

STATE OF HAWAII  
UNIVERSITY OF HAWAII  
UNIVERSITY OF HAWAII AT MĀNOA  
COLLEGE OF TROPICAL AGRICULTURE AND HUMAN RESOURCES  
**OFFICE OF THE DEAN**

FUNCTIONAL STATEMENT (for Chart II)

**OFFICE OF THE DEAN – Org Code: MADNTR**

The Office of the Dean and Director of Research and Cooperative Extension is responsible for the following:

- Plans and directs the programs of the College of Tropical Agriculture and Human Resources (CTAHR).
- Provides executive leadership in the areas of planning, program development, policy formulation, budgetary priorities and program direction to effectively accomplish CTAHR's mission and goals.
- Represents the University and the College in its external relationships, particularly with state, regional and federal agencies related to agriculture, natural and human resources.
- 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.
- Provide 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 ADMINISTRATIVE SERVICES – Org Code: MAASTR**

The Office of Administrative Services is responsible for personnel, fiscal, budget, organization, and other related administrative management functions for the College.

**OFFICE OF COMMUNICATION SERVICES – Org Code: MACSTR**

The Office of Communication Services is responsible for the publication and information program of the College. This Office plans, develops and directs the mass media educational and informational programs (print media, radio, television, web and electronic data) and produces newsletters, alumni bulletins, and an annual CTAHR Impacts Report. The Office also coordinates the College's public relations campaigns and activities.

**OFFICE OF PLANNING AND MANAGEMENT SYSTEMS – Org Code: MAPMTR**

The Office of Planning and Management Systems provides the following services:

- Provides staff support to the College in developing and maintaining an integrated instruction, extension and research management system for program and project planning, budgeting, management, evaluating and reporting.
- Coordinates the program/project budget review and allocation process and recommends funding levels for programs and projects based on decisions made by college administrators.
- 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.
- Provides for development, implementation and maintenance of a fully integrated research, extension and resident instruction management information system in support of administrative operations and decision making.
- Assists the Dean and Associate Deans and Associate Directors in matters pertaining to CTAHR's Capital Improvement Projects and Repair and Maintenance Projects.

**OFFICE OF THE ASSOCIATE DEAN FOR ACADEMIC AND STUDENT AFFAIRS – Org  
Code: MAAATR**

This Office provides administrative and educational leadership and oversight in planning, developing, implementing and evaluating CTAHR's academic program, including distance learning activities and on-going curricular revisions.

**OFFICE OF THE ASSOCIATE DEAN AND ASSOCIATE DIRECTOR FOR RESEARCH – Org  
Code: MARSTR**

This Office provides leadership and supervision of research programs of the agricultural research system. The functions of this Office include the following:

- Work with Department Chairs to initiate specific projects; coordinate interdepartmental projects; and approve and monitor projects in progress for accomplishments, impacts and publications.
- Liaise with Cooperative State Research, Education and Extension Service (CSREES) partnership office.
- Coordinate participation of CTAHR faculty in regional research projects and represent CTAHR regionally and nationally, including attendance at regular meetings of the Western Association of Agricultural Experiment Station Directors.
- Collaborate with the CTAHR Office of Planning and Management Systems to coordinate the budgetary allocations of the research system including preparation of budget requests, departmental allocation of funds, and federal research station funds.
- Maintain the research data systems required by USDA and other state/federal agencies.
- Cooperate with the Associate Dean and Associate Director of Cooperative Extension to manage internal grant programs and to coordinate the off-campus research/extension centers and farms.

**OFFICE OF THE ASSOCIATE DEAN AND ASSOCIATE DIRECTOR FOR COOPERATIVE  
EXTENSION – Org Code: MAEXTR**

This Office provides leadership and supervision of state-wide Cooperative Extension programs. The functions of this Office include the following:

- Work with County Administrators and Department Chairs to initiate specific projects/programs by encouraging "cross county programs" and projects through collaborative planning, implementation, and evaluation through the sharing of resources and expertise.
- Liaise with Cooperative State Research, Education, and Extension Service (CSREES) partnership office on issues relating to Cooperative Extension, including all Smith Lever funds, annual plans of work, and accomplishments and impacts/implementation reports.
- Represent Hawai'i Cooperative Extension regionally and nationally, including attendance at the regular meetings of the Western Directors' for Cooperative Extension.
- Oversee the budget allocations and extension data systems required by USDA and other state/federal agencies of the Hawai'i Cooperative Extension in collaboration with the CTAHR Office of Planning and Management Systems.
- Cooperate with the Associate Dean and Associate Director of Cooperative Extension to manage internal grant programs and to coordinate the off-campus research/extension centers and farms.

