

STATE OF HAWAII
UNIVERSITY OF HAWAII
UNIVERSITY OF HAWAII AT MANOA
OFFICE OF THE PROVOST
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

FUNCTIONAL STATEMENT

OFFICE OF THE DEAN – Org Code: MAOEST

The Office of the Dean plans and directs the programs of the School of Ocean and Earth Science and Technology (SOEST), 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 Provost at UH Manoa and is 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 Provost, Office of the Vice Chancellor for Research 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 ensuing years in conjunction with the Office of the Provost, Office of the Vice Chancellor for Research of UH Manoa and the UH Manoa Budget Office.

Chairs the SOEST 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.

The Secretary to the Dean position functions as an executive Secretary to the Dean, providing secretarial services through maintenance of the Dean's calendar, managing and booking her/his travel, and provides administrative and office management services. Facilitates communication between the Offices of the Dean, Associate Deans and the Director of Administration.

Advisory Groups To The Dean:

Education and Outreach Council: The purpose of the SOEST Education and Outreach Council is to assist and advise the Dean in the development, implementation, and evaluation of school-wide education and outreach activities across all levels of audiences. This includes lower- and upper-division undergraduate instruction, graduate, professional and faculty development, as well as K-14 outreach and informal education. The primary function is to

facilitate and strengthen communication about and coordination of education and outreach activities across SOEST departments, divisions, institutes and centers. The Council also devotes attention to large, federally funded programs and the need for related curriculum.

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.

Research Council: The Research Council (RC) is tasked with fostering collaborations across SOEST and evaluating actions the Dean's Office can take to better support SOEST's research enterprise. It is comprised of representatives from each research unit, typically division heads from the academic departments and deputy directors from the institutes. The RC will make recommendations to the Dean through the Associate Dean, as RC chair, on areas such as: resource allocation and programmatic priorities; infrastructure projects; school-wide research policies; research personnel management; graduate student, postdoc, and young investigator development; and strategic planning on research priorities.

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.

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OFFICE OF THE PROVOST
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY
OFFICE OF THE ASSOCIATE DEAN FOR ACADEMIC AFFAIRS

FUNCTIONAL STATEMENT

**OFFICE OF THE ASSOCIATE DEAN FOR ACADEMIC AFFAIRS – Org Code:
MAAAOE**

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 & Geophysics; Atmospheric Sciences; Oceanography; and Ocean and Resources Engineering; as well as the Cooperative 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 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 Provost, 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, fundraising, budgeting, planning, and international cooperative programs of the School.

DEPARTMENT OF EARTH SCIENCES – Org Code: MAGG

Chair

The Department of Earth Sciences is organized on the basis of a Departmental Chair, Standing Committee, 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, 1990, and 1998.

The purpose of the Department of Earth Sciences 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 Solis-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:

- Directs the activities, curricula, and personnel of the Department of Earth Sciences
- 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 use by graduate students; award departmental 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 provide professional services on an overload fee basis as allowed by current regulations.

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.

Administrative 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.

DEPARTMENT OF OCEANOGRAPHY – Org Code: MAOCN

Chair

Directs and coordinates teaching and research activities, curricula, and personnel in the Department of Oceanography. The Department provides instruction and performs research in biological, physical, chemical and geological oceanography leading to the M.S. and Ph. D. degrees, administers the Global Environmental Science (GES) program which offers a B.S. degree. In addition to formal instructional activities, department faculties 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 regards to all personnel actions involving members of the department; conducts faculty meetings; 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 (biological, physical, chemical, and geological). These include formal instruction, symposia, advising, and thesis and dissertation research direction.

The Department of Oceanography presently has 36 graduate faculties 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; and data reduction, analysis, and synthesis.

Administrative 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, processing of 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.

DEPARTMENT OF ATMOSPHERIC SCIENCES – Org Code: MAMET

Chair

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

Serves as graduate chair of the Atmospheric Sciences area of study or coordinates with a separate graduate chair.

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

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

Acts as administrative liaison within 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.

Departmental Functions

Provides instruction; conducts sponsored and unsponsored research into tropical meteorology and climate, emphasizing hurricane synoptic and mesoscale meteorology, atmospheric dynamics, satellite meteorology, monsoon systems and meteorology of the Hawaiian Islands as related to rainfall and hazardous weather; 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.

