### OFFICE OF THE DEAN AND DIRECTOR FUNCTIONAL STATEMENT

Plans and directs the programs of the College of Tropical Agriculture and Human Resources (CTAHR) as the Dean of the CTAHR and Director of Cooperative Science and Education (based on USDA organization). The Dean's office must provide the leadership and policy guidance necessary to the effective accomplishment of the CTAHR's mission and goals.

Provides executive leadership in the areas of planning, program development, policy formulation, budgetary priorities and program direction.

Represents the University and the College in its external relationships, particularly with regional and federal agencies, the Governor's Office, the State Agriculture Coordinating Committee, the State Department of Agriculture, appropriate committees of the State Legislature and Congress, groups representing industry and the College's varied clientele, and other American and foreign universities and officials.

Approves internal policies applicable to the College and its constituent units or recommends policies for higher administrative approval as appropriate.

Provides administrative direction and coordination for implementation of the instruction, research and development, and extension functions of the College as integrated programs serving State, regional, national and international needs in agriculture, natural and human resources.

Approves or recommends appointments to positions in the College.

Provides for evaluation of programs and services to maximize their effectiveness and to meet accountability requirements in accordance with federal, State and University regulations.

### OFFICE OF PUBLICATIONS AND INFORMATION FUNCTIONAL STATEMENT

Under the policies and guidelines approved by the Dean, this office assumes responsibility for the publication and information program of the College.

Edits, publishes and distributes research and extension publications.

Plans, develops and directs the mass media educational and informational programs (printed media, radio and television).

Depending on the availability of space, maintains a depository and stock of publications, including, when possible, publications issued by federal agencies and other sources of interest to the College.

Performs other related duties as required.

### OFFICE OF THE ASSOCIATE DEAN FOR ACADEMIC AFFAIRS FUNCTIONAL STATEMENT

Under University and College policies, the Associate Dean for Academic Affairs, assisted by the Assistant Dean, assumes direct operational responsibility for the instructional programs of the College.

Provide leadership in planning, developing, implementing and evaluating the instructional courses and curricula of the College.

Coordinates interdisciplinary educational programs that cut across individual departments.

Exercises administrative direction over departmental instructional activities and evaluates their performance.

Recommends policies and budgeting priorities for instructional programs to the Dean for his approval.

Administers a College-wide counseling and student service program for undergraduates and ensures that departmental advising programs for majors and graduate students are in accordance with established policies.

Coordinates instruction and training with the activities of the Hawaii Institute of Tropical Agriculture and Human Resources, and graduate programs with the Dean of the Graduate Division.

In consultation with the Director of the Institute, recommends instructional faculty appointments to the Dean, including the appointments of department chairpersons, and other personnel actions such as promotions, tenure and leaves.

Assists the Dean in the College's external relations and serves as Acting Dean when both the Dean and the Director of the Institute are absent.

Directs the work of an Assistant Dean for Academic Affairs who will administer appropriate student services and perform other duties to assist the Associate Dean of Academic Affairs.

Performs other related duties as assigned.

### OFFICE OF ADMINISTRATIVE SERVICES FUNCTIONAL STATEMENT

Under the general direction of the Dean and Director, CTAHR, this office performs personnel, fiscal, organization, and other related administrative management functions for the College.

#### Personnel Management Services

Develops, implements, directs and evaluates the personnel management system of the College in accordance with federal, State, University and College requirements and procedures.

Assists Associate Dean and Director of HITAHR in preparation of the College staffing plan.

Coordinates recruitment procedures to fill staff needs in accordance with approved staffing plans and program priorities.

Administers the appointment, classification and compensation, training, promotion, tenure, leave and benefits system for the College based on established rules and policies and contractual provisions of collective bargaining agreements.

Develops, directs and manages a central personnel records system.

#### Fiscal Services

Administers the annual and quarterly expenditure plans of the College, based on approved allocations.

Participates in the negotiation and administration of contracts and grants.

Reviews, evaluates and approves purchases, payments, transfers of funds, and other fiscal transactions of the College.

Manages the accounting an other fiscal records of the College.

Develops new fiscal information systems and maintains existing financial systems.

Assumes responsibility for establishment, maintenance and accountability of equipment inventory.

Is responsible for financial statements required by federal, state, or private agencies and organizations.

#### Organization and Management

Recommends organizational changes and/or innovative management practices in order to improve the effectiveness of program operations.

Supplements administrative systems needed to improve the business operations of the College.

Performs other management services as assigned.

#### **Budgeting**

Administers required inputs for university and state budgets.

Is responsible for the execution of approved budgets.

### OFFICE OF INTERNATIONAL PROGRAMS FUNCTIONAL STATEMENT

Under the policies and guidelines approved by the Dean, assumes responsibility for coordinating the international programs of the College.

Plans, develops and coordinates both long-range goals and immediate objectives of the College's international training programs.

Develops working relationships and maintains liaison with federal and State agencies, counterparts in agricultural colleges throughout the United States, governmental and university officials in foreign countries, the East-West Center and other international programs of interest to the College.

Provides support to the faculty of the College in developing international training projects for extramural funding.

Serves as a source of information and assistance to firms, groups and individuals in the State of Hawaii who are involved or interested in international agriculture and human resource programs.

Provides periodic reports on the College's international programs and activities.

Performs other related duties as assigned.

### OFFICE OF PLANNING AND MANAGEMENT SYSTEMS FUNCTIONAL STATEMENT

Under the general direction of the Dean and Director, CTAHR, this office provides staff support to the HITAHR Director and Associate Dean for Academic Affairs in developing and maintaining an integrated instruction, extension and research management system for program planning, project budgeting, project management, evaluating, and reporting. An integrated instruction, research and extension management information system will be developed and maintained to provide data required to plan and manage CTAHR programs.

#### Planning and Project Budgeting

Coordinates the program/project planning activities of the College.