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**DEPARTMENT OF FAMILY AND CONSUMER SCIENCES**

FUNCTIONAL STATEMENT (Chart III)

**DEPARTMENT OF FAMILY AND CONSUMER SCIENCES – Org Code: MAFCS**

**Instruction**

- Develop, implement, and evaluate relevant curricula for Bachelor of Science degrees in Apparel Product Design and Merchandising (APDM) and Family Resource (FAMR) including a common core of courses in research methods and internship.
- Provide service courses for majors in Early Childhood Education, K-12 School and Secondary Education, Nursing, Family and Consumer Sciences Education, Business and Marketing.
- Provide General Education Core courses that fulfill social sciences requirements for UHM (APDM 200 and FAMR 230).
- Provide support for academic advising and career counseling for undergraduate students.

**Research**

- Develop and implement research projects and programs designed to advance knowledge in two areas of family and consumer sciences: fashion, apparel product design, and merchandising; or human development and family studies. Disseminate the knowledge through refereed journals and other forms of peer reviewed scholarship such as books, book chapters, research presentations, peer reviewed design competition and exhibits, peer reviewed and evidence based curriculum, etc.
- Plan, develop, and implement community-based and collaborative research activities designed to provide solutions to Hawai'i's, national or international problems in the context of Asian and Pacific Islander families and multicultural communities. Integrate this knowledge into the degree program's formal curriculum on campus and off-campus educational activities and publications.
- Broadly disseminate research-based knowledge to consumers, communities, business and industry, non-profit organizations, and government agencies through multimedia communication channels, including electronic communication systems.
- Guide undergraduate students in understanding and developing research skills appropriate to their career tracks, or post-graduate education, and data evaluation skills to be a better informed citizen,.
- Provide faculty mentorship and guidance for students conducting directed research projects, theses, and dissertations.
- Develop collaborations with researchers in other fields to promote multidisciplinary, interdisciplinary, and international research to develop innovative technologies, educational and other human interventions, and incorporate emerging paradigms and methods into our curriculum.

**Extension**

- Develop, implement, and evaluate outreach programs that provide educational materials designed for information and assistance to clientele at the consumer, agency, and business levels on topics related to family and consumer sciences.
- Develop collaborative programs involving faculty in instruction, research, and extension to enhance innovative and creative programs that have been demonstrated to work in addressing problems that are pressing needs in the State, across the Nation and around the globe.

**Other**

- Develop criteria for and participate in the peer review process for the evaluation of faculty for promotion and tenure.
- Participate in activities that support the Department, the College, and the University.
- Share expertise with consumers, communities, business and industry, non-profit organizations, and government agencies.
- Provide service to the profession at the local, national, and international levels.

**4-H OFFICE – Org Code: MA4H**

The State wide 4-H Office is responsible for state wide planning, development, implementation, and impact evaluation of 4-H youth (including children and youth 5 through 19 years of age) development activities across the counties. 4-H volunteers serve as 4-H club leaders in their communities to plan and carry out organized, informal life skills and hands on learning experiences with youth. The function of the 4-H Office is to:

- Provide support and 4-H/evidenced based positive youth development resource materials for 4-H county agents who assist 4-H volunteer adult leaders such as parents or other adults. Community based 4-H youth development hands-on activities and life skills seek to solve issues that arise in dealing with people, enhance civic engagement and 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 and use innovative curriculum and curricular tools to help volunteer leaders in their educational efforts while working with multicultural youth and their communities. Parents, adults and others serving as volunteers need support to work more effectively with youth, and help adapting peer reviewed 4-H materials to enhance and support the educational process for youth in their communities. An emphasis will be placed on adapting, developing, and using curricular materials and development of life skills to address urgent community and societal concerns.
- Plan and work with the Hawai'i 4-H Foundation to facilitate their efforts to support and promote 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 Hawai'i at Mānoa 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.