Administrative 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.

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

DEPARTMENT OF OCEAN AND RESOURCES ENGINEERING – Org Code: MAORE

Chair

Administers a balanced program of instruction and research in ocean engineering. The academic program is a graduate program that 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

The Department of Ocean and Resources Engineering provides research and instructional laboratory facilities through the Kilo Nalu Ocean Observatory, Aloha Cabled Observatory, Glider Lab, Fluid Dynamics Laboratory and the department's association with the Hawaii Undersea Research Laboratory. Each of these facilities provides 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, offshore energy resources and ocean observation; in educating the public on the awareness of marine science and ocean engineering by making the 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.

JOINT PROGRAMS

COOPERATIVE INSTITUTE FOR MARINE AND ATMOSPHERIC RESEARCH (JIMAR) – Org Code: MAJIMA

Jointly sponsored by the University of Hawaii and the National Oceanic and Atmospheric Administration, CIMAR pursues research involving both theoretical and observational studies on climate, equatorial oceanography, and tsunamis.

INTERNATIONAL PACIFIC RESEARCH CENTER (IPRC) – Org Code: MAIPRC

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-Earth Science and Technology, IPRC pursues research on the nature and predictability of climate variability and regional aspects of global environmental change in the Asia-Pacific region.

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OFFICE OF THE ASSOCIATE DEAN FOR RESEARCH

FUNCTIONAL STATEMENT

OFFICE OF THE ASSOCIATE DEAN FOR RESEARCH – Org Code: MARSOE

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 Geology and Geochemistry, Physical Oceanography, and Volcanology, Geochemistry and Petrology; as well as the Hawaii Undersea Research Laboratory and the Center for Microbial Oceanography: Research and Education. 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, the Analytical Support Facility and the Research Computing 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.

Program Administration, Planning, Representation and Consultation with the 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 Provost, the Vice Chancellor, and other appropriate units within the University.

RESEARCH DIVISIONS

PHYSICAL OCEANOGRAPHY DIVISION – Org Code: MAPOOE

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 Divisions 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 DIVISION – Org Code: MAVGOE

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 DIVISION – Org Code: MAGTOE

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.

MARINE GEOLOGY AND GEOCHEMISTRY DIVISION – Org Code: MAMGOE

Members of the Marine Geology and Geochemistry Division have research programs ranging from field studies of coastal and 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. A particular focus is on climate change issues, including studies of "greenhouse gas" dynamics and ocean acidification.

BIOLOGICAL OCEANOGRAPHY DIVISION – Org Code: MABOOE

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, effect 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 BIOLOGY AND COASTAL ECOSYSTEMS – Org Code: MAMBOE

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.

MARINE AND ENVIRONMENTAL GEOLOGY DIVISION – Org Code: MAMEOE

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 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 effect 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.

JOINT PROGRAMS

HAWAII UNDERSEA RESEARCH LABORATORY (HURL) – Org Code: MAHURL

Established by a cooperative agreement between the National Oceanic and Atmospheric Administrative (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.

CENTER FOR MICROBIAL OCEANOGRAPHY: RESEARCH AND EDUCATION (C-MORE) – Org Code: MACMOE

Established NSF-sponsored Science and Technology Center designed to facilitate a more comprehensive understanding of the diverse assemblages of microorganisms in the sea, ranging from the genetic basis of marine microbial biogeochemistry including the metabolic regulation and environmental controls of gene expression, to the processes that underpin the fluxes of carbon, related bioelements and energy in the marine environment.

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OFFICE OF THE DIRECTOR OF ADMINISTRATION

FUNCTIONAL STATEMENT

OFFICE OF THE DIRECTOR OF ADMINISTRATION – Org Code: MAASOE

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 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

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

PROGRAM AND BUDGET OFFICE – Org Code: MAPBOE

The SOEST Program and Budget Office provides financial planning, for the SOEST annual appropriated funds budget, 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 allocation 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 – Org Code: MAHROE

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 – Org Code: MAFMOE

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 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 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 for 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 activated, 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.

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.

UNIVERSITY MARINE CENTER/SHIP OPERATIONS – Org Code: MAMSOE

The University Marine Center (UMC) operates two large research vessels, various smaller watercraft and shore support facilities. The UMC 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 the U.S. and foreign port authorities, the U.S. Navy Hawaiian Sea Frontier and the U.S. Coast Guard.

