UPLB

Research Manual

Guidelines and Procedures Governing Research and its Related Activities

The UPLB Research Manual

Revised 2008
ISBN 971-547-198-6

Published by the
Office of the Vice-Chancellor for Research and Extension
University of the Philippines Los Baños
College, Laguna, Philippines

2008 Version Contributors:

Writer-editors: Florante A. Cruz, Rosario G. Gabatin, Elias B. Abao, Jr. and Perrose L. Comendador

Suggested citation:

2008. The UPLB Research Manual (Revised, 2008). Office of the Vice-Chancellor for Research and Extension, UPLB, College, Laguna, Philippines. pp.

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Message

I congratulate the UPLB Office of the Vice Chancellor for Research and Extension (OVCRE) on the occasion of its 11th Anniversary on October 23, 2008. OVCRE has been at the forefront of UPLB's efforts to promote and maintain our distinctive excellence in the field of research and extension. It is but fitting to highlight this celebration with a soft launching of the revised **UPLB Research Manual**, an essential tool for our current and future efforts.

Since its first publication in 2002, the UPLB research manual has helped our researchers in efficiently and effectively implementing their projects and studies at UPLB. However, with changes in policies and guidelines, it is necessary that the manual be revised and updated to ensure that our researchers are provided with a handy and reliable reference to help them succeed in their chosen fields of inquiry.This revised manual is a significant tool in serving as an information resource for consolidated information on administrative procedures and guidelines on research activities.

While the manual is an important tool for researchers in their respective fields, I hope it will also serve the purpose of developing a common "language" as an enabling environment for increased cross-disciplinary work among our researchers. I therefore take this opportunity to challenge OVCRE to become a catalyst in promoting the development and pursuit of cross disciplinary programs among various units and researchers of the university. I believe, our future greatness in the field of research and extension will rest not on how much research funds we are able to obtain but rather, on how well we are able to harness these funds and our individual expertise and research interests, to collaborate in making science and technology work for our stakeholders—from the lowly poor farming households to renowned research and development institutions.

Again, my congratulations and *Mabuhay*!

LUIS REY I. VELASCO
Chancellor

Foreword

Only a year away from celebrating its centenary, the University of the Philippines Los Baños (UPLB) takes pride in coming out with the revised version of the ***UPLB Research Manual***. The first manual was published in 2002, as part of UPLB's commitment to ensure efficient conduct of research and judicious use of university resources.

In addressing the research imperatives of the new century, UPLB, through the Office of the Vice Chancellor for Research and Extension (OVCRE) believes that there is a need to revise the manual to make it more relevant and available to the faculty and researchers, updated facts and information on procedures and guidelines in conducting research and extension activities.

The 2008 version of the manual contains additional information not found in the first manual e.g. list of available analytical service laboratories; list of completed research projects since 2004; list of funding agencies; schedules of deadlines for submission of awards nominations given by institutions and updated directory of specialists and experts.

As UPLB continues to strive for academic excellence and relevance in three equally significant functions of instruction, research and extension, it expands the realm of present knowledge by sharing it meaningfully including its beneficial use, as it applies to public service and administration. This manual, therefore, is its way of providing this need of information to its faculty and staff.

ENRICO P. SUPANGCO
Vice-Chancellor for Research and Extension

INTRODUCTION

Research at the University of the Philippines Los Baños (UPLB) began with the founding of the UP College of Agriculture (UPCA) in 1909.

The UPCA was at the forefront of agricultural research, experimenting and generating knowledge on tropical agriculture when at that time, it was acknowledged there was virtually none. The College was well-known in scientific and academic communities even before World War II, when UPCA had already developed numerous and improved crops and livestock such as animal breeds -- the Berkjala swine and the Los Baños Cantonese chicken.

UPLB's Three-fold Function

On November 20, 1972, through Presidential Decree No. 58, the UP System was created, with UPLB constituted as an autonomous unit. Though instruction was considered as UPLB's major function, research was also recognized as an equally important function.

Extension, on the other hand, was viewed as a function that showed UPLB's relevance in the development of the countryside. Knowledge gained through research, imparting it through instruction, and applying it as public service are all efforts, directed towards the development of the whole man.

In the late 1950s, then UPCA Dean Dr. Dioscoro L. Umali "brought down the faculty from their ivory towers," encouraged them to apply their expertise on actual agricultural problems, and to make the countryside their laboratory. Dr. Umali's challenge resulted to the creation of an office tasked to monitor training and other extension activities at UPCA. The move institutionalized and integrated the tripartite function of instruction, research, and extension in the university. It challenged the university to serve the people who saw the "UPCA's golden age of extension" during Dr. Umali's administration.

UPLB's RDE Vision and Mission

As the first autonomous campus and constituent university of the UP System, UPLB has been drawing historical strength from agriculture, and now, with biotechnology and the environment. Building on this strength, UPLB evolves into a university with an institutional identity from its distinctive origin -- to develop opportunities, and to address the constraints in realizing these goals.

UPLB is considered as the Philippines premier learning institution in agriculture, biotechnology and the environment. UPLB has also become an emerging center of excellence in engineering, information and communication technology, and in the natural and social sciences, and is expected to play a vital and active role in charting a path towards overall national transformation. This transformation should provide Filipinos adequate access to food and social amenities, minimize absolute poverty, and empower communities to shape their future.

The university's vision and mission is to aim for "distinctive excellence" - a term coined during UPLB's strategic planning workshop in 2007. "Distinctive excellence" refers to UPLB's niche that sets its apart from other academic institutions in the country; the collective expression of a culture of instruction, research and community service on the principles of science and social responsibility. It is the standard of greatness that UPLB establishes in the academic and research arena that others look up to for guidance and inspiration.

Now, towards the 20th century, UPLB is pursuing a vision that will nurture itself as a national center of excellence in the environment, biotechnology, and agricultural sciences; and a center for language and culture in the Southern Tagalog Region. UPLB's current activities are now linked to the country's vision to achieve a just, equitable and prosperous society through strengthened agricultural base and to grow confidently into industry and services.

University Research, Extension and Development Thrusts

Research and extension, are two of the triple, major functions of UPLB. The University sees to it that its knowledge for teaching and for development are supported by local and/or national research findings from the experience of the institution through research and extension and immersion into the problems of the communities. The stimulating effect of research provides the backstop and support to the instruction and extension functions. As a center of excellence in higher learning, UPLB"s contribution to the pursuit of relevant knowledge is critical.

Since 1909, until the university became autonomous in 1972, readjustments were made in its research thrusts without sacrificing its orientation for instruction. Its unique mission towards agricultural and rural development in the 70s heightened to include more specifically the development of the rural poor in the 80s.

Criteria have been set forth in establishing research and extension priorities in the development, processing, and funding of research and extension proposals. UPLB consulted with its various units to identify research and extension thrusts.

In the 10th University Research and Extension Council (UREC) General Assembly held on February 19, 1996, the following thrusts (***Table 1***) were approved and pursued:

Table 1. University research and extension thrusts approved in 1996 by the UREC.

Research	Extension
1. Sustainable productivity and efficient resource use premised on ecological balance; 2. Optimal rural and urban development; 3. Appropriate technologies for processing industries; 4. Basic research and cutting-edge technologies; and 5. Indigenous knowledge systems and Philippine culture.	1. Develop or test extension policies, models and approaches towards wider application; 2. Respond to development issues, problems, changing needs and demands of its clientele; 3. Disseminate and apply results of research and other relevant information and social technologies towards addressing issues and problems from the environment; and 4. Contribute towards improving the quality of life of the people through improvement of agricultural production, better nutrition and health, and moral upliftment.

In 1999, UPLB's mandate was reassessed from its traditional role in providing national leadership in instruction, research and extension in agriculture, forestry and related fields to meeting the growing needs for quality education in the arts and sciences, humanities and engineering.

The university's mandate was broadened to include far-reaching policy and institutional reforms to address the problems of industry and agriculture; national development framework premised on accelerated economic growth; the Arroyo administration's social contract with the poor; the Agriculture and Fisheries Modernization Act (AFMA) premised on dynamic, smallholder agriculture; a need to revitalize education; call for more investments in productivity-enhancing research and development; and the pressing need to enhance institutional capability at all levels. Further, being the seat of several centers of excellence, UPLB shares it institutional resources with the country's state colleges and universities (SUCs).

With the broadened UPLB mandate, the strategic vision, plans of action and priority research areas were set as follows:

1. Molecular biology and biotechnology
2. Biodiversity and genetic resource management
3. Natural resource management
4. Information and communication technology
5. Knowledge systems and development and policy studies, and
6. Sustainable production systems

In 2005, as part of his vision for UPLB, Chancellor Luis Rey I. Velasco, the university oriented its programs to three priority areas – food and agriculture, environment, and

biotechnology, where the university will focus and build its academic research programs around niches and themes (***Table 2***) that will respond to and anticipate major national needs:

Table 2. UPLB niches and themes formulated in 2005

Niches	Themes
1. Agricultural Modernization and Competitiveness 2. Equitable and Sustainable Rural Development 3. Managing Tropical Ecosystems 4. Urban-Rural Transition 5. Research and Manpower Support to CALABARZON 6. Continuing Education via Open and Distance Learning	1. Alternative Energy RDE 2. Natural Products RDE 3. Bio-oganics RDE 4. Climate Change

RESEARCH AS DEFINED AT UPLB

Research is a studious inquiry or examination, an investigation or experimentation aimed at the discovery and interpretation of facts, revision of accepted theories or laws in the light of new facts, or practical application of such theories or laws.

In UPLB, the classification and definition of research reflect the diversity of research activities being conducted in the different units of the university. These vary from the very basic laboratory type of researches to the high-end applied researches. The following are the definitions of the most common terms used in UPLB research and its related activities.

Classification of Research at UPLB

1. By nature

Basic Research – any systematic and creative work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any particular or specific application or use in view.

Applied Research – any original investigation to acquire new knowledge. It is, however, directed primarily towards a specific practical aim or objective.

In order to define research and development priorities at the national, regional, and provincial levels, the Department of Agriculture - Bureau of Agricultural Research (DA-BAR) further classified basic and applied research into:

Upstream research – any research project of basic strategic type implemented by national centers of excellence such as UPLB.

Midstream research – any systematic work, drawing on existing knowledge gained from research and/or practical experience that is directed to producing new materials, products and devices, to installing new processes, systems and services, and to improving substantially those already produced or installed; these are technology verification and technology adaptation type of research implemented by regional SCUs.