Conducts analyses of proposals in accordance with approved program plans and priorities.

Coordinates the program/project budget review and allocation process and recommends funding levels for programs and projects based on decisions made by college administrators.

Participates in the effort to maintain, develop and improve the agricultural industry analysis and action plan system.

#### **Project Management**

Coordinates the preparation of project proposals in accordance with program objectives and priorities.

Submits proposals, progress reports and evaluations to the USDA as required by federal laws and regulations.

Monitors the implementation of program/projects approved by CTAHR administrators.

Participates in discussions with agricultural industry leaders to determine program priorities and directions for agriculture in Hawaii.

#### Management Systems

Provides for development, implementation and maintenance of a fully integrated research, extension and resident instruction management information system in support of administrative operations and decisionmaking.

Maintains standards for procurement and maintenance of computer hardware and software systems.

Provides for staff training in computer utilization.

#### **Facilities**

Assists the Dean, HITAHR director, and Associate Dean in matters pertaining to CTAHR's Capital Improvement Projects and Repair and Maintenance Projects.

## OFFICE OF THE DIRECTOR HAWAII INSTITUTE OF TROPICAL AGRICULTURE AND HUMAN RESOURCES (HITAHR) FUNCTIONAL STATEMENT

Under the policies and guidelines approved by the Dean, the Director of the HITAHR assumes direct operational responsibility for the programs of research and extension services, including the operations of the branch experiment stations and county extension service.

Provides leadership in planning, development, implementation and evaluation of the programs of the Institute.

Represents the Institute in its dealings with the Legislature, State, regional and federal agencies, industry and clientele groups, university and governmental officials in the U.S. and foreign countries, and the general public.

Functions as first deputy to the Dean and serves as Acting Dean whenever the Dean is out-of-state or absent from his office.

Recommends program policies and budgetary priorities of the Institute for the Dean's approval.

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In consultation with the Associate Dean of Academic Affairs, recommends personnel appointments, promotions and tenure, leaves and other actions pertaining to Institute personnel for the Dean's approval.

Participates in coordinating the Institute's activities with those of Academic Affairs.

Directs the programs and operations of the Institute through three Assistant Directors, whose responsibilities are as follows:

#### Assistant Director for Agricultural and Applies Behavioral Sciences Research

In close coordination with Academic Affairs, administers disciplinary based research programs in the agricultural and applied behavioral sciences in accordance with the international, regional and State research mission and graduate instructional needs of the College.

#### Assistant Director for Agricultural and Resource Development

Administers research and development programs designed to resolve specific problems of an industry, commodity resource or clientele group in order to facilitate food production, promote community development and improve the standard of living throughout the tropical areas of the world. Special emphasis will be placed on research and development projects of immediate interest as well as potential applicability to the State of Hawaii. An important responsibility is to ensure the maximum degree of coordination and mutual benefit will be attained between State programs and international projects.

#### Assistant Director for Cooperative Education Services

Administers the research data system, information dissemination and cooperative education services. These services will be provided to industries, communities, families, organizations, farmers, home owners, other individuals and the general public to ensure that the needs of these clients in each of the counties or throughout the State as a whole are met. This will include a technology assessment and transfer program to facilitate the application of research findings to problems in Hawaii and to other tropical areas of the world.

Performs other duties as assigned.

### PEARL CITY FACILITY FUNCTIONAL STATEMENT

The Pearl City Facility functions as a community educational/demonstration facility of the College of Tropical Agriculture and Human Resources, University of Hawaii at Manoa. A "one-stop" educational center to provide quality, professional assistance and information on gardening, nutrition and related information relevant to Hawaii's conditions and local needs.

To provide expert assistance and information on home gardening, foods and nutrition, and other related home and agricultural information relevant to Hawaii's conditions and local needs.

To foster community concern for food production, utilization and nutrition, small scale gardening, protection of the environment, recycling of wastes and enhancement of natural beauty, recreation and therapeutics.

To provide practical, hands-on educational programs and activities for Oahu's families and youth; and opportunities for schools, businesses, and other community groups to relate their experiences and/or job activities in food production, agricultural services and environmental improvement.

To establish and develop an educational facility in a form of tropical botanical gardens with a library and laboratory for the community to appreciate and understand agriculture and nutrition.

### DEPARTMENT OF ENVIRONMENTAL BIOCHEMISTRY FUNCTIONAL STATEMENT

The Department of Environmental Biochemistry offers undergraduate and graduate coursework and has strong programs in research and extension.

#### Instruction

The Department offers courses in the undergraduate curriculum. Students from the Colleges of Arts and Sciences, Education, and Tropical Agriculture enroll in two of these courses to obtain basic knowledge of biochemistry and metabolism. Courses at the graduate level are offered in specialized fields of biochemistry and environmental toxicology.

#### Research

The Department's program in research is concerned with a variety of topics. The principle focus is on the production, effect and metabolism of bioactive substances relating to agriculture, including either man-made or naturally occurring chemicals in the environment. Thus, projects dealing with pesticide residue and metabolism, environmental effects of agriculturally related contamination and pollution, carcinogenesis, plant biochemistry, and aquatic nutrition are actively pursued. An outgrowth of the research on pesticide residues and environmental contamination has been a successful project whose aim is to gather data for the registration of new pesticides for use on minor crops grown in Hawaii.

#### Extension

The Department's extension activities include four major programs: pesticide registration, pesticide applicator safety training, pesticide impact assessment and pesticide information management. These programs support state and national research, educational and regulatory objectives.

A certain amount of service work is performed under contract to the State Department of Agriculture. This involves analyses of commercial feeds and economic poisons to verify the manufacturer's label guarantee.

### DEPARTMENT OF BIOSYSTEMS ENGINEERING FUNCTIONAL STATEMENT

The Department is responsible for programs of instruction, research and extension having an emphasis on the engineering application to problems of tropical agriculture and renewable resources management. Principals functions performed by the Department are the following:

#### Instruction

Maintain and improve curricula leading to a baccalaureate degree in Biosystems Engineering and to a master of science degree in Biosystems Engineering. A proposal for a doctor of philosophy in Resource System Engineering is pending.