**CENTER ON THE FAMILY – Org Code: MACOF**

The Center on the Family conducts research, education, and community outreach that supports and strengthens families, with a focus on Hawai'i's multicultural families. The Center on the Family is administratively located within the College of Tropical Agriculture and Human Resources (CTAHR) with a Director.

The Center on the Family:

- Develops and conducts programs of basic and applied research relating to family well-being and strengthening families (e.g., family resilience; lifespan family interaction and dynamics; the interface between families and educational, economic, health, and social systems; Asian/Pacific Island family values), and disseminates this research through professional journals, publications, and conferences.

- Develops and disseminates research-based education and training materials and curricula to be used by community groups and agencies that provide direct service to families.
- Develops and implements research-based outreach programs that support and strengthen families and/or increase the capacity of community organizations and systems that serve individuals and families in Hawai'i.
- Maintains the Data Center, an on-line social indicators database and resource clearing house on the status and well being of Hawai'i 's families, for use by faculty, students, policy makers, and other citizens seeking information that has relevance to strengthening and supporting families.
- Facilitates networking and multidisciplinary, interdepartmental collaboration among persons interested in family-focused research, education, and outreach at/by the University of Hawai'i.

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**DEPARTMENT OF HUMAN NUTRITION, FOOD AND ANIMAL SCIENCES**

FUNCTIONAL STATEMENT (Chart IV)

**DEPARTMENT OF HUMAN NUTRITION, FOOD AND ANIMAL SCIENCES (HNFAS) – Org  
Code: MAHFAS**

The Office will offers instructional programs at both the undergraduate and graduate levels and through the College of Tropical Agriculture & Human Resources (CTAHR), carry out both departmental and interdisciplinary programs encompassing both research and extension functions.

**Instruction**

- Plan, develop and implement courses and curricula leading to baccalaureate degrees in Animal Sciences and Food Science and Human Nutrition.
- Provide the means for undergraduate students to acquire a broad educational base in Animal Science to include animal nutrition, genetics, disease, meat science, muscle and growth biology, reproduction, physiology and production management. Additionally, the department will include a pre-veterinary program that prepares students for application to colleges of veterinary medicine. The Department also prepares students for graduate education.
- Provide undergraduate students with a strong science base that is applied to food science and human nutrition. The Department will offer an accredited program in Dietetics, approved by the American Dietetic Association. Other options will include food science and human nutrition which provides students with opportunities toward the areas of nutrition education, sports and wellness, food science, pre-professional programs such as pre-medicine, pre-dentistry, pre-pharmacy as well as preparing students for graduate education.
- Offer a strong science based curriculum with emphasis on active learning, critical thinking skills, problem solving and the basic scientific principles of animal sciences, food science and human nutrition.
- Provide academic advising and counseling needed for careers to students. Provide service courses for student from other departments and colleges in the University.
- Offer courses through the Outreach College.
- At the graduate level, HNFAS 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 field of animal science or food science and human nutrition. Master's of Science degrees will be offered in Animal Sciences, Nutritional Sciences and Food Science. An interdisciplinary Ph.D. program, Food and Environmental Sciences is also available.

**Departmental Disciplinary Research**

- Through the Associate Dean and Associate Director for Research for the College of Tropical Agriculture and Human Resources, plan develop and conduct research projects designed to advance the knowledge of food science, human nutrition and animal sciences.
- Supervise the work of graduate students conducting thesis, dissertation, and directed research projects.
- Prepare reports and manuscripts or otherwise communicate the research findings. Some of the research areas include food biochemistry and chemistry, food microbiology, food safety, sensory and objective quality, nutrient requirements, interrelationships and bioavailability of nutrients for both humans and animals, toxicology, human and animal nutrition education, food and cultural interrelationships, food product development and dietetics, nutritional and environmental stress on animals, reproductive physiology and endocrinology, growth and

development of animals, muscle development and meat science, disease control and animal breeding.