Downstream research – these are applied research projects with significant output for dissemination and technology demonstration at the provincial level.

2. By research focus

Commodity – refers to research undertakings that focus on product development of specific commodities like rice and other agricultural products or certain research fields like culture, breeding, and /or feeding of fishery resources.

Non-commodity – refers to research undertakings that focus on socioeconomic aspects or interdisciplinary researches with policy implications to agriculture. Examples: Integrated Pest Management (IPM); mechanization; biodiversity; biotechnology; crop protection; and forest biology.

3. By stage of technology development

Technology generation research – focuses on a single factor affecting the productivity of a single commodity. Example: Studies on varietal resistance to rice blast.

Technology adaptation research – evaluates the performance stability and replicability of technologies over space and time, conducted either in the research station or farmers' fields and done under the supervision and management of the researcher. Example: Testing of promising varieties of upland rice tolerant to rice blast.

Technology verification research – compares performance of the improved technologies to the existing farmers' practice under existing farm environment. This research is conducted in farmers' own farms under the supervision and assistance of researchers. Example: Testing of recommended upland varieties in actual farm condition.

4. By location

On-station research – trials conducted in research stations where facilities for experimentation are excellent and accessibility to researchers is favorable. Usually, only the researchers are involved in formulating the research objectives and methodologies.

On-farm research – trials conducted in farmers' fields with the farmers involved in formulating improved technologies to be tried or tested.

a) Researcher-managed – on-farm trials conducted on farmers' fields managed by researchers who evaluate in detail the specific management components to be assigned to the cropping systems.

b) Farmer-managed – on-farm experiments managed by farmers to find out how they respond to suggested improvements.

5. Scope of activity

Research program – a group of interrelated or complementing projects usually requiring an interdisciplinary or multidisciplinary approach to meet established goal(s) within a specific time frame. It is composed of at least two projects.

Research project – a set of interrelated studies/activities or a component of a program with predetermined objective(s) to be accomplished within a specific time frame. It is composed of at least two studies or activities.

Research study – A basic unit in the investigation of a specific problem identified under a research project.

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UNIVERSITY RDE ADMINISTRATION AND ORGANIZATION

Before UPCA became UPLB, the university was already performing a trilogy of functions: instruction, research and extension. As the highest academic body in UPLB, the University Council formulates instruction policies. Until 1984, there was no parallel body for consultation and policy-making in research and extension.

The University Research and Extension Council (UREC)

The UREC was created through Executive Order No. 5 series of 1984 to provide direction for research at UPLB and to coordinate the university's research programs and activities. The UREC operates at the university level as a policy-making body and as an advisory to the UPLB Chancellor. Specifically, the UREC:

- Determines or recommends whenever appropriate, policies, standards, and rules relating to the planning, implementation, and evaluation of university and extension programs;
- Periodically reviews university research and extension thrusts/ directions;
- Reviews and recommends policies concerning research and extension personnel;
- Serves as channel for communication among the different units of the university on major developments in research and extension;
- Serves as a forum for discussion of issues; and
- Advises the university administration on matters requiring decisions or action.

UREC members

Automatic UREC members are the following:

1. Personnel with academic designation of University Researcher I (SG 16) or higher and University Extension Specialist I or higher (equivalent to Instructor 4 or higher); and
2. Faculty members with rank of at least Assistant Professor 1 serving as leaders of research and extension programs officially approved by UPLB.

By virtue of their administrative positions, the following are ex-officio members:

1. The UPLB Chancellor as ex-officio chair;
2. The Vice-Chancellor for Research and Extension as UREC secretary;
3. The vice-chancellors for instruction, planning and development, administration, and community affairs;
4. Deans of academic units;
5. Heads of research and extension units; and
6. College/ unit research and/ or extension coordinators.

Standing and ad-hoc committees

The following are the different standing and ad-hoc committees of the UREC and their functions:

UREC Executive Committee

1. With the Chancellor as Chair, the committee is composed of all deans, vice-chancellors, chairs of standing committees, and seven (7) members elected at-large who shall serve a term of two (2) years without reelection.

2. It convenes to decide urgent matters for the council when it is impractical to wait for a meeting of the entire council. Such decisions shall be reported to the council at its next meeting.

3. It reviews the items previously acted upon by other UREC committees and determines the agenda of UREC meetings.

Committee on Research Direction and Utilization

Reviews policy proposals concerning identification of research thrusts and priorities; piloting and demonstration of university-developed technologies; publications; information systems; and training and other extension activities.

Committee on Research and Extension Administration

Reviews and recommends proposals for consideration of the council on matters pertaining to the institution and improvement of fiscal and business procedures; establishment, support, and maintenance of laboratories and other facilities; and the evaluation and monitoring of activities and other administrative matters.

Committee on Personnel Welfare

Reviews items addressed to the UREC, particularly on matters relating to personnel welfare and discipline such as compensation, workload, fringe benefits, working conditions, training and scholarships.

Other committees

As it deems appropriate, the UREC, by majority vote, may form other standing committees. The UREC chair may form ad-hoc to study important issues not covered by any of the standing committees.

Specially-formed Committees/ Groups

Committees on Niches and Themes

Under the over-all coordination and support of the Office of the Vice-Chancellor for Research and Extension (OVCRE), the Committees on Niches and Themes have been formed in 2005 to help the University prime the process of reorienting programs to agriculture, environment and biotechnology.

These groups provide the leadership in contacting and bringing together interested faculty and staff from various academic and research units who are currently involved or wish to be involved in formulating and carrying out specific plans, projects, and activities related to the assigned theme.

The committees can also form working groups to formulate and recommend specific proposals for submission to the OVCRE and endorsement by the University to potential funding agencies and institutions.

Commodity-based Research, Development and Extension (RDE) Teams

Due to the need for RDE groups which will coordinate the preparation, packaging, review and submission of commodity-based proposals to the Department of Agriculture (DA), DA-Bureau of Agricultural Research (DA-BAR), Department of Science and Technology (DOST), DOST-Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (DOST-PCARRD) and other commodity-focused funding agencies, commodity-based RDE Teams have been created by the administration in 2008.

The Commodity RDE Teams ensure a more focused yet multi-disciplinary approach in the development of RDE projects. The teams formulate and package university-wide, multi-disciplinary proposals for submission to funding agencies; assist the OVCRE in the review of special proposals; and craft long-term strategies for priority commodities identified and adopted by the funding agencies.

The Commodity RDE teams include Rice, Corn, Coconut, Abaca, Rootcrops, Mango, Banana, Pili, Vegetables, Ornamentals, Legumes, Swine, Poultry, Dairy, and Ruminants.

Coordinators for Research and Extension

To promote university-wide dissemination and coordination in RDE matters among researchers and extensionists in the various UPLB units, coordinators for research and extension were identified by their respective college, institutes and departmental heads.

Appointed by their supervisors on a yearly basis, the coordinators, assist their institutional heads in implementing research and extension-related activities. These coordinators are periodically met by the Vice-Chancellor for Research and Extension to discuss pressing issues or for information dissemination.

The Office of the Vice-Chancellor for Research and Extension

The OVCRE is currently mandated as the UPLB unit in charge with the university's research and extension programs. Created in October 23, 1997 during the Board of Regents' (BOR) 1113th meeting, the OVCRE is tasked to:

1. Assist the chancellor in coordinating the R and E programs of the university;
2. Oversee the development and implementation of R and E programs of the university;
3. Serve as secretary of the UREC;
4. Initiate innovative techniques for efficient planning, implementation, performance evaluation, and reporting of R and E activities in the university;
5. Effect increased output of technical and popular publications and implement an extensive and efficient distribution system;
6. Coordinate staff development of personnel in research, extension and professional staff categories; and
7. Assist in resource generation and in the establishment of inter-institutional linkages in R and E.

OVCRE-Supervised Units and Programs

The office supervises some of the most important RDE centers in the university. The OVCRE has an administrative control and supervision over these units:

National Institute of Molecular Biology and Biotechnology (BIOTECH)

The National Institute of Molecular Biology and Biotechnology (BIOTECH), formerly known as the National Institutes of Biotechnology and Applied Microbiology, was established on December 20, 1979 by the UP Board of Regents as a research and development institution based at UP Los Baños.

BIOTECH serves as the national research and development organization specializing in agricultural, environmental, food and feeds, and health biotechnology. The institute capitalizes on the use of the country's diverse collection of microorganisms, rich natural resources and agro-industrial waste and by-products to develop and advance alternative technologies and products towards improved agro-industrial productivity.

The institute develops globally-competitive and environment-friendly biotechnology-based products, processes and services from diverse resources in order to fulfill its mission and attain the vision it has formulated.

UPLB Center for Technology Transfer and Entrepreneurship

The Center for Technology Transfer and Entrepreneurship (CTTE) was established by virtue of the BOR approval on July 27, 2007. The CTTE integrates programs, policies and activities towards the protection, promotion and successful disposition of the university's technologies through licensing and technology business incubation to both the private and public sectors.

The CTTE is located at the 22-hectare Science and Technology Park (STP) and is composed of three existing units: the APEC Center for Technology Exchange and Training for Small and Medium Enterprises (ACTETSME), the Intellectual Property Rights Office (IPRO) and the UPLB-STP.

The CTTE, through the ACTETSME, provides technical support for small and medium-scale enterprises in the country and the Asia-Pacific Region. Through the UPLB-STP, the CTTE makes laboratories, pilot plants, greenhouses, storage, and office spaces available for technology and business incubators and start-ups. The IPRO assists faculty members and researchers in the protection and valuation of UPLB technologies.

UPLB Office for Initiatives in Culture and the Arts

The present thrust of the UP System to transform the constituent universities into major cultural centers in their respective regions has led the UPLB administration to create the UPLB Office for Initiatives in Culture and the Arts (OICA).

Approved by the UP Board of Regents in its 1223rd meeting on August 22, 2007, the OICA aims to make the University a cultural center in the Southern Tagalog and Bicol regions.

The OICA systematizes UPLB's art and culture programs and develops medium- and long-term plans for the campus. It also integrates and enhances the functions of the Southern Tagalog Studies Program (STSP) and the Bicol Studies Program (BSP).

Aside from serving as UPLB's policymaking body on developing and managing culture and arts, OICA coordinates cultural performances and artists' exhibits, conserves and promotes Philippine historical and cultural heritage through scholarly study and documentation of traditions, arts, crafts, and other cultural resources. It also serves as the conduit for the exchange of creative works between UPLB staff and students and people in neighboring provinces.