#### 'Research

The Department's principal function in research is to explore ways of creating the required engineering knowledge for successful utilization and protection of the state's agricultural and renewable resources. Major research activities are in the following categories:

- management of waste and wastewater from agricultural, aquacultural and food industries
- biological engineering of cell culture, fermentation, micropropagation and bioconversion
- thermal treatment and processing of horticultural crops
- · engineering Intensive production system for aquatic and horticultural crops
- systems modeling and optimization of bioresource production and processing systems
- water management and irrigation system design
- spatial decision support systems for enironmental protection and resource development
- biomass energy systems and thermal conversion
- · mechanization and automation of tropical crop production and processing

#### Extension

Transmitting knowledge concerning the application of engineering to industries or farms associated with the production, processing and handling of agricultural products. Transmittal of engineering knowledge for the management and protection of agricultural and other renewable resources to public as well as private agencies is also the extension's responsibility of the Department.

### DEPARTMENT OF AGRICULTURAL AND RESOURCE ECONOMICS FUNCTIONAL STATEMENT

#### Mission Statement of the Department

The mission of the Department of Agricultural and Resource Economics is to be a leading economic research, instructional and extension unit with recognized expertise in Hawaii and Pacific Basin agriculture and resources. The Department will have well-funded and user-oriented research programs that serve a broad-based clientele through innovative and responsive activities. The Department will have rigorous instructional programs in applied economic analysis that attract superior students world wide. The Department will have extension programs that provide timely information dissemination, relevant training and user-oriented research. In these endeavors, the Department will support the missions of the University of Hawaii and the College of Tropical Agriculture and Human Resources.

#### Instruction

The Department offers Bachelor of Science, Master of Science and Doctor of Philosophy degrees. Undergraduate and graduate curricula deal with the practical application of economic theory and analytical methods to diverse aspects of the commercial food and fiber industries. Analysis of public sector projects and domestic and international policies in agriculture and resource use are also involved.

The basic objective of the undergraduate program is to produce competent management-oriented economists. High priority is placed on developing analytical and communication skills. Practical application of these skills to real-world economic situations is also emphasized.

The Department's graduate programs provide students with solid theoretical and quantitative based training in agricultural and resource economics with particular attention to their application to real-world problems. The M.S. and Ph.D. programs have recently been revised and take effect in January, 1991. The new M.S. program emphasizes the applied aspects of agricultural and resource economics. The new Ph.D. program retains the strong theoretical and quantitative components of the former program but adds a disciplinary core whose purpose is to provide students with sufficient breadth in analyzing problems in the general areas of agricultural and resource economics. This disciplinary core also allows the student to appreciate the interrelationships among the sub-disciplines.

The Department provides service courses in agricultural economics, quantitative methods and computer modeling for both college majors and the broader University community. Academic advising and related career counseling are also available to students.

In addition to the regular instruction and advising program, the Department also operates a computer lab for the College. This facility is used extensively for teaching and is accessible to College students carrying out classroom assignments.

#### Research

The Department contributes to the betterment of the State and the larger world community by applying economic analyses to solving agricultural, resource, environmental, rural community, economic development and marketing/trade problems. The Department's research programs develop and apply the latest economic concepts, scientific methodology and analytical/quantitative skills to solving economic problems while advancing theories, methodologies, substance and the practice of agricultural and resource economics as a discipline and profession. The wide range of subjects under investigation include but are not limited to the following: production, marketing and trade of agricultural commodities; cost of production and value added; database and economic analysis of diversified agricultural production; aquaculture/fisheries management and development; resource planning, conservation and forecasting; and evaluation of domestic and international policies.

Departmental faculty members supervise research work of graduate students doing dissertation, thesis and directed research. Faculty also prepare books, reports, manuscripts and present papers at meetings to make their research findings available to professional peers and the general public.

Departmental researchers also work with faculty members from other departments in the College and University. These interdisciplinary projects, like disciplinary projects, seek funds from internal and external sources as well as publish research results.

#### Extension

The Department's extension program is organized into four broad areas: (i) management and finance, (ii) marketing, (iii) community resource development (CRD) and (iv) environmental and public policy.

Extension specialists in the Department extend research findings to extension agents, agricultural commodity groups, other professional groups and community associations. They also respond to queries from local, national and international sources; identify economic problems in agriculture requiring research; and provide economic training to extension agents, producer groups and other related audiences.

Extension specialists also prepare applied research/extension publications and educational material addressed to appropriate clientele. Some current areas of work include but are not limited to the following: research on market structure, cooperatives, pricing mechanisms, grading and standards, market development and feasibility analyses, budgets for costs of production for selected crops, development of management decision aids in agriculture and aquaculture, financial analyses, environmental and natural resource policies, management of small businesses, coastal zone management, agricultural land availability, energy conservation, etc.

#### Other

Participate in international, national, regional and local professional associations involving agricultural economics/economics as participating disciplines.

Serve as reviewers and/or on the editorial board for disciplinary related journals and magazines. Serve as reviewers for project proposals submitted to international, national and local organizations.

` Provide expert information, when necessary, to other State agencies, community service organizations, the Legislature and other appropriate groups.

Participate in departmental, college and university committees and contribute to the governance of these entities.

Participate in faculty development and professional enrichment programs sponsored by the State, university and other professional and governmental associations.

### DEPARTMENT OF AGRONOMY AND SOIL SCIENCE FUNCTIONAL STATEMENT

The Department of Agronomy and Soil Science is the major unit dealing with land and natural resource utilization within CTAHR. Our goal is to secure, develop and disseminate scientific information and management technologies on crops, soils, and the environment for the sustained, abundant, and safe production of high quality food, feed, fiber and fuel crops for Hawaii and selected areas in the tropics. This goal and related specific objectives are carried out through undergraduate and graduate instruction, research, and extension. Instruction is carried out through CTAHR/Academic Affairs; research and extension functions are carried out through HITAHR.