- 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 these disciplines.

#### **Interdisciplinary Research and Extension Education**

- Through the Associate Dean and Associate Director for Extension of the College of Tropical Agriculture & Human Resources, plan, develop and conduct interdisciplinary research and extension education projects in support of the food processing, food service and livestock industries in the State, focusing on improving production efficiency, management and marketing and programs to promote sound nutritional practices in the community through coordination and cooperation with federal and state agencies. Both statewide and county-wide programs will be conducted through coordination of extension specialists, researchers and extension agent service organizations when called upon to do so.
- Prepare reports, plans of work and publish research findings. Provide available research and development findings produced in Hawai'i, as well as information generated elsewhere, to Hawai'i's clientele through a variety of communication channels. Priorities should be established in accordance to various industry analyses and clientele needs through a direct working relationship with clientele groups.

#### **Other**

- Provide expert information to other State agencies, the legislature, and community service organizations when called upon to do so.
- Participate in the governance and other academic or educational activities of the department, the college and the University of Hawai'i at Mānoa.
- Develop criteria for and participate in peer review process for professional development.

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**DEPARTMENT OF MOLECULAR BIOSCIENCES AND BIOENGINEERING**

FUNCTIONAL STATEMENT (Chart V)

**DEPARTMENT OF MOLECULAR BIOSCIENCES AND BIOENGINEERING (MBBE) – Org  
Code: MAMBBE**

The mission of this Office is twofold: 1) to integrate the biological sciences with engineering to develop new knowledge in molecular biosciences and biological engineering and 2) to apply the latest scientific discoveries to strengthen the biologically-based industries of biotechnology, agriculture, food technology and aquaculture. The applications of science and technology will be done in a manner that protects human health and the environment while meeting the needs of society.

The Department will operate along three traditional assignment categories, instruction, research, and extension, and will participate in various interdisciplinary and other activities.

**Instruction**

- Plan, develop, and present curricula leading to B.S. degrees in Biological Engineering and Molecular Biosciences (the latter will have options in General Molecular Biosciences and Biotechnology, Plant Biotechnology, and Environmental Biochemistry). Plan, develop, and present curricula leading to M.S. degrees (Plan A or Plan B) in Molecular Biosciences and Bioengineering and Bioengineering Ph.D. degrees in Molecular Biosciences and Bioengineering
- Provide service courses to other academic programs.
- Provide academic advising and career counseling to undergraduate students.
- Advise and supervise graduate students performing thesis, dissertation, and directed research.
- Offer specially targeted courses through the Outreach College.

**Research**

- Plan, develop, and conduct research aimed at advancing the knowledge in biochemistry, biotechnology, and biological engineering. Areas of research emphasis include biotechnology; plant molecular biology and biochemistry; photosynthesis, gene regulation, and signal transduction; plant-microbe interaction, plant and insect cell culture; natural products chemistry and biochemistry; environmental chemistry and toxicology; biological and thermo chemical conversion; water distribution systems; control theory and automation; systems engineering and engineering of agricultural biosystems; food science and technology; and nutritional biochemistry.
- Disseminate research findings via refereed professional journals, oral presentations to peers and clients, research reports to funding agencies, and other appropriate communication mechanisms.
- Interact with extension faculty to disseminate information to clientele and to keep abreast of problems in the field that require research for their solution. Provide information to governmental agencies for establishing public policy, and for regulatory development and enforcement.
- Cooperate with researchers in other disciplines in multidisciplinary research projects.
- Interact with researchers and professionals outside of Hawaii to keep abreast of new developments and new knowledge worldwide.



**Extension**

- Plan, develop, and implement outreach aimed at disseminating information and transferring technology to clientele concerned with areas of emphasis of the Department.
- Maintain strong linkages with public and private stakeholders to identify critical needs of clientele.
- Maintain close liaison with research peers to facilitate the flow of information to and from clientele.
- Provide educational materials, conduct workshops, establish electronic means of information delivery or any other effective means of providing help and information for clientele.