Ugnayan ng Pahinungód/ Oblation Corps

The Ugnayan ng Pahinungod program of UPLB is the venue for constituents and alumni to share time, energy and capabilities with underserved communities, marginalized groups and underprivileged individuals as well as to their fellow public servants. The program has been conducting different programs wherein UP constituents and alumni took part in serving our fellow Filipinos.

Pahinungod conducts seven (7) development programs: Gurong Pahinungod Program (GPP), NSTP–LTS/CWTS, Community –Based Development Program/Project (CBP), Affirmative Action Program (AAP), Youth and Women Development Program (YWDP), Technical Assistance Program (TAP) and the Volunteer Development Program (VDP).

Museum of Natural History

The UP Board of Regents in its 877th meeting established the UPLB Museum of Natural History (MNH). As a natural history museum, the MNH is mandated to pursue several objectives, the most important of which are: to document and serve as repository for the flora and fauna of Mount Makiling and eventually of the entire Philippine biota; and to undertake scientific explorations and systematic researches on Philippine plants and animals as needed

in the basic disciplines of biology (e.g. systematics, evolution, ecology, biogeography), natural resource management and applied studies in agriculture, forestry and medicine.

The museum also pursues information dissemination activities on the basic aspects of biology and education on the preservation of the country's natural heritage. The museum serves as training institution for future naturalists and taxonomists/ systematists.

UPLB Gender Program for Rural Development

The University of the Philippines Los Baños Gender Program for Rural Development (UPLB-GPRD) is an inter- and multi-disciplinary, university-wide unit. It is UPLB's initiative to a national and global commitment towards the integration of gender perspective in development efforts.

The UPLB-GPRD aims to create and enhance awareness of gender issues in the university as well as in society; work out for the integration of gender concerns in the University's academic, curricular, research, and extension programs; stimulate a critical assessment of differential impacts of development initiatives on men and women; serve as documentation and information center on gender issues related to rural development, technology and environment resource management; and provide a multi- and inter-disciplinary program within UPLB for gender-related activities in research, extension, and policy and advocacy.

UPLB'S RDE PROFILE

UPLB takes pride in generating knowledge and products for use in the academe and the industry. Through various research investments, UPLB and its partner agencies have been producing intellectual outputs such as journal articles, books, and scientific papers. These significant contributions of the staff are given recognition through awards or grants.

This section provides general information on how UPLB uses research funds in conducting research and generating knowledge products.

Resources for Research

Resources are essential in the conduct and success of a research undertaking: manpower, facilities, financing, and the conducive environment. Linkages and partnerships with various public and private organizations are essential in the generation of support for research.

Financial Resources

Financial resources are generated through grants, donations, bilateral agreements, and collaborations with government agencies, local and foreign funding institutions, and other research agencies and councils.

There are two major classifications of fund sources in support of research at UPLB. **Internal funds** which come from the UP System, go direct to the research units or managed through the OVCRE. **External funds**, on the other hand, come from government agencies such as the Department of Agriculture, Department of Science and Technology, as well as foreign agencies, private organizations, and industry-partners.

Internal Funding

UPLB receives a sizable amount of funds from the government that is allocated for research and extension projects. From 2005 to 2007, UPLB received a total of ₱576 M (***Figure 1***) or an annual average of ₱192 M in research funds. This covers payments for personnel services and maintenance and other operational expenses.

A big percentage of the the internal budget is given directly to the research units for core-funded research projects. For 2007, 242 registered core-funded projects have been monitored by the university. The remaining amount of the internal budget is coursed through the OVCRE to

fund basic research projects under the UPLB Basic Research Program.

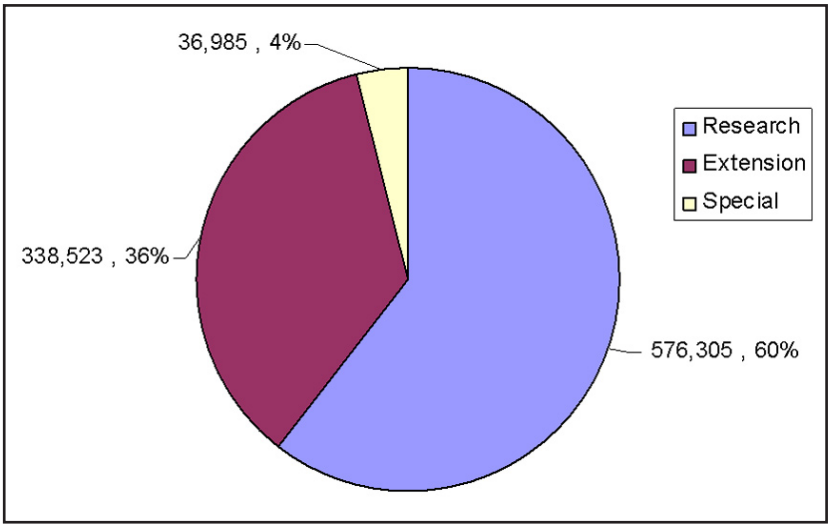

Figure 1. Relative proportion of total RDE-related funds (in '000) obligated to UPLB, 2005-2007

Also, nearly ₱113 M have been received by the university during the same period to finance extension-related services. Furthermore, UPLB's income-generating activities have been able to provide an additional ₱116 M to augment government funds for research and extension-related activities during the same three-year period.

External Funding

Research at UPLB is also supported by funds coming from external sources. Research projects not normally supported by internal funds are covered by this type of funding which may require research in areas specified by these funding agencies.

From 2004 to 2007, a total amount of ₱176 M or an annual average of ₱44 M was received by UPLB as external funds from government funding agencies, international organizations and some local/ private institutions (***Figure 2***).

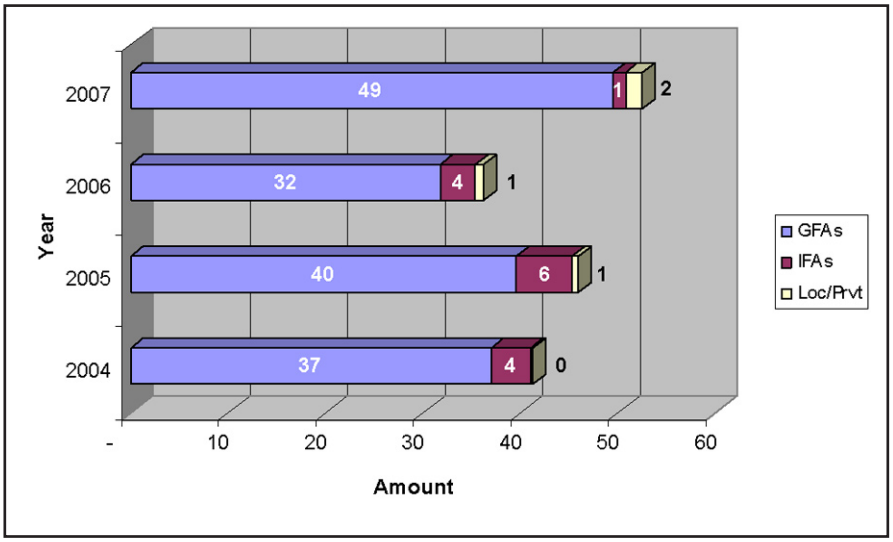

Figure 2. Research funds generated by UPLB from different funding sources from 2004 - 2007, in million pesos

Most of funds which are yearly generated come from the DOST and its councils, and the DA and its bureaus. Of the nearly ₱53 M research funds in 2007, almost 90% came from these two agencies (***Figure 3***).

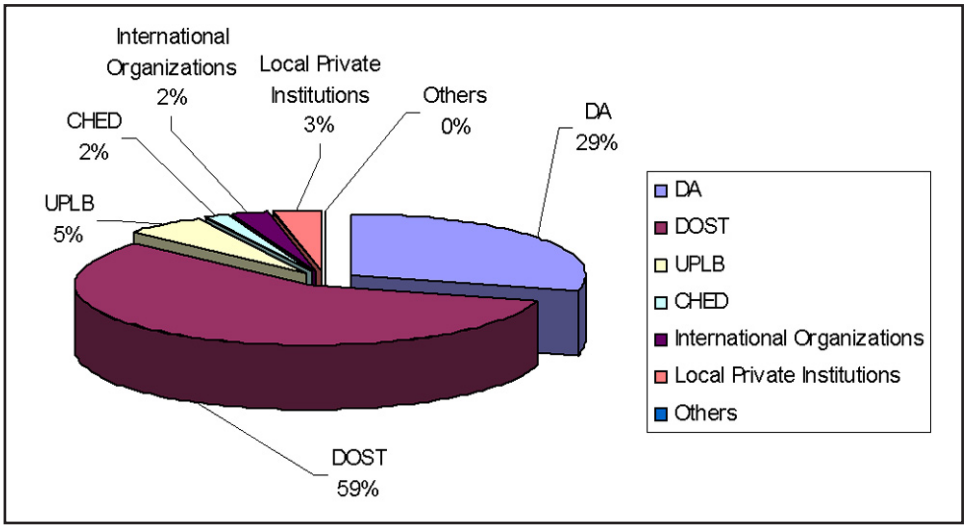

Figure 3. Distribution of research funds generated by UPLB in 2007, by source of fund

Aside from this, UPLB through the UPLB Foundation, Inc. (UPFI) has been recipient of about ₱396 M in project funds from 2005 to 2007, substantially increasing resources for research and extension-related activities (***Figure 4***).

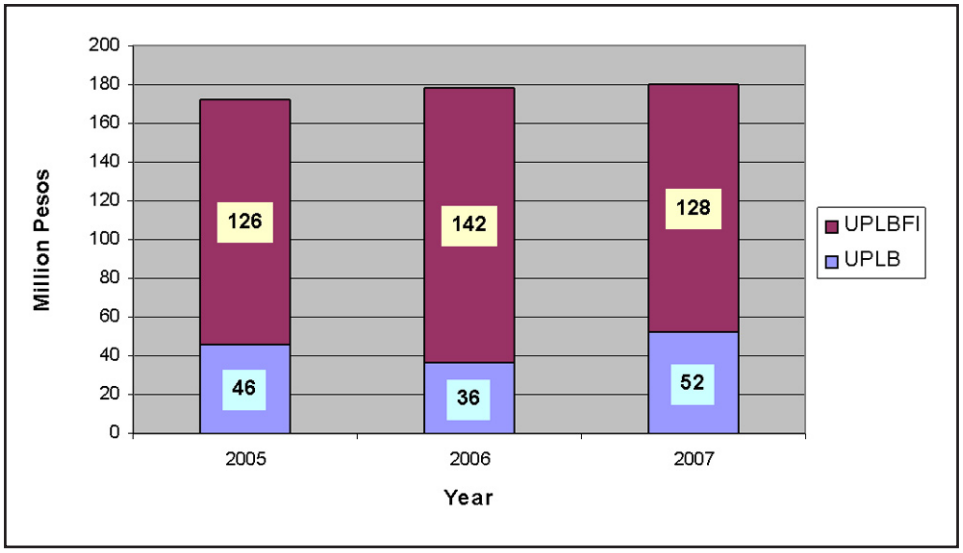

Figure 4. Total funds yearly generated by UPLB and UPLBFI from 2005 - 2007, in million pesos

For 2007, UPLB and the foundation were able to generate ₱180 M from external sources to augment the ₱192 M coming from the university's internal budget (***Figure 5***).