#### Instruction

Through the CTAHR Associate Dean for Academic Affairs and U.H. Graduate Division, plan, develop and implement courses and curricula leading to a baccalaureate degree with options in agronomy, crop, and soil sciences and to graduate (masters and doctors) degrees with options in agronomy and soil science. Minor specializations are available in crop production and cropping systems; agroforestry; natural resource inventory, management and conservation; environmental quality; and agricultural systems analysis, models and methodology.

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Provide service courses for students from other departments and colleges in the University.

Provide academic advising and related career counseling to undergraduate, graduate, and unclassified students.

Offer specially targeted courses through the College of Continuing Education and Community Services, the Summer Session, and the State Department of Education.

#### Departmental Disciplinary Research

Through the Director of HITAHR and the Department Chairperson (acting in his/her capacity as the coordinator for departmental disciplinary research), plan, develop and conduct research projects designed to advance knowledge in crop and soil sciences. Disciplinary emphasis in crop science will be on developing viable cropping systems for Hawaii and the tropics through crop selection, improvement and management. Cropping systems of primary agronomic importance are the conventional field crops, pastoral and forage systems, and tree-based (forestry/agroforestry) systems.

Disciplinary emphases in soil science are to inventory and stratify the biophysicochemical characteristics, extent and productive potential of Hawaii's soil resources and environments and to develop efficient management strategies for enhancing the productivity of these resources and to prevent their degradation by nutrient depletion, acidification, erosion, salinization or pollution.

Supervise the work of graduate students conducting M.S. thesis, Ph.D. dissertation, and directed research projects.

Prepare reports, manuscripts and other informative delivery products to make available the research findings to peers and clients. Specific disciplinary research areas for crops will include biotechnological exploitation, crop physiology, quality, competition, and protection. Soil science and environmental research areas will include soil genesis, characterization, classification, conservation, mineralogy, biology, chemistry, fertility, physics and agrometeorology.

Retrieve and disseminate available research information from elsewhere to facilitate the use of relevant new knowledge in departmental programs and to keep abreast of new developments in the discipline and various sub-disciplines.

#### Interdisciplinary Research and Extension Education

Through the Director of HITAHR, plan, and conduct interdisciplinary research and extension education projects to develop and apply improved soil and crop management systems for each of the major soil and climate combinations in the state, to determine, predict and enhance the potential productivity and sustainability of these systems under rainfed or irrigated conditions, and to quantify the long term impacts of these systems on the stability and productive capacity of the soil and the quality of environment.

Participate as needed in other interdisciplinary projects and networking of activities throughout the state in order to take advantage of the islands' environmental, geologic and soil diversity for systematic research and technology transfer.

Participate in partnership with sister Federal agencies, State agencies and clientele in addressing natural resource and land use issues and formulating interagency action plans.

Participate with other departments and institutions in international research and technology transfer to assist with the relief of suffering and development of sustainable agriculture in tropical nations now unable to feed their people.

Work with county research and extension personnel to develop county subprograms and annual plans of work.

Prepare reports, manuscripts, educational materials and other informative delivery products to make research and development findings available to peers and clients. Some of the interdisciplinary areas involved are agricultural climatology, agricultural ecology, simulation modeling and decision support systems, soil and water management and conservation, watershed hydrology, environmental quality and International agronomy.

#### **Other**

Develop criteria for and participate in peer review processes for professional development and the rewarding of excellence in teaching, research and extension.

Participate in other appropriate academic and educational activities of the College, the University of Hawaii at Manoa Campus and the University System at large.

Provide expert information in response to the needs of other State agencies, community service organizations, the Legislature and others when called upon to do so.

Participate in the governance of the department, the College, the University of Hawaii at Manoa Campus, and the University System at large.

### DEPARTMENT OF ANIMAL SCIENCES FUNCTIONAL STATEMENT

The Department of Animal Sciences (ANSC) will offer instructional programs at both the undergraduate and graduate levels, and, through the Hawaii Institute of Tropical Agriculture and Human Resources (HITAHR), carry out both departmental and interdisciplinary programs encompassing both research and extension functions.

#### Instruction

Plan, develop and implement courses and curricula leading to a baccalaureate degree in Animal Sciences. This education will provide the means for undergraduate students to acquire a broad educational base in Animal Sciences to include animal nutrition, genetics, disease, meat science, growth biology, reproduction, disease muscle biology, and production management. Animal Sciences will provide academic advising and counseling on education and careers that will give majors in Animal Sciences the technology needed for careers in animal or animal related industries and in government. Animal Sciences will also provide service courses for students from other departments and colleges in the University.

At the graduate level, Animal Sciences will provide instruction, direction and opportunities to learn through research to learn at a highly specialized level. These skills at the graduate level will provide the graduate student with the ability to become prospective researchers, teachers or extension leaders in the fields of animal nutrition, genetics and breeding, physiology, reproduction, meat science, growth biology, disease and management. A proposal for a Ph.D. program in Food and Environmental Sciences as an interdisciplinary program between Animal Sciences, Food Science and Human Nutrition and Environmental Biochemistry is currently pending.

#### Research

Through the Director for the Hawaii Institute of Tropical Agriculture and Human Resouces, plan, develop and conduct research projects designed to advance knowledge in the animal sciences within the speciality areas of animal nutrition, genetics and animal breeding, disease, reproduction, meat science, growth biology, muscle biology, physiology and production management. Research will address state, national and international priorities to include basic and applied research on beef and dairy cattle, swine, poultry, sheep and goats and some aquatic species.