ENGINEERING SUPPORT FACILITY – Org Code: MAESOE

The principal functions 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 publication, instrumentation development requirements.

PUBLICATIONS FACILITY – Org Code: MAPFOE

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 SOEST 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 – Org Code: MARCOE

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. The facility manages two SOEST data centers.

ANALYTICAL SUPPORT FACILITY – Org Code: MAANOE

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 advises the Director of Administration and Associate Dean for Research as to the operational efficiency and future direction of each facility.

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HAWAII INSTITUTE OF MARINE BIOLOGY

FUNCTIONAL STATEMENT

**OFFICE OF THE DIRECTOR OF THE HAWAII INSTITUTE OF MARINE BIOLOGY –
Org Code: MAHIMB**

The Director administers the research, educational, administrative, and facility support services for the Hawaii Institute of Marine Biology (HIMB). In addition, the director represents HIMB with a multitude of University, State, national and international research programs. The Director provides leadership and maintains an environment supportive of excellence in research. The Director is liaison between HIMB and the offices of the Dean of SOEST and the Office of the Vice-Chancellor for Research of Mānoa. The Director also represents HIMB with local and state community groups and within the national and international research community.

The Director approves personnel appointments, research proposals, faculty tenure and promotion actions, provides policy guidance, and reviews and evaluates HIMB programs. The director also approves, authorizes and monitors HIMB's operational budget and expenditures for each fiscal year.

The Director's office includes an Administrative Officer and an Office Manager who provides support to the faculty, staff and students; and a boating and diving safety officer who is responsible for the safe use of the research boat fleet and diving gear as well as providing UH Diving Office certified training for UH-affiliated researchers and students.

ADMINISTRATIVE SUPPORT/FISCAL OFFICE – Org Code: MAASMB

HIMB is a largely independent off-campus facility located on Moku o Lo'e (Coconut Island) in Kāne'ohe Bay. The Administrative Services Manager serves as chief administrative advisor to the Director. The Administrative Support Office provides administrative support for ongoing scientific activity within HIMB, is responsible for financial planning, management, and control of HIMB funds including state allocations, funds received via contract and grants and other revenue sources; assures the efficient management of research and training contracts and grants and other revenue sources. The Administrative Support/Fiscal office provides personnel services and supervises the maintenance of administrative fiscal and personnel records. The Administrative Services Manager plans and supervises the work of professional and clerical staff; trains staff in policies and procedures and interacts directly with various local, state and federal agencies on contract and grant administration.

FACILITIES SUPPORT – Org Code: MAFSMB

The campus of the Institute comprises the 29-acre island, Moku o Loe, and the 64-acre patch reef that surrounds the island. The Auxiliary and Facilities Services Officer directs the maintenance and operation of the physical plant, which includes responsibility for the shop and security staff and the vehicles, research vessel and equipment which are integral to the marine biology laboratory. 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. The Auxiliary and Facility Services Officer handles the day-to-day operation of the maintenance team and nonscientific vessel operation. A Research Support specialist is also on staff to assist researchers with permitting, water quality monitoring, and

coordination of maintenance and repair of shared scientific equipment, as well as collection, storage, and management of Hazardous Materials and Hazardous Waste across HIMB..

Island Security – Org Code: MAISMB

HIMB's security officers are tasked with providing after-hours security for the island and the Lilipuna Road parking lot. They also, to the extent possible, document and report state poaching restrictions in the Hawaii Marine Laboratory Refuge, which is comprised of the 64 acre reef surrounding Coconut Island and 25 feet of ocean beyond the reef edge.

Vessel Operations – Org Code: MAVOMB

HIMB's fleet includes two large personnel/light freight carrier and a number of Boston Whaler-sized vessels designed for research within the Bay. Two certified captains are on staff who can operate the larger vessels, one of which is used to bring classes and other large groups to the island, and the other is used primarily for transport of other large loads to and from the island.

Laboratory Support – Org Code: MALSMB

The Institute currently has positions for two groundskeepers, two janitors, one building maintenance worker, one electrician, and one maintenance mechanic who are responsible for maintaining the Institute's buildings, grounds, vehicles, boats and infrastructure.