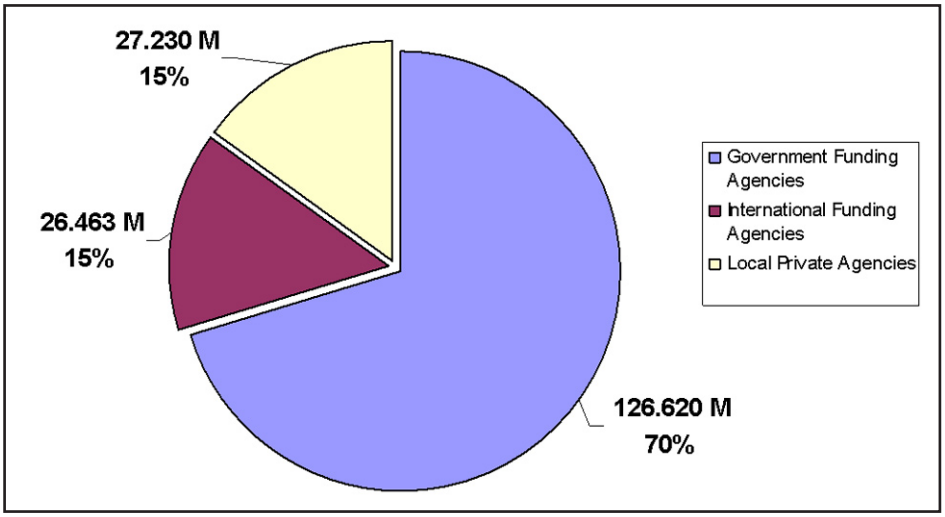

Figure 5. Distribution of combined funds administered by UPLB and UPFI in 2007, by funding source

Funds coming from international agencies as well as local private entities can be easily accommodated through the foundation.

Through the UPLBFI's financial administration, funds coming from international funding agencies and local/private organizations can be easily received by the university. In 2007, the combined generated funds of UPLB and its foundation was 30% of the total. UPLB was also able to generate ₱52 M from 2005 – 2007 for special local projects such as the Agricultural Modernization and Development Program (AMDP) based at the College of Engineering and Agro-industrial Technology (CEAT) and the Regional Training Programme for Food and Nutrition Planning (RTP-FNP) based at the College of Human Ecology (CHE).

Manpower Resources

UPLB draws its research strength mainly from the quality and quantity of its research staff and faculty.

For 2007, out of the university's total faculty of 794, most of which are MS and PhD graduates, 136 or approximately 17% have conducted research and extension projects duly registered at the OVCRE.

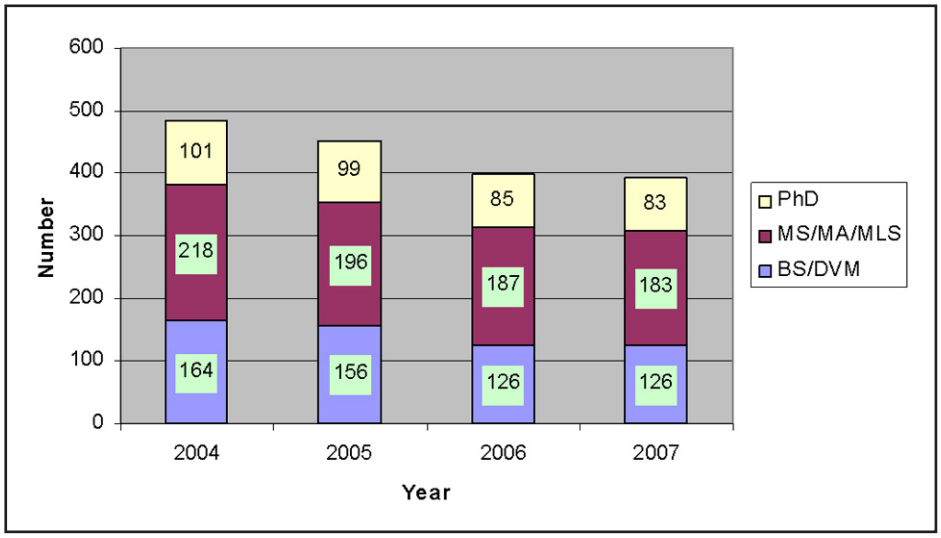

Figure 6. Yearly total number of UPLB REPS from 2004 - 2005, by educational attainment

Aside from this, the number of regular employees considered as Research, Extension and Professional Staff (REPS) in 2007 totaled 392 (***Figure 6***).

There were 126 REPS with BS/AB/DVM degrees, 183 with MS/MM/MLS degrees, and 83 with Ph.D. Of the total number of REPS, 292 were in permanent status, 74 were on a temporary basis and 26 with casual-monthly appointments.

UPLB remains to be the premier educational institution in agriculture, forestry and allied fields in the country. A list of UPLB researchers and their respective fields of specialization is shown in ***Appendix A***.

Facilities, Equipment and Library Resources

Research at UPLB is enhanced and facilitated by the support of its major research and extension facilities and equipment. UPLB has a total land area of 14,665 hectares. Around 533 hectares serve as experimental sites, field laboratories and stations. Of this area, the UPLB Science and Technology Park occupies about 156 hectares.

The Makiling Forest Reserve (4,224 ha) and the three land grants, namely, La Carlota in the province of Negros Occidental, Siniloan (5,719 ha) and Paete (3,336) in the province of Laguna comprise 13,567 ha or 92.52% of the total land area. These vast tracts of land rich in flora and fauna are used as experimental areas for research.

Housed in the various research units in the UPLB campus are analytical laboratories, specialized laboratories for tissue culture, plant and animal biotechnology, nurseries, and greenhouses for plant breeding and plant collection. Other research facilities include a meteorological station, agricultural machinery development and testing, geographical information system and remote sensing laboratory, broadcasting facilities for AM and FM, pets and animal clinics, experimental animal farms, and other complementary facilities used in the conduct of research.

Access to scientific information from local and foreign sources through the UPLB's Main Library and satellite reading libraries located at the unit levels greatly contributes to the development of research and extension proposals and the analysis of the generated data.

As of December 2007, the University Library collection totaled to 346,061 volumes. Of this figure, 195,282 volumes are housed at the Main Library and the rest are housed in the different unit/college libraries. The library subscribes to 140 foreign journals, 100 titles of which are available both in print and online via their respective access provider (***Table 3***) and 39 local journals.

Table 3. Online serial titles subscribed to by the UPLB Main Library, 2008

Access Provider	Number of Journals
www.swetswise.com	72
www.ingentaconnect.com	8
http://www.atypon-link.com	3
http://ps.fass.org/	1
www.metapress.com	2
www.genome.org	1
http://jchemed.chem.wisc.edu/	1
http://esapubs.org/esapubs/journals/ecology.htm	1
http://www.journals.uchicago.edu/	4
http://portal.acm.org/portal.cfm	6

Currently, the University Library Serial collection is made up of 1, 215 titles which includes foreign and local titles. Library collection includes books, pamphlets, theses, journals, etc.

Table 4. CD-ROM databases available at the University Library.

Name of Database	Period Covered
AGRICOLA (Agricultural Online Access) *http://agricola.nal.usda.gov/*	1984 – March 2006
AGRIS (International Information System for the Agricultural Sciences and Technology) *http://www.fao.org/agris/*	1975 – September 2007
AGRIS Fisheries	1975 – 1993
BEAST-CD (Animal Production Database)	1973 – August 1995
BIOTECH	1983 – August 2004
ERIC (Education Resources Information Center) *http://www.eric.ed.gov*	1966 – June 2004
FHN (Food and Human Nutrition)	1975 – December 2005
FSTA (Food Science and Technology Abstracts)	1969 – September 1996
SOCIOFILE	1974 – December 2001
SOCIOLOGICAL ABSTRACTS	1963 – April 2006
TEEAL (The Essential Electronic Agricultural Library)	1993 – 2005
TROPAG (Topical Agriculture)	1975 – December 2005
VET-CD (Veterinary Science Database)	1973 – November 2005
WASTA	March 1993 – March 1998

Available resources aside from printed forms include bibliographic databases (***Table 4***), etc. in CD-ROM on agriculture and related fields (i.e. AGRIS, AGRICOLA, TROPAG, etc.) and in full text using The Essential Electronic Agricultural Library (TEEAL) CDROM databases at the Computer Services Section. Internet searching includes access to e-journals, Philippine e-Lib, World Bank Catalog and other searchable useful websites.

The library also houses depository copies received from the Food and Agriculture Organization of the United Nations (FAO), the United Nations University (UNU), World Bank (WB) and UN-HABITAT (United Nations Human Settlement Programme). Complimentary copies of the publications of various government agencies in the country and from the international agricultural centers, such as the International Rice Research Institute (IRRI), Southeast Asian Regional Center for Graduate Studies in Agriculture (SEARCA), Philippine Rice Research Institute (PhilRice), PCARRD, etc., are also available.

A new Library system, the Integrated Library System (iLib), available at ***http://ilib.upd.edu.ph/*** was launched and implemented by the UP System last July 2007. At present, iLib is used only for Online Public Access Catalog (OPAC), which is accessible only within the Library premises.

UPLB's units are networked by an educational-level (speed and bandwidth) internet connectivity. As of January 2008, the full capacity internet connection of UPLB is 8mbps, making the browsing experience of UPLB users significantly faster. With interconnectivity, UPLB has been able to deploy Voice-over-Internet Protocol (VoIP) telephone services to 54 units with 86 VOIP phone units.

Most of the research facilities and equipment at UPLB have been generated through collaborative research undertakings. These facilities and equipment have been donated to UPLB upon completion of research projects.