Preparation of reports, publication of manuscripts, and communication of research findings are a part of the research process. In addition, research is an integral part of a graduate student's program which requires research leading to the thesis and publications on work in the student's area of specialization. Other important aspects of research are to remain abreast of current research developments in the discipline produced elsewhere and to utilize appropriate new knowledge in departmental programs. The Department also recognized the importance of interdisciplinary, interdepartmental and intercollege collaborative research efforts.

#### Extension

Through the Director of The Hawaii Institute of Tropical Agriculture and Human Resources, the Department of Animal Sciences will plan, develop and execute extension projects and participate in interdisciplinary projects to obtain and disseminate to the livestock producers and allied industries and the people of Hawaii useful and practical information. Extension efforts in Animal Sciences will focus on improving production efficiency, management and marketing. In addition, extension specialists will work with county research and extension personnel to develop county subprograms and annual plans of work and in youth development projects. Efforts in extension will include preparation of reports, publication of research efforts and provide available research and development findings produced in Hawaii as well as information generated elsewhere to Hawaii's clientele. Public service and continuing education will be offered to other tropical and subtropical areas of the Pacific Basin and Asia.

Extension specialists will develop criteria and participate in the peer review process for professional developments. In addition, extension specialists will provide expert information to other State agencies and community service organizations and participate in the governance of the department, the college and the University of Hawaii at Manoa.

### DEPARTMENT OF PLANT MOLECULAR PHYSIOLOGY FUNCTIONAL STATEMENT

Within the Hawaii Institute of Tropical Agriculture and Human Resources, the Department of Plant Molecular Physiology (PMP) conducts research on the physiology, biochemistry and molecular biology of tropical plants. The department also offers graduate instruction leading to M.S. and Ph.D. degrees in plant physiology.

#### Departmental Disciplinary Research

Through the College Dean, the Director and Assistant Directors of HITAHR, the Department Chairperson, the PMP faculty conceptualize, plan and conduct basic research projects to advance the fundamental knowledge in plant physiology, postharvest physiology, biochemistry, molecular and cellular biology especially as related to tropical plants.

The faculty prepares and publishes manuscripts, chapters, invited contributions in internationally recognized journals and volumes. Other published research reports are made available as appropriate. The faculty also present research findings at state, national and international conferences and to local commodity groups. Research areas include mineral nutrition, postharvest physiology of tropical fruits, flowers and vegetables, photosynthesis, growth and development, plant cell transformation, genetic engineering for crop improvement, molecular biology and genetics, environmental stress, signal perception and transduction.

The faculty maintains contact with other researchers worldwide, keeps abreast with current literature and incorporates state-of-the-art developments into departmental research programs.

#### Interdisciplinary Research and Extension Activities

Through the appropriate CTAHR channels, the Governor's Agricultural Coordinating Committee, other agencies, and the industry analysis process, the PMP faculty plans, develops and conducts interdisciplinary research and extension programs. These activities support the agricultural activities in the State and the tropics.

The faculty provides expertise on interdisciplinary research projects with other units in the University, State and Region.

The appropriate faculty work closely with commodity interest groups to identify priorities and address research needs through the industry analysis process.

Written manuscripts, reports and presentations are made detailing research findings in State, National, International publications and conferences. Research areas include plant mineral nutrition, postharvest handling of tropical fruits, flowers and vegetables, plant cell transformation, biotechnology, molecular genetics and biology, stress physiology photosynthesis and signal transduction.

#### Instruction

The department plans, develops and implements courses and programs leading to M.S. (Plans A and B) and the Ph.D. degree in Plant Physiology within the Botanical Sciences Graduate Field of Study. The department is also an active participant in the Cell Molecular and Neuro Sciences graduate program. The degree programs are research intensive and stress solid foundations in the fundamentals of plant biology, physiology and biochemistry with emphasis on contemporary methods and approaches.

The department provides challenging course selections to students from other CTAHR units and colleges in the University.

The department offers courses jointly with other University departments and during the Summer Session.

The faculty provides academic advising, career counseling and research guidance to graduate students in PMP and other University units.

#### Other

The PMP faculty:

Develops criteria for and participates in peer review process for professional development.

Participates in other academic or educational activities of the College, the University of Hawaii at Manoa and the University as appropriate.

Provides expert information on occasion to other State agencies, commodity groups, community service organizations, the Legislature and others when called upon to do so.

Participates in the governance of the department, the College and the University of Hawaii at Manoa.

### DEPARTMENT OF ENTOMOLOGY FUNCTIONAL STATEMENT

#### I MAJOR FUNCTIONS

The Department of Entomology has three major functions: Instruction, Research, and Extension. The Department offers programs of instruction at the undergraduate and graduate levels. Research and extension functions are carried out through the Hawaii Institute of Tropical Agriculture and Human Resources (HITAHR) and includes departmental as well as interdisciplinary programs.

#### A. Instruction

Develop and implement courses and curricula leading to a Bachelor of Science at the baccalaureate level, and to the Master of Science and the Doctor of Philosophy degrees at the post-graduate level.

Provide academic advising to undergraduate students and serve on thesis or dissertation committees as chair or committee member.

#### B. Research and Extension

Conduct basic and applied scientific research in the field of entomology. Research areas include acarology, biological control, forensic entomology, insect ecology, insect genetics, insect physiology and biochemistry, insect systematics and evolution, medical and veterinary entomology, pest management, tropical IPM, and urban entomology.

Prepare reports and manuscripts which make available information or research findings in published form to both the scientific and lay public.

Prepare extramural grant proposals for research funding.

#### **II MINOR FUNCTIONS**

Participate in peer review processes for tenure and promotion.

Provide expert information to other State agencies, community service organizations, and the Legislature.

Participate in academic, service, and educational activities of the Department, College, University, and professional organizations.

### DEPARTMENT OF FOOD SCIENCE AND HUMAN NUTRITION FUNCTIONAL STATEMENT

The Department of Food Science and Human Nutrition (FSHN) will offer programs of instruction at both the undergraduate and graduate levels, and, through the Hawaii Institute of Tropical Agriculture and Human Resources (HITAHR), carry out both departmental and interdisciplinary programs encompassing both research and extension functions.