RESEARCH AND INSTRUCTIONAL ACTIVITIES

The central focus at HIMB is to support research and educational activities. The Hawai'i Institute of Marine Biology has 19 permanent faculty members. These faculty members serve as advisors for between 100 to 125 graduate students, undergraduate students and post-doctoral scholars whose research activities are focused mainly at Moku o Lo'e, Kāne'ohe Bay and other coastal waters of the Hawaiian Islands, including the Papahānaumokuākea Marine National Monument. 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-shore ecosystems, and tropical aquaculture place-based and immersive education particularly for kama'aina students, and collaboration with local community organizations on Indigenous marine resource management. Numerous associated faculty from other UH departments and partner institutions participate in the research and instructional activities that occur at HIMB.

RESEARCH & INSTRUCTION – Org Code: MARIMB

The HIMB Education Program's mission is to cultivate the next generation of Hawai'i's ocean scientists, managers and stewards to protect and conserve the marine resources of the Hawaiian Islands. Goals are achieved through a focused set of program objectives in community and school tours, formal curriculum, and training internships.

AQUACULTURE – Org Code: MAAQMB

HIMB provides net-pen, tank space and grant administration for coral restoration and aquaculture researchers from a number of University departments. HIMB's unique setting makes spawning and larval growth studies possible.

PLANKTON INVESTIGATIONS – Org Code: MAPIMB

HIMB scientists study marine bacteria, their effect on their surroundings and where the different groups are found in the water column.

FISHERIES INVESTIGATIONS – Org Code: MAFIMB

The Pelagic Fish and Shark Research group studies the sensory physiology and ecology of top predators such as tunas, billfish, sharks, rays and other top carnivores, and their distribution and movements. Electronic tags and transmitters are used to obtain information about the habitat preferences and behavior of these various species. The Marine Mammal Research Program uses empirical and applied research to support conservation and management of marine megafauna.

BEHAVIORAL STUDIES – Org Code: MABSMB

Researchers at HIMB study the behavior of reef fish, as well as pelagic animals, investigating spatial population dynamics of reef organisms and marine community ecology.

BIOCHEMICAL STUDIES – Org Code: MABCMB

The Marine Evolutionary Genetics research group uses advanced technology to: 1) conserve the genetic diversity of Hawai'i's native fauna, 2) reveal the processes that promote biodiversity in Hawai'i and across the Pacific, and 3) illuminate the natural history and biology of tropical marine animals and ecosystems in the service of conservation.

SUMMER INSTITUTE – Org Code: MASIMB

Each summer the Schmidt Ocean Institute Foundation supports the Schmidt HIMB Summer Program for post baccalaureate students. HIMB faculty design and deliver curriculum that leverage the HIMB's research capacities, facilities, and location of Moku o Lo'e to advance scientific and career goals of participants who otherwise may not have this unique opportunity. The course includes lectures, hands-on field work, a lab component, and data analysis for projects developed during the program.

CORAL ECOLOGY – Org Code: MACEMB

HIMB faculty conduct coral reef research including:

- 1) biochemistry & remote sensing,
- 2) reproduction, development, immune functions & environmental adaptation,
- 3) fish trophic ecology & ecosystem linkages,
- 4) coral reef assessment & monitoring,
- 5) coral symbiosis and response to environmental changes,
- 6) ecology of microorganisms and spread of alien species, and
- 7) coral reef ecology, processes & conservation.

FISH ENDOCRINOLOGY – Org Code: MAFEMB

This lab uses quantitative ecology, biomechanics and informatics to study coral reef fishes, fauna and ecosystems.

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OFFICE OF THE PROVOST
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HAWAII INSTITUTE OF GEOPHYSICS AND PLANETOLOGY

FUNCTIONAL STATEMENT

OFFICE OF THE DIRECTOR OF THE HAWAII INSTITUTE OF GEOPHYSICS AND PLANETOLOGY – Org Code: MAHIGP

The Director establishes research objectives, unit policy, and directs 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 Planetary sciences and space technology.

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 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 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.

Administrative Support

- Administrative support office provides overall administrative, fiscal, 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 and be a liaison on all contracts and grants handled through RCUH.

