coastal and ocean science education that spans the K-12, undergraduate and graduate levels. Activities include participation in the Global Environmental Studies undergraduate degree program and collaboration with State Department of Education in developing marine biology-related curriculum that conforms to state and national standards. Extension faculty based at higher education institutions state-wide and in the Pacific region participate in the development and instruction of high quality courses. Sea Grant supports graduate research and education in the School of Ocean and Earth Science and Technology, the College of Natural Sciences and the College of Tropical Agriculture and Human Resources. Sea Grant also conducts community-based educational programs such as the Hanauma Bay Education Program, ReefTalk public lecture series, ReefTeach student information presentations, ReefWatchers habitat monitoring, designed to help visitors, residents, students and teachers become better stewards of marine and coastal ecosystems.

d. Publications

The Communications Unit, under the leadership of the Director via the Communications Leader, works with program management, researchers and extension faculty as well as other local, state and federal agencies to help strengthen connections between scientific findings and public awareness. It helps ensure increased public understanding and informed decision making through interpretation and synthesis of scientific and technical information and uses the press as a conduit to reach a broad audience. Sea Grant Communications produces publications, technical manuals, newsletters and other educational materials and also uses other innovative multimedia strategies to provide access to information, such as podcasts. It supports graduate and undergraduate students interested in science journalism through the Science Writer and Sea Grant Communications Assistant positions. Sea Grant Communications also develops and maintains Hawaii Sea Grant's website.