#### Instruction

Plan, develop and implement courses and curricula leading to a baccalaureate degree with options in foods and nutrition, food science, dietetics and human nutrition, and to a master's degree with options in food science and nutritional science. (A proposal for a Ph.D. program in Food and Environmental Sciences is currently pending.)

Provide service courses for students from other departments and colleges in the University.

Offer courses through the College of Continuing Education and Community Services and the Summer Session.

Provide academic advising and related career counseling to students.

#### Departmental Disciplinary Research

Through the Assistant Directors for Agricultural and Applied Behavioral Sciences Research, HITAHR, and the Department Chairperson (acting in his/her capacity as the coordinator for departmental disciplinary research), plan, develop and conduct research projects designed to advance knowledge in food and nutritional sciences.

Supervise the work of graduate students conducting thesis and directed research projects.

Prepare reports and manuscripts or otherwise make available the research findings. Some of the research areas will involve food biochemistry and chemistry; food microbiology; food processing and technologies; food safety; sensory and objective quality, nutrient requirements, interrelationships and bioavailability of nutrients, toxicology; nutrition education, international nutrition, nutrition policy; food and cultural interrelationships; food product development and dietetics.

Keep up with research findings elsewhere in order to make use of appropriate new knowledge in departmental programs and to keep abreast of new developments in the discipline.

#### Interdisciplinary Research and Extension Education

Through the Assistant Directors for Agricultural and Resource Development, HITAHR, plan, develop and conduct interdisciplinary research and extension education projects in support of the food processing and food service industries in the State and in promoting sound nutritional practices in the community. Priorities should be established in accordance with various industry analyses and clientele needs.

Participate as needed in other interdisciplinary projects to input food science or human nutrition knowledge required by those projects.

Work with county research and extension personnel to develop county subprograms and annual plans of work.

Prepare reports and educational materials or otherwise make available research and development findings. Some of these areas are the development of food products, food processing methods for fruits, vegetables, nuts, grains and animal products (poultry, beef, pork, processed meats, fish, shell fish, prawn, etc.) and seaweeds; nutrition and food quality testing; food packaging; food preparation methods; dietetic standards and education; consumer/school/institutional/community nutrition education programs; food safety laws and regulations; food and nutritional practices in other cultures.

#### Other

Develop criteria for and participate in peer review process for professional development.

Participate in other academic or educational activities of the College, the University of Hawaii at Manoa and the University as appropriate.

Provide expert information on occasion to other State agencies, community service organizations, the legislature and others when called upon to do so.

Participate in the governance of the department, the College and the University of Hawaii at Manoa.

### DEPARTMENT OF HORTICULTURE FUNCTIONAL STATEMENT

The Department of Horticulture conducts programs in three major categories, research, extension and instruction, administered by the Department Chair. In each of these categories, activities are primarily related to major crop sections, composed of fruits and nuts, vegetables, and ornamentals.

#### Research

Plan, develop and conduct research activities to develop a greater understanding of the breeding and genetics, growth, production and handling of horticultural crops to the benefit of agricultural industries in Hawaii and the tropical world. Research projects are conducted in the areas of genetics, cytogenetics, genetic engineering and plant breeding; crop physiology, culture and management; asexual propagation including tissue culture; weed science; chemical growth regulation; and crop quality evaluation.

 Prepare and publish manuscripts to report findings as well as present finding at local, national and international conferences.

Cooperate with extension specialists to provide information required by clientele. Provide information required by government agencies for regulatory development and enforcement.

Cooperate with researchers in other disciplines in multidisciplinary research projects.

#### Extension

Develop extension programs in the areas of floriculture, turfgrass management, tropical fruit and nut crops, vegetable crops, ornamental crops, and weed control.

Develop and/or translate research results into a form easily used by county extension agents.

Assist county extension personnel in plans of work and providing information for clientele.

Coordinate and prepare Industry Analyses.

Prepare and provide educational materials, conduct workshops, coordinate conferences, and provide information to industry, students, and the general public.

Through the Seed Distribution Program, provide fruit and vegetable seeds of University-developed cultivars to farmers and the general public.

#### Instruction

Plan, develop and implement courses and curricula leading to a baccalaureate degree in Tropical Horticulture with options in horticultural production (technology or business) and horticultural science, and to a Master's degree and Ph.D. degree in Horticulture.

Provide courses through the College of Continuing Education and Community Service.

Provide academic advising and related career counseling to students.

Supervise the work of graduate students conducting thesis, dissertation, and directed research projects.

#### Other

Participate in the peer review process for professional development.

Review manuscripts and research proposals.

Participate in other academic and educational activities of the College, the University of Hawaii at Manoa and the University as appropriate.

Provide expert information to other State agencies, community groups, the State Legislature and others when called upon.

Participate in training programs of foreign visitors.

Participate in training programs for high school students.

Participate in governance of the department, college, and university.

### DEPARTMENT OF PLANT PATHOLOGY FUNCTIONAL STATEMENT

The Department of Plant Pathology offers a program of instruction leading to M.S. and Ph.D. degrees, and through the Hawaii Institute of Tropical Agriculture and Human Resources (HITAHR) carries out departmental and interdisciplinary programs extending over research and extension functions.

#### Instruction

Plan, develop, and implement curricula and courses leading to the Master's degree, with Plan A and Plan B options, and the Ph.D. degree with specializations in mycological, bacteriological, viral, and nematological aspects of plant pathology.

Offer an introductory course, as a service course for undergraduate or graduate plant science or agriculture majors.

Supervise the studies of graduate students conducting thesis and directed research.

Provide academic advising and career counselling to graduate students. Provide academic and research advising, to under-graduate and secondary school students.