Congressional allocations, institutional development grants of several government departments such as the DA, and loans were also sources of funds particularly for infrastructure.

Important Research and Training Centers, Institutes and Units

UPLB has a number of important RDE units that implement the bulk of R and D projects in the university. Most of these units have been created and built by law and operationalized and maintained by UPLB:

1. National Institute of Molecular Biology and Biotechnology
2. National Crop Protection Center
3. National Plant Genetic Resources Laboratory
4. Institute of Plant Breeding
5. Farming Systems and Soil Resources Institute
6. Post-harvest Horticulture Training and Research Center
7. Dairy Training and Research Institute
8. Institute of Animal Science
9. Institute of Food Science and Technology
10. La Granja Research and Training Station
11. UPLB Limnological Station
12. Makiling Center for Mountain Ecosystems
13. Training Center for Tropical Resources and Ecosystems Sustainability
14. Forest Development Center
15. Agricultural Machinery Testing and Evaluation Center
16. Agricultural Modernization and Development Program

In 2006, the Philippine government's Commission on Higher Education also recognized some of the university's units as Centers of Excellence / Centers of Development (***Table 5***):

Table 5. UPLB units recognized by CHED as National Centers, 2006 - 2007

College	Unit	Center of Excellence	Center of Development
College of Agriculture		Agriculture	
College of Arts and Sciences	Institute of Biological Sciences	Biology	
	Institute of Chemistry	Chemistry	
	Institute of Mathematical Sciences and Physics	Mathematics	Physics
	Institute of Computer Sciences	Information Technology	
	Institute of Statistics		Statistics
College of Development Communication		Communication Arts	
College of Engineering and Agro-industrial Technology	Institute of Agricultural Engineering	Agricultural Engineering	
College of Forestry and Natural Resources		Forestry	
College of Veterinary Medicine		Veterinary Medicine	

Available Service Laboratories

UPLB operates several service laboratories vital in the conduct of research. Most of these laboratories are supervised by the main research centers that can be used by the other research programs. Some special research programs also provide analytical services for minimal fees. The services can be availed of by faculty, researchers, students, and even private individuals or groups.

Appendix B lists some of the main laboratories which provide analytical services.

Outputs of UPLB Research

The university's research manpower regularly comes out with proposals, most of which are funded either internally or externally, and implemented until completion. Results of these researches are in the forms of knowledge products such as technical information in various forms. Important contributions by UPLB staff to the body of knowledge and to society do not go unnoticed as they have been recognized by not only by the university but other organizations as well.

Productivity in Research

Research Proposals Received and Endorsed. There were 171 and 135 research proposals received at the OVCRE in 2006 and 2007, respectively. Of which, 124 in 2006 and and 105 proposals in 2007, respectively, were endorsed to various funding agencies for possible support.

Table 6. Number of proposals received and endorsed in 2006 and 2007.

Year	Received	Endorsed
2007	135	105
2006	171	124

Completed and Ongoing Projects. Averages of 99.8 and 64.4 ongoing and completed projects, respectively were conducted in UPLB for the period 2003-2007. The most number (120) of ongoing projects was conducted in 2006 while the least number (79) of ongoing projects was in 2004. A list of completed projects since 2004 is available at ***Appendix C***.

Table 7. Number of projects monitored from 2003 to 2007.

Year	Ongoing	Completed
2007	83	60
2006	120	38
2005	102	55
2004	79	92
2003	115	77
Average	99.8	64.4

Projects Evaluated. An average of 54.8 projects underwent evaluation for the 5-year period, with the most number of projects evaluated in 2003 (98) and least in 2007 (35).

Table 8. Number of evaluated proposals from 2003 to 2007.

Year	No. of Projects
2007	35
2006	48
2005	48
2004	45
2003	98
Average	54.8

Knowledge Products Generated

The UPLB staff had put their research outputs into some knowledge products in published forms while some were papers/posters presented in various conferences here and abroad. For the four-year period, 2004-2007, the most number of publication outputs as well as the number of papers presented in local and international conferences were recorded by the OVCRE in 2007.

Table 9. Knowledge products generated by UPLB staff, 2004-2007

Articles Published/ Papers Presented	2004	2005	2006	2007
ISI-Indexed journals articles (endorsed for IPA)	46	86	100	98
International Refereed Journals	1	8	1	56
Local Refereed Journal	16	25	12	85
Book, Book Chapter/ Section	14	18	16	28
Papers Presented in International Conferences	21	71	56	58
Papers Presented in Local Conferences	10	91	58	150

The journals articles, book/ book chapter/sections which are listed in the Institute for Scientific Information (ISI), however, were slightly higher in 2006 than in 2007. Also, the combined papers presented in international and local conferences; and the combined articles published in local and international refereed journals were higher in 2007 than in 2006.

Recognition Received by UPLB

Awards for research and extension outputs come in the form of plaques of recognition, trophies, research grants, as well as cash prizes. The national government agencies such as the Commission on Higher Education (CHED), National Academy of Science and Technology (NAST), DA-BAR, DOST and its councils, and other professional and international organizations, UPLB as well as provincial and regional government agencies also give other R and E related awards.

Among the distinguished awards recently received by the UPLB faculty and REPS included the Outstanding Agricultural Scientist, a DA-conferred Gawad Saka Award; Presidential Gawad Lingkod Bayan Award by the Civil Service Commission; Outstanding Young Scientist Award in the field of genetics; Zayed International Prize for the Environment for Scientific and Technological Achievement in Environment.

In 2007, a team from the UPLB College of Forestry and Natural Resources was part of the Intergovernmental Panel on Climate Change (IPCC) which was recipient of the 2007 Nobel Peace Prize Award given by the Norwegian Nobel Committee in Oslo, Norway .

For the 4-year period (2004-2007), the UPLB faculty and staff received an average of 22, 67 and 4 provincial/regional, national and international awards, respectively (***Table 10***).

Table 10. Research and extension related awards received by UPLB staff, 2004-2007.

Year	Provincial/ Regional	National	International
2004	19	73	-
2005	22	67	4
2006	21	67	5
2007	27	63	3
Total	89	270	12

OPPORTUNITIES FOR RESEARCH

Faculty and REPS can be involved in any form of research activity and can avail of themselves the different administering programs under the auspices of the university. Depending on the researcher's qualification and status, he or she can pursue research grants administered by the university or by external funding agencies:

UPLB Core Research Fund

The core research funds are directly allotted to the unit by the central administration as maintenance, operating and other expenses (MOOE). The research unit manages these funds and determines research prioritization and implements its own unit-based program.

UPLB Basic Research Program

Administered by the OVCRE, this program provides financial assistance for basic studies in the natural sciences and mathematics, social sciences and the humanities to support UPLB's teaching function. Priority is given to proponents who have no other research study/project and/or have recently received their MS or PhD degrees and wish to do follow-up studies on their thesis or dissertation. Under the program, there is no provision for honoraria of study leaders, equipment and capital outlay.

UP System Research Grants

The UP System has created a Creative and Research Scholarship Program in 1999 to support UP faculty and researchers. Depending on the availability of funds, the following grants are open to applicants every year: Creative Work and Research Grant, Research Incentive for Lateral Entrants, Sabbatical Research Grant and other grants. These grants usually support research or creative projects in any field, such as literary work, scientific research, artistic work, invention, software. Awardees are made to sign contracts for a certain period of time to complete the project.

Furthermore, in 2006, the UP Board of Regents approved the creation of the UP Emerging S and T Fields Agenda which makes available a grant to support inter-/multi-disciplinary research programs/projects related to the approved list of emerging fields in S and T: materials, biotechnology, pervasive computing, measurement and instrumentation.

More information on these grants are detailed in the “Research Incentives” section of this manual.

External Research Grants

Most of UPLB’s current research undertakings are funded by various agencies which tap the university’s capability and physical resources.

Government agencies such as the DOST and the DA are long-time partners of UPLB in research, technology generation, and dissemination of useful knowledge. These organizations have funded research projects which fall under their respective agendas or plans and programs. Similarly, international and local organizations provide grants to UPLB, mostly as part of their research networking and business affairs.

Donor-driven research therefore dictates the areas or disciplines to be focused on by the proponent. Before proposing, the proponent may also need to periodically review the funding agency’s set of research priorities which usually change from to time.

A list of funding agencies, which have infused research financial support through the OVCRE and UPLBFI since 2004 is listed as ***Appendix D***.

RESEARCH PROPOSAL DEVELOPMENT AND PROCESSING

The OVCRE facilitates the approval and funding of research proposals through an efficient system of processing research proposals. This section explains in detail the procedures.

Developing Proposals

Call for proposals from UPLB Basic Research Program and external funding agencies (FAs) may come anytime during the year. Research proponents prepare proposals in accordance with the thrusts and objectives specified by the funding agency.

Research under the UPLB Basic Research Program

Every last quarter of the year, the OVCRE calls for submission of basic research proposals. The deadline for submission is November, evaluation is conducted in December and implementation starts in January. Funds are released on a quarterly basis. Guidelines on the UPLB Basic Research Program and formats of proposals are available in ***Appendix E***.

The flow of basic research proposal processing is presented below:

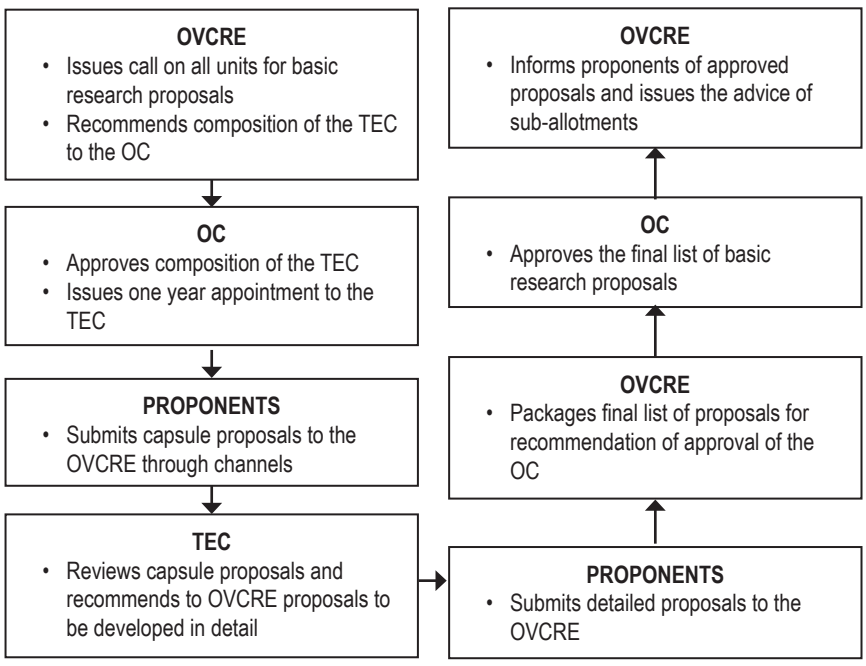

Figure 7. Process of proposal approval and funding under the UPLB Basic Research Program.