**Interdisciplinary Programs**

- Plan and conduct interdisciplinary research and outreach to develop and apply new biotechnological and engineering approaches to support agricultural and other bio-based industries, formulate environmentally compatible methods of controlling pests and diseases in tropical crops and other biological cultures, and protect human health.
- Provide an “expert technological base” for molecular biology, biochemistry, biotechnology, and biosystems engineering in CTAHR.
- Participate, as appropriate, in interdisciplinary projects and networking of activities throughout the State in areas pertinent to the Department.
- Collaborate with government agencies, governmental laboratories, and clientele in areas pertinent to this Department.
- Participate with other departments and institutions in international research and technology transfer.

**Other**

- Develop criteria for and participate in peer review processes in the evaluation of faculty for promotion and tenure. Develop criteria and mechanisms to reward faculty and staff for meritorious performance.
- Participate in governance of the Department, the College, and the University.
- Participate in academic and educational activities in the College and the University, as appropriate.
- Provide service to governmental agencies, secondary school units, and the general public, as appropriate.

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**DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL MANAGEMENT**

FUNCTIONAL STATEMENT (Chart VI)

**DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL MANAGEMENT – Org**  
**Codes: MANREM**

This Office is the major unit dealing with land and natural resource planning, policy and utilization within CTAHR. Our *mission* will be to “Discover and help CTAHR’s clients learn how to better use, manage, and conserve natural and renewable resources for optimum benefits and enhanced environmental quality.” The natural resources of focus include land, soil, water, air, forestry, fisheries, range and, as appropriate, aquacultural systems. The department will endeavor to develop selected areas of expertise into foci/centers of excellence in conservation and development efforts and sustainable agricultural technologies and management policies that are capable of leveraging extramural funding from local, national and international sources.

The NREM mission, purpose, and articulated specific objectives are implemented through the primary Land-Grant functions of undergraduate and graduate instruction, disciplinary and problem-solving inter/trans-disciplinary) research, and extension. Undergraduate instructional support is through CTAHR/Academic Affairs, graduate instructional support is through CTAHR and the UHM Graduate Division, research and extension functions are support mainly through CTAHR Research/Extension.

**Instruction**

- Through the CTAHR Associate Dean for Academic and Student Affairs and in consultation with the NREM faculty, NREM plans, develops and implements curricula and courses leading to a baccalaureate degree with options/tracks in Natural Resource Management and Conservation and Community Development and Policy.
- Through the UHM Graduate Division and in consultation with the faculty, NREM plans, develops and implements curricula and courses leading to graduate (both master Plans A, B, C and a professional masters of Environmental Management and doctors) degrees with options in physical, biological, ecological and socio-economic streams.
- Provide service courses for students from other department and colleges in the University.
- Provide academic advising and related career counseling to undergraduate, graduate, and unclassified students.
- Offer specially targeted courses through the Outreach College and the State Department of Education.

**Disciplinary Research**

- Through the Associate Dean and Associate Director for Research and the Department Chairperson (acting in her/his capacity as the coordinator for departmental inter/trans disciplinary research) along with the faculty, plan, develop and conduct research projects designed to advance knowledge in the physical, biological, ecological, economic and social sciences directly linked to NREM’s mission and purpose.
- Interact and collaborate with researchers and professionals outside of Hawai’i to stay up-to-date on new developments and new knowledge and conduct joint research in areas of mutual benefit.
- Supervise the work of graduate students conducting M.S. non-thesis and thesis, Ph.D. dissertation, and Directed Study projects.
- Prepare reports, manuscripts and other informative delivery products to make available the research findings to peers and clients.
- Retrieve and disseminate available research information to facilitate the use of relevant new knowledge in departmental programs and to keep abreast of new developments in the disciplines and various sub-disciplines of NREM.

- Pursue competitive local, national and international grants and awards to build capacity and advance knowledge in the physical, biological, ecological, applied economic and social sciences directly linked to NREM's mission and purpose.