#### Departmental Disciplinary Research

Plan, develop, and implement research programs and projects designed to advance knowledge in plant pathology and to develop information for attaining disease control as the ultimate goal of the discipline.

Prepare projects, publish relevant research findings in HITAHR publications or professional journals, make oral presentations to commodity groups or professional peer groups, or otherwise make these research findings available.

Maintain contact with researchers elsewhere, keep abreast of new developments and new knowledge, and striving to update departmental programs to eliminate redundancy and obsolescence.

#### **Extension Program**

Plan, develop, and implement extension programs designed to provide available plant disease control information and knowledge to our agricultural clientele so that they can produce quality goods efficiently.

Maintain close liaison with departmental researchers as well as with other plant science groups, entomology, biochemistry, soils, and economics.

Work closely with other specialists and county agents to provide service to agricultural clientele efficiently.

Prepare reports and educational materials, conduct workshops, make on-site visits, and otherwise make available research and development findings to agricultural clientele. Provide expertise to support activities of the Plant Disease Clinic of Agricultural Service Center.

#### Interdisciplinary Programs

Plan, develop, and implement interdisciplinary programs to advance knowledge in plant pathology and to develop information leading to efficient control of plant diseases.

Maintain current cooperative programs with horticulture, agronomy, entomology, biochemistry which encompass such activities as crop improvement projects, etiology of disease, pesticide applications, and biological control of weeds.

#### Other

Develop criteria for and participate in peer review process for the evaluation of faculty for promotion and tenure.

Participate in academic or educational activities of the College of Tropical Agriculture and Human Resources and the University of Hawaii concerned with standards and policy.

Provide best available information to community service organizations, to County, State, and Federal agencies, the state Legislature, and others as appropriate.

### DEPARTMENT OF HUMAN RESOURCES FUNCTIONAL STATEMENT

The Department of Human Resources (HR) offers programs of instruction and, in conjunction with the Hawaii Institute of Tropical Agriculture and Human Resources (HITAHR), carries out both departmental and interdisciplinary research and extension programs.

#### Instruction

Plan, develop and implement courses and curricula leading to the baccalaureate degree. Instruction is provided in areas such as human development, child and families studies, consumer & family economics and resource management, fashion design and merchandising, and clothing and textiles.

Provide service courses for students from other departments and colleges in the University.

Offer courses through the College of Continuing Education and Community Services and the Summer Session.

Provide academic advising and related career counseling to students.

#### Departmental Disciplinary Research

Through the Assistant Director for Agricultural and Applied Behavioral Sciences Research, HITAHR, and the Department Chairperson (acting in his/her capacity as the coordinator for departmental disciplinary research) plan, develop and conduct research projects designed to advance knowledge in human resources (individual, family and community), and, more specifically, in human development; family and child studies; family and community resources development; fashion merchandising and design, clothing and textiles; consumer and family economics and resource management.

Supervise the work of students conducting thesis and directed research projects.

Prepare reports and manuscripts or otherwise make available research findings for publication and dissemination.

Keep up with research findings elsewhere in order to make use of appropriate new knowledge in departmental programs and keep abreast of new developments in the discipline.

#### Interdisciplinary Research And Extension Education

Through the appropriate Assistant Directors of HITAHR, plan, develop and conduct interdisciplinary research and extension education products in support of households, families, consumers, communities, and the clothing and textiles industries in the State. Priorities should be established in accordance with the discovery and emergence of knowledge applicable to the needs of human resources clientele and related industries.

Participate as needed in other interdisciplinary projects to input human resources knowledge and expertise required by these projects.

Participate in regional, national and international research and extension projects as appropriate.

Work with county research and extension personnel as is appropriate and permitted to review, develop and support the development of county plans of work and programs.

Prepare reports and educational materials or otherwise make available or disseminate applicable research and education.

#### Other

Develop criteria for and participate in peer review process for professional development.

Participate in other academic or educational activities of the College, the University of Hawaii at Manoa and the University as appropriate.

Provide expert information routinely to clientele and appropriate community agencies, organizations and industries and on occasion to other state and federal agencies when appropriate or called upon to do so.

Participate in the governance of the department, the College, and the University of Hawaii at Manoa.

### 4-H YOUTH DEVELOPMENT FUNCTIONAL STATEMENT

4-H Youth Development focuses on 4-H youth groups at the community level where volunteers serve as leaders to plan and carry out organized learning experiences with youth.

The function of the 4-H Youth Development unit through the Hawaii Institute of Tropical Agriculture and Human Resources (HITAHR) is to:

Organize parents, other adults and volunteers for the purpose of helping youth to cope with problems in areas of human relations, community involvement, health and safety, food, energy, values, decision making, careers, and other societal concerns. Emphasis is placed on helping parents, other adults, and volunteers to understand the importance of their role and how they can be involved more effectively in the development of youth through 4-H.

Develop the curriculum and curricular tools to help volunteer leaders in their educational efforts of working with youth. Parents, adults and others serving as volunteers need help on how to work more effectively with youth, and need the necessary materials to help them in the educational process. An emphasis will be placed on developing curricular materials concerned with the various areas of life skills and societal concerns.

Assist the Hawaii 4-H Foundation to raise funds to supplement public funds in carrying out the 4-H program.

Maintain close working relationships with other youth-serving educational agencies within the state.

Work with county extension personnel to develop county programs and annual plans of work.

Participate in other academic or educational activities of the college, the University of Hawaii at Manoa and the University as appropriate.

Provide information on occasion to other state agencies, community service organizations, the legislature and others when called upon to do so.

### COMMUNITY RESOURCE DEVELOPMENT FUNCTIONAL STATEMENT

Community Resource Development is a process involving an open system of decision making whereby those who comprise a community use democratic and rational means to arrive at group decisions and take appropriate action for enhancing the social and economic well-being of the community.

The function of the Community Resource Development unit in the College of Tropical Agriculture and Human Resources is to:

Assemble, interpret and make available to county extension staff and community leaders information and material that will assist people in communities to deal effectively with their problems.