Applied research support by external fund sources

Some agencies, such as the DA-BAR and DOST-PCARRD require the initial submission of capsule proposals, and when considered for funding, proponents are requested to submit detailed proposals. Proposal format depends on the requirement of the funding agency. The proponents, for faster proposal processing, should strictly follow the formats required by DOST and its councils, DA-BAR and other funding agencies. Those who wish to prepare proposals for funding by external funding agencies can get the formats and the guidelines for submission of proposals from the agency's website. The flow of research proposal processing for external funding agencies is presented below:

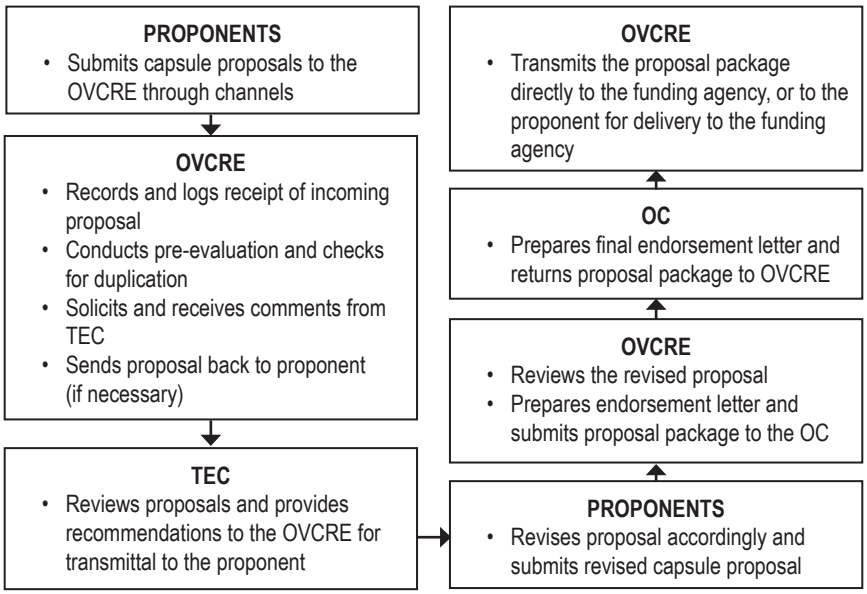

Figure 8. The administrative process for proposals for external funding.

Pointers in proposal-making

The proponent should review the budgetary requirement of the project in terms of the following:

- Salaries of the project personnel, honoraria rates should be in accordance with the salary rates approved by the funding agency, i.e. DOST, DA-BAR.
- The administrative cost (indirect cost) of the project is dependent on the following schemes:
  - Below ₱100,000 (5%)
  - ₱101,000 – P200,000 (7%)
  - ₱201,000 – above (10%)
- Payment of training fees, travel insurance, attendance in international or local conferences, collaboration with other agencies should be explicit in the Memorandum Agreement or Understanding (MOA/MOU).

RESEARCH PROJECT IMPLEMENTATION, EVALUATION AND MONITORING

Research project proposals are approved if they satisfy the criteria set by the funding organization and can start as soon as all the administrative requirements are met. While implementing the project, it undergoes evaluation and monitoring by the OVCRE (***Figure 9***).

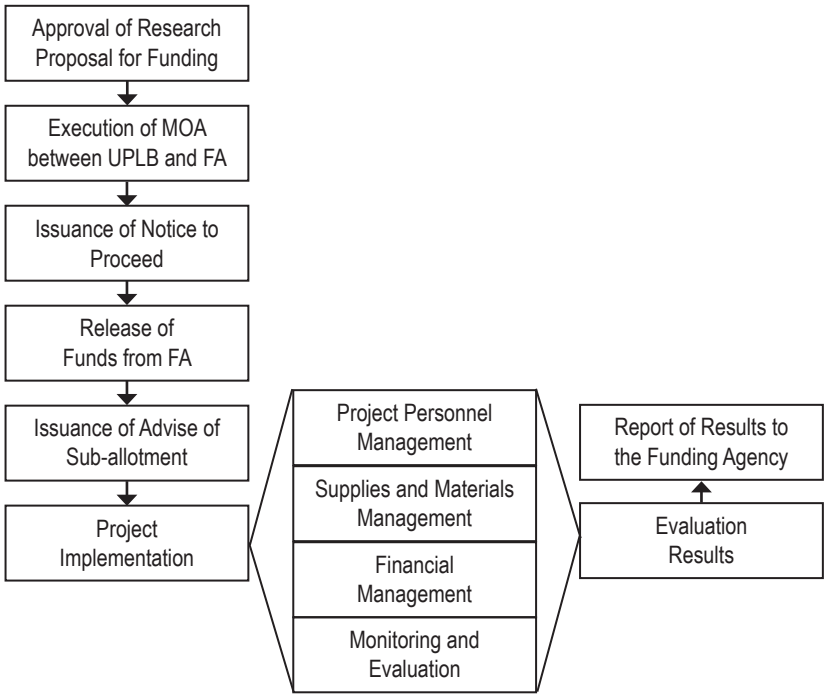

Figure 9. General flow of administrative processes involved in implementation, monitoring and evaluation of research projects.

Project Implementation

An approved basic research project funded through the UPLB Research Program or the UPLB Research Trust Fund (Endowment Fund) is given notice to proceed by the OVCRE.

For projects with funds coming from other organizations, implementation starts after a memorandum of agreement (MOA) between UPLB and the funding organization is executed.

Developing and executing legal agreements

Once a research study/project is approved for implementation, a Memorandum of Agreement/ Memorandum of Understanding (MOU) between the funding agency and the UPLB is prepared by the proponent. There are funding agencies that have their own draft MOA/MOU that the proponent can refer to. UPLB has also its own *proforma* of a MOA/MOU and is available

at the UPLB Legal Office. PCARRD, on the other hand, has an Omnibus MOA with UPLB.

The draft MOA/MOU is referred to both parties for comments. From the funding agency, the MOA/MOU is referred to the UPLB Legal Office for review, and sent back to the proponent/ funding agency for revision based on the comments of the OVCRE and the Legal Office.

The OVCRE studies the agreements/terms and recommends the MOA/MOU to the UPLB Chancellor who signs the agreement. The document is then transmitted to the funding agency which approves and notarizes the MOA/MOU.

After notarial, the OC, OVCRE, UPLB Legal Office and proponent are provided copies of the agreement. A copy of the document is sent by the OC to the UP System for confirmation.

After the MOA is approved, the funding agency issues the notice to proceed to the OVCRE for the attention of the proponent. The funding agency also furnishes the proponent a copy of the notice.

Processing release of project funds

Upon the finalization of the MOA/MOU, the funding agency issues the check for funds of the approved project. Upon receipt of the check, the OVCRE gets an account code from the UPLB Accounting Division, deposits the check to the UPLB Cash Division and furnishes the funding agency with the copy of the official receipt. An Advice of Sub-allotment (ASA) is prepared by the OVCRE, copies of which are furnished to the following: 1.) proponent (original copy), 2.) Accounting Division, 3.) Internal Control Office, and the 4.) funding agency.

Funds are released on a quarterly basis. Expenses for the operation of the project should be disbursed by the proponent in accordance with the ASA and subject to existing accounting and auditing rules.

Hiring and appointing project personnel

The project management should take particular attention on the following when preparing the appointment papers of the project staff:

- **Project/study leader, project staff/administrative support staff who are UPLB personnel, NGW personnel such as URA, labroratory technician/aide, animal caretaker, agricultural technician, laborer etc.** - Prepare the basic papers for each, submitted and processed through channels. Only permanent and temporary staff are allowed to be assigned as administrative support staff in the project. UPLB

staff whose appointment is in substitute or contractual basis is not allowed to be given additional assignment as administrative support staff.

- **Contract Labor (Non-Government Worker), or NGWs hired charged against Other Services** - Make a letter request to hire contract labor to the Dean/Unit head for approval. The approved request will be attached to the appointment, processed through channels. The duration for contract labor is only for a maximum of three (3) months. Appointments maybe renewed but with a one-week gap.

- **For Non-UPLB personnel to be appointed as study leader and project staff** - Make a formal request to the Chancellor to be able to appoint a study leader/ project staff who is not UPLB-employed . The request should attach a letter from the supervisor allowing the involvement of non-UPLB personnel to the project. Upon approval of the request by the Chancellor, a letter order, will be processed and issued by the Human Resource Development Office (HRDO) that will serve as the appointment of the staff involved.

Purchasing project supplies and equipment

By default, the university implements a public bidding system for the procurement of supplies and materials in accordance to the existing rules and regulations being carried out by the government.

Purchase of the following items is covered by the unit's annual procurement plan: 1.) Computers, peripherals, software and related supplies, 2.) Tools, instruments, equipment, and machines, 3.) Crop and animal production and processing units, 4.) Laboratory chemicals, medicine and supplies, 5.) Construction and hardware supplies including labor, and 6.) Other services.

However, postage, gasoline, telephone, janitorial and security services, labor for field activities, and food and vehicle rentals are not covered by the annual procurement plan.

It is thus important for a researcher to plan out the needs of the project and understand the procurement guidelines set by the UPLB Bids and Awards Committee (BAC).

A copy of the guidelines can be requested from the BAC or downloaded from the UPLB website. Results of the public bidding for supplies can be retrieved from UPLB's Online Procurement System website at ***http://admin.uplb.edu.ph/bac.*** Bidding documents and procurement manuals from the Government Procurement Policy Board are also available from the Internet at ***http://www.gppb.gov.ph***.

Managing the program/ project/ study

Requesting change of date of project implementation

The start and end of the project are specific in the MOA/MOU. Implementation, however, may be reset depending on the release of funds or upon issuance of the notice to proceed.

Proponents may want to defer or decide on when to start the project depending on the need factors such as climate, cropping season, availability of personnel and other justifiable reasons.

When deferring project implementation, the funding agency should be properly informed through an official communication coursed through channels.