#### **Problem Solving Research, Extension Education and Outreach**

- Through the Associate Dean and Associate Director for Extension of CTAHR, NREM with consultations with faculty plans, and conducts inter- or trans-disciplinary research and outreach/extension education projects to develop and apply sustainable natural resource management systems for the major land and climate combinations in the state, and quantify the long-term impacts of these systems on the stability of land and the quality of environment.
- Predict and enhance the potential productivity and sustainability of agroecosystems whether under rain fed or irrigated conditions.
- Participate as needed in other inter- or trans-disciplinary projects and networking activities throughout the state in order to take advantage of the islands' environmental, geologic, soil, topographic, and ecological diversity for systematic research and technology transfer.
- Participate in partnerships with sister Federal agencies, State agencies and clientele for addressing natural resource and land use issues and formulating cooperative interagency action plans.
- Participate with other departments and institutions in international research and technology transfer to assist with the development of sustainable agriculture in other tropical and sub-tropical nations, especially in the Asia Pacific and to learn from these experiences.
- Work with county research and extension personnel to develop county subprograms and annual plans of work that assert the role of sound natural resource management and environmentally safe land use systems.
- Prepare reports, manuscripts, and educational materials; hold periodic conferences and workshops; and use other information dissemination and delivery vehicles to make research and development findings readily available to peers and clients.

#### **Other**

- Develop criteria for and participate in peer review processes for professional development and the rewarding of excellent faculty performance in teaching, research and extension.
- Participate in the governance of the department, the College, the University of Hawai'i at Mānoa campus, and the University System at large.
- Participate in other appropriate academic, research and educational activities of the College, the University of Hawai'i at Mānoa 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.

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**DEPARTMENT OF PLANT AND ENVIRONMENTAL PROTECTION SCIENCES**

FUNCTIONAL STATEMENT (Chart VII)

**DEPARTMENT OF PLANT AND ENVIRONMENTAL PROTECTION SCIENCES (PEPS) – Org  
Code: MAPEPS**

This Department conducts Instruction, Research, and Extension programs.

**Instruction**

- Provide a relevant curriculum for B.S., M.S. (Plan A, Plan B, and Plan C options), and Ph.D. degrees focusing on a broad education, but with specialization in several plant protection and environmental protection areas.
- Service courses will be provided for plant science majors in other departments.
- Mentoring of graduate students and supervision of directed studies and research.
- Advising undergraduate students and career counseling.

**Research**

- Plan, develop, and implement research programs and projects designed to advance knowledge in plant and environmental protection and to develop and disseminate information pertaining to the management of pest problems.
- Develop projects and publish the results in appropriate refereed professional journals, make oral presentations to growers, gardeners, turf and landscape managers, professional peers, and other relevant outlets to make research findings available to the public.
- Interact with researchers and professionals outside of Hawai'i to remain current and up-to-date of new developments and new knowledge.

**Extension**

- Plan, develop, and implement outreach programs designed to provide information and technology to clientele concerned with plant problems and associated environmental problems.
- Maintain a close liaison with research peers to facilitate information and technology delivery.
- Work cooperatively and collaboratively with other specialists and county agents to provide the most efficient and effective means to transferring knowledge and technology.
- Provide educational materials, conduct workshops, establish electronic means of information delivery or any other effective means of providing help and information for clientele.

**Interdisciplinary Programs**

- The PEPS unit is designed to be transdisciplinary to assure advancement of knowledge about plant and environmental protection.
- Cooperative and collaborative programs with other plant science units are essential for crop improvement in the tropics and for improving crop and environmental protection programs.

**Other**

- Develop criteria for and participate in peer review process for the evaluation of faculty for promotion and tenure and contract renewal based on job responsibility.
- Participate in academic and educational activities of the college and the university.
- Provide community services where appropriate.

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**DEPARTMENT OF TROPICAL PLANT AND SOIL SCIENCE**

FUNCTIONAL STATEMENT (Chart VIII)

**DEPARTMENT OF TROPICAL PLANT AND SOIL SCIENCE – Org Code: MATPSS**

This Department conducts programs in three major categories, research, extension and instruction. The program is administered by the Department Chair. Our goal is to secure, develop and disseminate scientific information and management technologies on plants and soils for Hawai'i and selected areas in the tropics, to enhance the competitiveness and economic sustainability. This goal and related specific objective are carried out through undergraduate and graduate instruction, research, and extension. Instruction is carried out through CTAHR/Academic and Student Affairs; research and extension functions are carried out through CTAHR/Research and CTAHR/Extension.