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

The Institute is comprised of four research areas:

**PLANETOLOGY – Org Code: MAPLGP;
GEOPHYSICAL STUDIES – Org Code: MAGSGP;
TECHNOLOGY DEVELOPMENT – Org Code: MATDGP; AND
MINERAL PHYSICS – Org Code: MAMPGP.**

The current areas of emphasis within HIGP are as follows:

Development of new space and satellite technologies and instrumentation for Earth and planetary science applications.

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

Conducts geophysical research into geothermal energy resources and water resources, seismology, volcanology, and provides State agencies with technical expertise in these areas when requested.

Research and technological development in materials science, mineral physics, and extreme materials.

Administration of NASA Hawaii Space Grant College.

Leads (in collaboration with the College of Engineering) of the Hawaii Space Flight Laboratory.

Development of infrasound technology in support of National Defense.

Administration of the W.M. Keck Foundation's Cosmochemistry Laboratory, with an emphasis on meteorites and samples returned from comets and asteroids.

Administration of the Advanced Electron Microscopy Center, with an emphasis on Materials Science and analysis of extraterrestrial materials.

Administration of the undergraduate certificate program "Earth and Planetary Exploration Technology" which equips undergraduates with engineering and physical sciences backgrounds with the skills to design planetary science satellite missions.

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HAWAII NATURAL ENERGY INSTITUTE

FUNCTIONAL STATEMENT

OFFICE OF THE DIRECTOR OF THE HAWAII NATURAL ENERGY INSTITUTE – Org Code: MAHNEI

The Hawaii Natural Energy Institute Director is responsible for coordinating research to provide visibility, focus, and encouragement to demonstrate and deploy renewable energy, energy efficiency, and peak demand reduction technologies that will:

- Contribute to the technology base for finding solutions to national and global energy and environmental challenges;
- Reduce Hawaii's dependence on imported fossil fuels with minimal environmental degradation;
- Coordinate the Institute's work with the State's Chief Energy Officer in carrying out duties pursuant to section 196-4 in the area of research and development of renewable energy sources;
- Assist the state to utilize its ocean resources.
- Carry out the duties pursuant to Hawaii Revised Statutes Secs. 304A-1891-1894 and Sec. 304A-2169.1

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;

SUPPORT SERVICES – Org Code: MASPNE

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

ENERGY R&D PROGRAMS – Org Code: MARDNE

HNEI conducts applied research and development activities primarily in the areas of renewable energy, energy efficiency, grid systems, and ocean resources. Related high technology areas such as development of advanced grid technology, alternative fuels, electrochemical power systems, advanced materials research, and ocean energy for which expertise exists within HNEI and which can impact economic development in the State, are 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 listed above;
- Administering State, federal, and private funds allocated for renewable energy, energy efficiency, grid systems 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 the Hawaii State Energy Office (HSEO) and the Hawaii Public Utilities Commission (HPUC), 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.

- **Electrochemical Power systems** — For almost two decades, HNEI has been conducting research, development, and testing of fuel cell and battery technologies. The primary goal of these efforts has been to understand the performance and durability of these electrochemical technologies for both commercial and military applications, including fuel cell powered and electric vehicles, fuel cell powered unmanned (autonomous) aerial and undersea vehicles, and for grid services.
- **Alternative Fuels**—HNEI's research objectives include development of low-cost, high-efficiency processes for renewable hydrogen production, ; the development of alternative fuels from biomass; and fuels characterization. ,. 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**— HNEI's primary focus in the area of ocean resources is in the development and testing of cost-effective technologies for the generation of energy from kinetic and thermal energy sources.
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- **Grid Technology development** - With its very high penetration of distributed rooftop solar and the pending utility scale solar + storage projects, Hawai'i is at the forefront of tackling the problem of renewable energy integration. The geographic isolation of the islands' electricity grids and the exponential growth of renewable generation make Hawai'i's electricity grids an ideal test bed for

energy solutions for the nation. HNEI's portfolio includes a range of grid technology development efforts, ranging from development of new devices and methodologies to deployment and assessment of emerging technologies to better understand their value.

- **Advances Materials**—HNEI conducts research on the development of advanced materials and cost-effective processes for the manufacture of high-efficiency solar cells, hydrogen storage, and novel technologies for seawater desalination.

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.