Requesting for realignment/ reprogramming of program/ project funds

Researchers may request for reprogramming or transfer of funds from a line-item budget (LIB) to another when the need arises, provided funds are available. Reprogramming / transfer of funds is considered **major** when the transfer request is from one line-item budget to another, **minor** when the request is within the line-item budget. The request should pass through channels.

For reprogramming request of more than 30-33% of the approved budget, the OVCRE recommends the request for approval by the funding agency in consideration of the following conditions:

- Transfer of funds (major) from equipment to maintenance and operating expenses (MOE) or personnel services (PS); and
- Request for additional project personnel

For DOST and DOST-PCARRD-funded projects, the OVCRE recommends to the OC the approval of reprogramming/transfer of funds for requests of less than 30% of the approved budget.

For more than 30%, minor or major request for reprogramming/transfer of funds is to be approved by PCARRD. Similar requests for DOST-PCIERD, PCASTRD-funded projects are to be approved by the concerned funding agency.

For PhilRice and international funding agencies, requests for reprogramming or transfer of funds (regardless of the amount) are approved by the funding agency.

Requesting audited financial reports

An Audited Financial Report (AFR) is prepared by the UPLB Accounting Division indicating the expenditures and the remaining balance of the project for a certain period. There are funding agencies which require the quarterly submission of AFRs, but there are those which require AFRs every six (6) months.

The AFR of a project, after made available by the UPLB Accounting Division is submitted by the OVCRE to the funding agency. A copy is also furnished to the project leader.

Proponents can request an updated AFR from the UPLB Accounting Division as he or she deems necessary.

Requesting transfer of project leadership

Based on the new delegation of authority, the OVCRE approves the request for transfer of project leadership, with a copy of the approved request submitted to the funding agency together with the bio-data of the new project leader.

Requesting for use of unobligated balances

Unobligated (UB) or unexpended funds maybe used while awaiting the next release of the budget allotment. For PCARRD-funded projects, the OVCRE approves the request for use of the UB. Unused balances from the previous year may be used for the same line-item budget for the following year and for other necessary items, provided that the use is approved by PCARRD.

Unobligated balances of funds coming DOST, PCIERD and PCASTRD from the previous year may be deducted from the release for the following year unless requested as an additional budget for the following year.

Request for use of UB of other grants needs the respective funding agency's approval.

Requesting for program/ project extension

Requests for extension, renewal, termination of the projects are made through the OVCRE substantiated by written communication, evaluation results and annual reports. As per OVCRE Memo No. 17 s2008, requests for extension of ongoing research projects, both basic and externally-funded shall be deliberated on the regular conduct of in-house review.

All requests for project extension shall be submitted two months prior to the end of the

project. Likewise, the status of the funds shall be included in the progress report to aid reviewers in evaluating the necessity of the extension.

Requesting for bridging/ emergency funds

Researchers can tap other funds while waiting for the release of budget. The project leader can charge additional expenses of the project from the unit's share of administrative indirect cost on the project (40% of the 10% of the total project cost).

Through the bridging fund (Endowment Fund), the project leader can request from the OVCRE an amount to pay for unpaid salaries (maximum of three months) of project personnel. The amount must be replenished as soon as the project's budget is released.

Project Monitoring

Research projects are monitored in the financial and technical areas. The UPLB Accounting Division conducts financial monitoring by providing the status of funds and AFRs. On the other hand, the OVCRE also monitors the finances of the research project as well as the appointments of personnel, requests and advice of sub-allotments, and other pertinent data.

For registration purposes, proponents of research projects administered under the UPLBFI should submit project-related documents such as the proposal, MOA, and reports. These will also serve as proof in crediting personnel workload and other concerns.

UPLB units and researchers should periodically submit progress reports and accomplish the OVCRE's Research and Extension Monitoring forms (***Appendix F***) and UPLB Intellectual Productivity Databank forms (***Appendix G)*** and downloadable at ***http://www.uplb.edu.ph/rde/download***

Monitoring biosafety concerns

UPLB has formed its own Institutional Biosafety Committee (IBC) to ensure safety to health, the environment, and society during the conduct of genetic engineering experiments or the introduction of new species and genetically engineered organisms. This is pursuant to Malacañang's Executive Order Number 430 creating the the National Committee on Biosafety of the Philippines (NCBP) and its mandates.

The UPLB IBC is composed of at least five members. At least three members have the capability to assess the safety of research, in general, and of the specific area of specialization of their organization, in particular. Also, in the case of the university, the IBC members represent

different areas of research specialization. At least two members are not UPLB-affiliated but represent the interest of the surrounding community with respect to health and protection of the environment.

UPLB's IBC reviews genetic manipulation work conducted at, or sponsored by UPLB and recommend research proposals for approval by the NCBP; reviews regularly work with potential risks that are being conducted at the unit to ensure that the guidelines are being fulfilled; formulates and adopts emergency plans covering accidental spills and personnel contamination; reports immediately to the appropriate official and to the NCBP any significant problems with/or violations of the guidelines and any significant research-related accidents or illnesses.

Researchers who may have to deal with biosafety of their projects should consult with guidelines which are available at the National Committee on Biosafety of the Philippines' website at ***http://www.ncbp.dost.gov.ph*** or request audience with the Chair of the UPLB IBC.

Project Evaluation

Both ongoing and completed research projects under the applied/basic research grants, research trust, and those funded by DOST, DOST-PCARRD, DA, DA-BAR and other government agencies are required to be presented in an annual in-house review. Based on the findings during the review, evaluators recommend the renewal or extension or even termination of the research projects.

Completed projects, on the other hand, are also evaluated prior to the submission of the terminal report 30 days after the termination of the project. Researchers are also required to present their results.

The OVCRE has prepared several guidelines on the following:

1. Guidelines in the evaluation of programs and projects
2. Guidelines for project leaders/ presenters of projects for review
3. Guidelines for evaluators during in-house review of completed R and E projects
4. Guidelines for evaluators during in-house review of on-going R and E projects

These guidelines are available at the OVCRE office and website (***http://www.uplb.edu.ph/rde/download***). These are also briefly discussed in the succeeding sections:

Appointment of evaluators

Two months before the year ends, a pool of UPLB evaluators for applied (externally-funded) and basic (internally-funded) researches are constituted for recommendation to the Chancellor for approval. In the selection of the members in the pool, their expertise and the current list of ongoing researches to be reviewed for the following year are considered.

The pool of evaluators consist of: a) core evaluators with expertise in the areas of statistics, crops, livestock, social sciences and economics, and who shall be present in all evaluation sessions, if possible; and b) specialist evaluators who shall be selected based on the area of discipline of the research projects being evaluated.

Schedule of reviews

The evaluation of ongoing UPLB research projects both internally- and externally-funded is conducted once a year.

The Project Monitoring and Evaluation Section (PMES) of the OVCRE coordinates with the funding agency in order to synchronize the schedule of evaluation of UPLB with that of the funding agency. As much as possible, a joint evaluation between UPLB and funding agency is conducted.

In case a joint evaluation is not possible, the funding agency invites a representative from the UPLB team of evaluators to attend the funding agency's evaluation, and provides the OVCRE, a copy of the summary of evaluation results.

The schedule of UPLB evaluation is done quarterly - in the months of February, May, August, and November. For projects due for completion, the evaluation shall be scheduled before the termination of the project:

- Projects ending in April, May, June are reviewed in February
- Projects ending in July, August, September are reviewed in May
- Projects ending in October, November, December are reviewed in August
- Projects ending in January, February, March of succeeding year are reviewed in November

Evaluation, however, may not be held in a regular scheduled month, if and when the following occur:

- The funding agency approved the change of implementation date.
- The funding agency approved the extension of project to complete activities and/or use of unexpended balance.
- The nature of the project (i.e., short duration, seasonality of crops).
- The project shall not request for extension and shall instead present completed research for evaluation.

The PMES staff shall finalize the schedule of evaluation, and accordingly coordinate with the project leaders and funding agencies in this regard.

Preparing and submitting reports

Proponents whose externally-funded projects are due for review should prepare the following, depending on the type of review (i.e. quarterly, annual, terminal etc):

- Six (6) copies of progress report which are submitted to the funding agency
- 14 copies of the annual report which are submitted for use in the joint UPLB and funding agency annual in-house review of projects; and
- Five (5) copies of the terminal report which are submitted two months after the termination or completion of the project.

Renewal, Extension, and Termination of Research Projects

Funding of research projects may be renewed or terminated based on the evaluation conducted prior to termination or completion. On the other hand, research projects may also be extended after the termination date stated in the MOA. Requests for extension are made through the OVCRE and these must be substantiated by written communication, evaluation results, and annual reports.

RESEARCH OUTPUT PROMOTION AND PUBLICATION

Knowledge products such as discoveries, inventions, new methods, and processes are results of the conduct of research. The university churns out numerous knowledge products through its diverse efforts in research, development, and extension in varied areas of specialization be it in natural and physical sciences, social science or the arts.

The amount and quality of research outputs reflect scientific productivity and are among the determinants of the scientific career of scientists, faculty and researchers, as well as a mirror of the capabilities of an academic institution. But, however numerous such outputs are, these are rendered useless if not promoted and published for public consumption. Hence, the university addresses the need to promote and publish these outputs.

Publication

Scientific productivity, in the form of intellectual contributions to the advancement of science and ultimately communicated in written form, is considered to be fundamentally important to one's scientific career advancement. Thus, publication is a major output of a researcher.

Publication serves two purposes: recognition and reward. Firstly, public awareness that such a research was conducted. Secondly, it contributes to the academic career enhancement of the person(s) involved by earning merit or compensation.

The following are the common types of publication:

Print Media

Print media are the most common means of disseminating research output as these reach wide audiences. These publications usually carry a copyright or an ISBN/ISSN. The following are the most common publications for knowledge products:

1. ***Journal*** — a periodical, published by a professional society or institution, containing original reports of work in a particular field, news, and proceedings (for example: The Philippine Agricultural Scientist published by the College of Agriculture). A journal that requires critical review by peers is called a refereed journal.

Articles for journal publication must follow guidelines and requirements set by the respective journal. Research results published in journals as regular articles carry the most weight among the publication venues, especially if the articles appear in a primary or refereed journal.

Researchers whose articles are published in an ISI-accredited journal are given monetary rewards (International Publication Award) by the UP System as incentives for getting research outputs published.

2. ***Book*** – a non-periodical publication, at least 49 pages (according to UNESCO), covering an extensive treatise on a specialized field. A textbook is a book approved by a textbook board to be used as a main material for a course.