**Instruction**

- Plan, develop and implement courses and curricula leading to a baccalaureate degree in Tropical Plant and Soil Science with options in 1) production/management, 2) soil science; and, 3) plant sciences and genetics; and to a Master's degree (Plan A, Plan B, and Plan C) and Ph.D. degree in Horticulture, and Agronomy and Soil Science.
- To provide service courses to other departments.
- Offer specialty targeted courses through the Outreach College and the State Department of Education.
- Provide academic advising and related career counseling to undergraduate students.
- Supervise the work of graduate students conducting thesis, dissertation, and directed research projects.

**Research**

- Plan, develop, and conduct research projects designed to advance knowledge in tropical plant and soil sciences. Disciplinary emphasis in plant science will be on developing viable cropping systems for Hawai'i and the tropics through crop selection, improvement and management. Research projects are conducted in the areas of genetics, cytogenetic, genetic engineering and plant breeding; crop physiology, soil management, plant nutrition, culture and management; asexual propagation including tissue culture, chemical growth regulation, postharvest physiology and handling and crop quality evaluation.
- Disciplinary emphases in soil science are to inventory and stratify the biological and physiochemical characteristics, extent and productive potential of Hawai'i's soil resources and environments and to develop efficient management strategies for enhancing the productivity of these resources and to prevent their degradation by natural and anthropogenic processes, such as nutrient depletion, acidification, and salinization.
- Prepare reports, manuscripts and other informative delivery products to make available the research findings to peers and clients at local, national and international levels.
- Retrieve and disseminate available research information.
- Facilitate the use of relevant new knowledge in departmental programs and to keep abreast of new developments in the discipline and various sub-disciplines.
- Cooperate with extension faculty to provide information required by clientele. Provide information required by government agencies for regulatory development and enforcement. Interact with extension faculty to keep abreast of problems in the field that may require research input.
- Cooperate with researchers in other disciplines in multidisciplinary research projects.

**Extension**

- Plan, develop, and implement outreach programs designed to provide information and technology to clientele concerned with plant and soil problems.
- Maintain strong linkages with external groups both public and private as this partnership plays a critical role in identifying critical issues of our clientele. Clientele involvement through extension assures that local needs and concerns are met as integrated programs are developed and delivered to people in communities where they live and work.
- Maintain a close liaison with research peers to facilitate technology generation by adaptive research, information dissemination and technology adoption.
- Work cooperatively and collaboratively with other specialists and county agents to provide the most efficient and effective means to transferring knowledge and technology.
- Provide educational materials, conduct workshops and coordinate conferences, establish electronic means of information delivery or any other effective means of providing help and information for industry, students, and the general public.

**Interdisciplinary Programs**

- Plan, and conduct interdisciplinary research and extension education projects to develop and apply improved plant, soil and pest 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 rain fed or irrigated conditions, and to quantify the long-term impacts of these plant and soil 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 Federal agencies, State agencies and clientele in addressing plant and soil 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-based personnel to develop county programs.

**Other**

- Develop criteria and mechanisms to reward faculty and staff for meritorious instruction, research and extension activities, giving clear recognition for team and interdisciplinary activities.
- Develop criteria for and participate in peer review process for the evaluation of faculty for promotion and tenure based on job description and performance.
- Develop criteria for and participate in peer review processes for professional development and the rewarding of excellence in teaching, research and extension
- Participate in the governance of the department, the College, the University of Hawai'i at Mānoa campus, and the University System at large.
- Participate in other appropriate academic and educational activities of the College, the University of Hawai'i at Mānoa campus and the University System at large as appropriate.
- Provide expert information when called upon to do so, in response to the needs of the other State agencies, community service organizations, the Legislature and others.
- Provide community services where appropriate.
- Review manuscripts and research proposals.
- Participate in training programs of foreign visitors.
- Participate in training programs for high school students.