Bring problems from communities that require additional information for solution to the attention of research.

Work with social and economic researchers to plan and carry out needed research for community betterment.

Provide needed leader training for professional staff as well as for community leaders.

Design and provide assistance for community surveys to provide basic information and background for community planning.

Evaluate completed and ongoing programs to determine effectiveness.

# STATE OF HAWAII UNIVERSITY OF HAWAII UNIVERSITY OF HAWAII AT MANOA COLLEGE OF TROPICAL AGRICULTURE AND HUMAN RESOURCES HAWAII INSTITUTE OF TROPICAL AGRICULTURE AND HUMAN RESOURCES

#### COUNTIES CHARTS III, R, S, T, U FUNCTIONAL STATEMENT

The CTAHR provides research and extension education services to the farmers, ranchers, industries, homeowners, homemakers and other residents for the counties of Oahu, Hawaii, Maui and Kauai primarily through a county organization. Each county is directed by a County Administrator who reports to the Director of HITAHR through the Assistant Director for Cooperative Extension and County Programs. HITAHR conducts programs in counties based upon county priorities, industry and resource priorities, and discipline principles. Priorities are developed through a system analyses approach involving community, industry and resource groups, government agencies and University faculty and administrators. Major functions of each county are as follows:

Develop and implement long-range and annual plans of work to meet the needs of the county for research and extension education services provided by HITAHR.

Provide input in the development of State plans for the commodities and resources of the county to assure coordination between county and state plans.

Represent HITAHR in the county in dealings with the county government, other state agencies located in the county, various groups, and industry and community leaders. Implement projects developed to meet priority areas of county programs.

Assume responsibility for custody, allocation and maintenance of budget, space, equipment and facilities for all HITAHR activities in the county.

Organize advisory committees and staff assignments needed to serve organized clientele groups, field days, county fairs and similar activities important to the College.

Conduct disciplinary research related to discipline priorities. Contribute to the development of extension education as a discipline.

Conduct inter disciplinary research and development relating to commodity and resource priorities.

Participate in developing specific statewide and county industry and program analyses and carrying out programs and projects which are designed to establish research development priorities for each industry, commodity or clientele group in the state and the respective counties.

Conduct extension education and services programs by defining and carrying out projects and services of county priority.

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### AGRICULTURAL DIAGNOSTIC SERVICE CENTER FUNCTIONAL STATEMENT

The Agricultural Diagnostic Service Center (ADSC), functioning through the Assistant Director of the Cooperative Extension Service, provides analytical and diagnostic services to Hawaii's agricultural community which includes: researchers and graduate students, extension personnel, commercial producers, other government agencies, and the general public. Services are rendered in: soil testing, plant tissue analysis, feed and forage analysis, plant disease identification, and insect pest identification.

#### **ANALYTICAL SERVICES**

Supports research and extension projects in soil fertility and crop nutrition and management, and animal nutrition by performing routine chemical tests on material from experiments.

Collaborates with researchers in testing new diagnostic procedures.

Provides extension specialists and agents, commercial producers, and the general public with diagnostic tests as means of confirming or identifying nutritional disorders and problems with pests. Obtains remedial recommendations from commodity specialists in various departments.

Performs analytical tests for city, state, federal agencies conducting experiments, surveys, or confirmations.

Maintains files on clientele, submittals and results, analyzes for trends of impending problems, and prepares other summaries as required.

Participates in workshops and conferences to educate clientele on ADSC services and to report on significant findings.

#### PROGRAM MANAGEMENT

Performs administrative functions associated with the operation of the ADSC, such as budget preparation and allocations, purchasing, equipment maintenance and replacement, preparation of program, and fiscal reports.

Prepare and administer policies of the ADSC, including billing, collection, and processing of fees, shipment of samples to facility, processing of test samples, and reporting of results.

#### INSTRUCTION PROGRAM CENTER ON THE FAMILY FUNCTIONAL STATEMENT

The Center on the Family will encourage and facilitate the generation, accumulation, and dissemination of information in order to support and strengthen families, with a focus on Hawaii's families. The Center on the Family will enhance a variety of family related educational programs, research and service activities currently being offered by UHM and will utilize faulty and resources from across the campus to build the knowledge base which could be used to strengthen Hawaii's families. The Center on the Family will be administratively located within the College of Tropical Agriculture and Human Resources (CTAHR) with a Director appointed by the UHM Vice President for Academic Affairs (VPAA) and staff positions located in the Center on the Family. A Center on the Family Advisory Council will be appointed by the VPAA and will advise on a broad spectrum of UHM and general community interests.

#### Goals

- a. Provide a clearinghouse (i.e., central location for the collection and dissemination of information) within the University of Hawaii where faculty, students, policy makers, and other citizens services may find information about research, curriculum, and services which has relevance to strengthen and supporting families.
- b. Facilitate networking and collaboration of persons who are interested in family focused research, curriculum development, and service at/by the University of Hawaii.
- c. Encourage and support basic and applied research on families, particularly research with ethno-cultural or Asian/Pacific focus and research having potential for strengthening families.
- d. Encourage and support development and delivery of curriculum with a family focus component, including multidisciplinary and inter departmental collaboration.
- e. Encourage and support services directed toward strengthening Hawaii's families.
- f. Provide an academic base of knowledge for Hawaii's policy makers, community agencies and families, aimed towards prevention as well as intervention in family problems and toward resolution of the wide range of issues which confront families.

#### **Activities**

- a. Solicit, collect, up-date, and maintain information about family related research, education, and service activities, expertise and resources at UH.
- Disseminate information about family related research, education, service, expertise and resources at UH, on a regular basis and selectively in response to the needs of various constituencies.
- c. Seek research and educational/training funds, on a selective basis, for special initiatives related to family support which can be carried out by the collaboration of various existing constituencies.