STATE OF HAWAII
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OFFICE OF THE PROVOST
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY
SEA GRANT COLLEGE PROGRAM

FUNCTIONAL STATEMENT

**OFFICE OF THE DIRECTOR OF THE SEA GRANT COLLEGE PROGRAM – Org
Code: MASGCP**

The University of Hawai'i Sea Grant College Program is housed within the School of Ocean and Earth Science and Technology on the campus of the University of Hawai'i at Mānoa. The program is part of a nationwide network of 33 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 and non-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 Hawai'i and the Pacific region. The Sea Grant Director represents the University of Hawai'i 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.

Advisory Groups to the Director:

Sea Grant Advisory Council: The University of Hawai'i Sea Grant College Program (Hawai'i Sea Grant) Advisory Council is charged with providing valuable guidance and input to the program. The Council is comprised of a diverse group of stakeholders representing institutional leaders, key government agencies at the state and federal level, important marine-related industries, and educational and nongovernmental organizations. One of its essential roles is to evaluate the programmatic fit of proposals submitted for possible funding. This insures that (Hawai'i Sea Grant is a responsive, highly efficient, inclusive program that provides strong contributions to research, outreach and education throughout Hawai'i and the Pacific.

ADMINISTRATIVE SERVICES OFFICE – Org Code: MAASSG

The Sea Grant College Program is supported by operational elements in the areas of administrative, fiscal and human resources management, and this section provides support for activities in core operations and sponsored projects. These functions include, budgeting, procurement of goods and services, payments, personnel administration, property management and sponsored projects administration.

RESEARCH – Org Code: MARSSG

Sea Grant research activities, under the leadership of the Director via the Associate Director, and the Assistant Director for Research and Fellowships, who serves concurrently as the Research Coordinator, promote and support 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, climate change science and adaptation, 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, watershed management and public policy.

The Sea Grant College Program provides for the development, coordination, and budget administration of as many as 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.

EXTENSION – Org Code: MAEXSG

Sea Grant extension activities, under the leadership of the Director via the Associate Director and Extension Leader, and the Assistant Director for Diversity and Community Engagement support information and training needs of decision-makers, marine and coastal resource users, industry, resource managers and the public at large in the following focus areas: Healthy Coastal Ecosystems, Resilient Communities and Economies, Sustainable Aquaculture and Fisheries, and Environmental Literacy and Workforce Development. In addition to Hawai'i 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 K-12 and institutions of higher learning throughout the region. A network of professional staff, extension specialists and agents carry out these activities in Hawai'i, American Samoa, Pohnpei and the Republic of the Marshall Islands.

MARINE EDUCATION AND TRAINING – Org Code: MAMTSG

The University of Hawai'i Sea Grant College Program collaborates in the development of a broad spectrum of coastal and ocean science education that spans

the K-12, undergraduate, graduate and post-graduate levels. Marine and coastal education and training activities under the leadership of the Director via the Associate Director, and the Assistant Director for Education who serves as the Director of the Sea Grant Center of Excellence in Marine Science Education and with support of the Program Leader, includes participation in the Global Environmental Studies undergraduate degree program, 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. Hawai'i Sea Grant supports graduate research and education in the School of Ocean and Earth Science and Technology, the College of Natural Sciences, The School of Architecture and the College of Tropical Agriculture and Human Resources at the University of Hawai'i at Mānoa and the Natural Sciences Division at the University of Hawai'i at Hilo to name a few. Hawai'i Sea Grant produces a television documentary series called Voice of the Sea under the leadership of the Assistant Director for Education and which is aired across Hawai'i as well as through several media outlets across the Pacific region. Hawai'i Sea Grant also conducts community-based educational programs such as the Hanauma Bay Education Program, ReefTalk public lecture series, ReefTeach student information presentations, Ocean Awareness Training in Hawai'i and ReefWatch Waikiki, which are designed to help visitors, residents, students and teachers become better stewards of marine and coastal ecosystems.

COMMUNICATIONS – Org Code: MACOSG

Sea Grant communications activities, under the leadership of the Sea Grant Director via the Associate Director, via the Assistant Director for Research and Fellowships and the Assistant Director for Diversity and Community Engagement, and Communications Leader, coordinate with program management, researchers and extension faculty as well as other local, state and federal agencies to promote and strengthen connections between scientific findings and public awareness. Sea Grant Communications provides capacity for increased public understanding and informed decision making through interpretation and synthesis of scientific and technical information and use the press as a conduit to reach a broad audience. Sea Grant Communications produces publications, technical manuals, newsletters and other educational materials and uses additional innovative multimedia strategies to provide access to information, such as podcasts and other web services. It supports graduate and undergraduate students interested in science journalism through its science writer and communications assistant positions. Sea Grant communications also develops and maintains The University of Hawaii Sea Grant College Program's website and a state-of-the-art publication, alumni and proposal database along with the bi-annual publication of Ka Pili Kai ocean and coastal magazine.

STATE OF HAWAII
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OFFICE OF THE PROVOST
SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY
PACIFIC BIOSCIENCES RESEARCH CENTER

FUNCTIONAL STATEMENT

OFFICE OF THE DIRECTOR OF THE PACIFIC BIOSCIENCES RESEARCH CENTER
– Org Code: MAPBRC

The mission of PBRC is scholarly research and education in integrated biology from molecules to ecosystems in aquatic and terrestrial systems. Research programs and core facilities in PBRC include basic and applied sciences that are oriented toward addressing state, national or global issues and challenges. All programs have in common the focus on integrative biosciences, hence are complementary to other programs and departments. The Director provides leadership in the development of new programs, fosters core research facilities, maintains an environment of excellence in research and education, and encourages interdisciplinary research efforts.

The Director reports to the Dean of School of Ocean and Earth Science and Technology and represents PBRC to the Office of the Vice Provost for Research & Scholarship. The Director also represents PBRC in interactions with the community at the local and state level and with the national and international research community. The Director's office manages administrative, fiscal and grant development teams that support faculty, staff and students. Personnel appointments, research proposals, faculty tenure and promotion actions are reviewed and approved by the Director. The Director supervises and approves operational budgets.

ADMINISTRATIVE & SUPPORT SERVICES – Org Code: MAASPB

The administrative staff plans and executes the essential support activities in areas of procurement, personnel and budget, for all research undertaken by the Center. It provides administrative, fiscal and human resources services and grants management for all faculty engaged in extramurally funded research.

RESEARCH DIVISION – Org Code: MARSPB

Research at PBRC encompasses biodiversity at all levels of biological integration, from genes to ecosystems, and seeks to integrate them through scientific collaborations. Areas of research include molecular and developmental biology, physiology, systematics, phylogenetics, behavior, invasion biology, population genetics, and community ecology. Evolution in native and introduced biota are being investigated in marine, terrestrial, lentic, and lotic habitats in Hawai'i. Molecular, physiological, ecological, computational, and imaging tools are used to investigate biological diversity, understand evolutionary relationships, and elucidate their functional significance in health, nutrition, the environment, and the intersection of all of the above. Community and ecosystem projects include surveys, field-experimentation, and the development and implementation of sophisticated monitoring systems.

PBRC researchers use comparative approaches to understand island biodiversity and the processes underlying adaptive radiation both within the archipelago and across habitats, while developing strategies for conserving the unique biota.

PBRC faculty work with government and non-government entities on conserving natural resources, developing sustainable land use practices, reducing dependence on food and energy imports, and maintaining a healthy population

— by developing new approaches to translational research to solve real world problems.

Research in PBRC is supported by extramural funds from the National Institutes of Health, National Science Foundation, Department of Defense and other national, state and local funding. Large-scale initiatives include the W. A. Keck Foundation-funded the Center for Microbiome Analysis through Island Knowledge (C-MAIKI), and two NIH-funded Centers of Biomedical Research Excellence (COBRE), the Integrative Center for Environmental Microbiomes and Human Health and the Integrative Center for Precision Nutrition and Human Health. State-of-the-art infrastructure housed within core facilities support interdisciplinary research programs across UHM, and provide training opportunities for students, researchers, and staff. PBRC oversees the following core facilities: the Biological Electron Microscope Facility (BEMF), the Microbial Genomics and Analytical Laboratory (M-GAL), the Insectary for Scientific Training and Advances in Research (InSTAR), the Metabolic Phenotyping Core, and the Computer Network Support Facility.

PBRC has been a leader in student-training programs since the mid-1970s, providing NIH- and NSF-funded research experiences for undergraduates and graduates across the biological sciences. Many of our past and current trainees are Native Hawaiians, other Pacific Islanders, or from other groups underrepresented in STEM.