3. ***Monograph*** – a separate treatise on a single subject or class of subjects, usually detailed in treatment but not extensive in scope, and often contains an extensive bibliography.

4. ***Technical bulletin*** – a scientific paper or translation recording the current status of a scientific research or development. A research output presented in a technical bulletin is usually written in a semi-technical manner.

5. ***Pamphlet/ brochure*** – a non-periodical publication, at least five pages (UNESCO), covering any field of interest. A pamphlet or brochure usually provides an overview and highlights of a certain research or project.

6. ***Magazine*** – a periodical containing a variety of pieces such as critical and descriptive articles, stories, poems, etc. designed for the general entertainment of the reader. Articles on knowledge products featured in magazines are written in popular form that do away with technical terms. Highly technical and scientific terms are made simpler for public readership. Furthermore, knowledge products featured in magazines are mature outputs which are ready for public consumption or use.

7. ***Newspaper*** – a publication issued periodically (daily or weekly) containing news, opinions, or feature stories. News articles on research usually cover the latest breakthroughs in a certain field. Researches described in features stories usually are ready for public use.

8. ***Leaflet*** – usually a single sheet of paper, which is sometimes folded to make 2 to 4 pages, deals with one main topic, and is highly illustrated.

Unpublished materials

Unpublished materials also belong to print media but are available only to select audiences. Manuals and course syllabi are examples of unpublished material which are for instructional purposes. Manuals contain detailed description of instructional, training or research procedures, while course syllabi contain an extensive account of all the topics covered by a course, including references.

Broadcast and other media

The broadcast media, including radio or television, are other channels for promoting knowledge products. With the advance in computer and telecommunication technologies, the Internet is the newest medium that can promote research and research outputs.

Symposia, conventions, workshops and other scientific meetings are other venues to promote research outputs. These are usually sponsored by organizations and are intended to gather specialists in a particular field to promote the exchange of ideas and knowledge, thereby contributing to the further development of the field and of their outputs. Scientists, faculty, and researchers participate in such gatherings by invitation to present a paper, a poster, or serve as resource persons.

Support for Publication and Broadcast Media

Publishing journal articles

The University Publication Office (UPO) under the Office of the Vice-Chancellor for Instruction supports the research and development endeavors of its constituents by providing a publications venue for them. Currently, the UPO is trying to revive the regular publication of the UPLB Journal as a campus-wide publication. While UPLB is home to a number of journals, four of which are ISI-registered, they are published by individual colleges and therefore, cater to very specific disciplines that each college is known for.

The UPLB Journal is a refereed University publication that accepts manuscripts from different disciplines. To help defray the costs of printing, the authors are required to shell out a specified fee per printed page to be collected when the journal comes out.

The journal publishes full articles, which are original works, preferably containing results of research and creative work, that have not been published or are not currently being considered for publication in any other journal. Each article is subjected to rigid refereeing.

Book/ textbook writing and printing grants

Book or textbook writing is supported by grants from funding agencies or the university. The UP System supports textbook writing for core courses of undergraduate degree programs, including reference books, workbooks, and laboratory manuals (in print or other media) by regular, full-time faculty, except those on sabbatical or on secondment to other agencies. REPS who engage or assist in teaching functions may apply for this grant.

The UPO also publishes and/ or prints books and instructional materials such as syllabi and laboratory manuals, among others. For books to be published and/ or printed by UPO, they should be endorsed by the department/ institute head and the dean of the college. Once the request/ proposal is received, the Publications Board assesses the material based on a criteria. Upon approval, the manuscript is subjected to the refereeing system, and once it gets the approval of the referees, it is then printed by the UPO.

Endorsement through channels is also required for instructional materials. The UPO director has been given the responsibility of acting on proposals for printing of these types of materials, thus the proposal no longer needs to pass through the Board. The materials are not refereed, the review is left to the course committees prior to making the request to print them.

Technical materials printing support

Printing of technical materials are also often supported by various agencies. For example, the DA-BAR has established a Scientific Publication Grant System to support the publication of scientific journals, handbook, books and scientific proceedings. The PCARRD and Philippine Agricultural Resources Research Foundation, Inc. (PARRFI) also have funds which accommodate proposals for printing of technical materials. Other DOST agencies such as the Technology and Livelihood Resource Center (TLRC) have supported the university in mass-producing vocational materials.

Proponents who are able to get support from other agencies should make sure that a proper agreement be made between the university and the funding agency.

Production of extension materials

UPLB has set up an Information, Education and Communication Program in 2004 to support small publications such as technology and product brochures, handbooks, catalogues and similar forms. Depending on the availability of funds, it can support production of these inexpensive materials. Requests for support should be addressed to the Vice-Chancellor for Research and Extension, accompanied with a draft of the proposed publication.

Popularized content via newsletters

The unit's Public Information Associate or PIA provides assistance to researchers in popularizing research outputs. The PIA is appointed by the Chancellor to help the Office of Public Relations (OPR) in writing news and feature articles for inclusion in the university's regular publications– the UPLB Link Newsletter released monthly; and the UPLB Horizon, a quarterly publication. News may also be made for the UP System newsletters or local and national newsletters.

Packaging and delivering multi-media

The OVCRE promotes research results through the tri-media on a per project basis, e.g. a compilation of research abstracts, technology profiles and others. The office also maintains a website and email list that can be used to deliver news through the Internet. The OPR can also post research and extension-related articles in the UPLB website.

The university will be rolling out a short messaging system (SMS) which will enable cellular phone subscribers to receive text announcements from various administration offices such as the OPR and the OVCRE.

Aside from the OVCRE and OPR, there are other units in the university which can also be tapped in packaging and delivering multi-media to clientèle.

Giving free services is the UPLB Interactive Learning Center (ILC), especially in the development of instructional materials from a faculty member's research outputs. Professorial chair awards presentations can be documented in video and packaged into a learning material for use of others. Currently, the ILC services are only offered to faculty members. A proposal is under way to include REPS.

Also, researchers interested to have their research outputs broadcast via the airwaves can approach the Department of Development Broadcasting and Telecommunications of the College of Development Communication. The department manages two radio stations - an AM and a FM station. Radyo DZLB 1116 khz over a 5 KW transmitter covers most parts of the CALABARZON region. Researchers can serve as resource persons who can talk more about their technologies, and who can even serve as anchor during the broadcast. The FM band is a campus radio.

Marketing and Commercialization

Research outputs with potential technological and industrial application are marketed to entities with capability to provide capital and produce such outputs commercially through contracts and license agreements. The university does not execute exclusive contracts with licensees.

The OVCRE through the UPLB CTTE provides technical support, such as feasibility studies preparation, technology valuation, among others, for researchers and developers in directly dealing with entities interested in commercializing UPLB technologies.

Direct Extension

Research outputs developed for the direct benefit of intended clients are promoted through direct extension. These usually involve outputs that deal with new methods or approaches, e.g. cultural management practices in agriculture and methods of management.

INCENTIVES FOR DOING RESEARCH

While much has been written about the contributions of research in various fields, the potential incentives that researchers could reap out of doing research *per se* have not been given adequate emphasis. The incentives that may be obtained in research may come in different forms such as workload credits, honoraria, awards, grants, and credits for promotion.

Workload Credits

The workload credits given to faculty and REPS engaged in various research undertakings differ during the proposal preparation, coordination, and actual implementation. Furthermore, in the actual implementation, workload credits will also differ depending on the responsibility of researcher by scope of research, i.e. program, project, or study.

Proposal preparation

Each proposal prepared within six (6) months or one (1) semester is given one (1) credit. However, credits must not exceed two (2) and four (4) for faculty and REPS, respectively. At the end of the semester, the proposals are submitted to the head of unit. In cases where the proposal is not finished within the prescribed period and is continued the following term, the proponent is not given the corresponding credit load for the work.

Project implementation

Table 11 shows the credit units per type of research involvement by scope together with the breakdown of credits according to activity.

Upon receipt of a faculty's or a REPS's service record, the OVCRE assigns the corresponding credit point based on the responsibility of the personnel in the research activity. Researchers should properly determine their research involvement using the standard definitions (***Table 12***).

Table 11. Credits units researchers earn based on the type of involvement

Type of Research Involvement	Activity	Credit
Program Leader	Coordination of two or more projects under the program	2
	Coordination of two or more studies under the program	2
	Actual implementation of a study under the project	3
	Total	7 [a/]
Project Leader	Coordination of the studies under the project [b/]	2
	Implementation of a component study	3
	Total	5
Study Leader	Implementation of one study under the project	3
	Total	3

[a/] To earn credit as a program leader, he/ she should also serve as a project and study leader. In serving as a leader of two projects, he/ she will earn additional 2 credits, or 3 credits for an additional study or activity

[b/] If implemented by more than one study leader

Table 12. Type of involvement of UPLB staff based on responsibilities and nature of work.

Research Involvement	Role
Program leader	One who directly plans, organizes, and supervises the overall activities of an R and D program and is directly responsible for the conduct of one of the projects of the said program.
Project leader	One who directly plans, organizes, supervises, and conducts the implementation of a basic unit of investigation of a specific R and D problem.
Study leader	One who supervises and conducts the investigation of a specific R and D problem of a research study under a particular project.
Project staff	Those whose basic function is to assist or participate in the day-to-day activities in the implementation of an R and D activity.
Research coordinator	A person who renders advisory, administrative, and/or management, and other service-related functions in the overall implementation of an R and D program/ project(s) involving three or more lead institutions/agencies with grants or with foreign assistance/institutional grants.

Research Involvement	Role
Research support staff	Those who render administrative and management-related services/assistance in the conduct of an R and D activity. Support staff include Levels 1, 2, and 3 as defined by the Civil Service Commission: ■ Level 1 – the first level shall include clerical, trade, craft, and custodial service positions which involve nonprofessional or subprofessional work in a nonsupervisory capacity requiring less than four years of college studies; ■ Level 2 – the second level shall include professional, technical, and scientific positions which involve professional, technical, or scientific work in a nonsupervisory or supervisory capacity up to division chief level requiring at least four years of collegiate work; ■ Level 3 – the third level shall cover positions in the Career Executive Service.
Research and/or development consultant	A person from outside the DOST system engaged to provide special expertise, special assistance, and/or special advice to an R and D and other related program/ project/activity.
Special activity	This consists of activities/meetings related to a research program or project development, conference, symposium, seminar, workshop, or similar activity.
Commodity team/technical panel	Refers to a group of experts called to direct, guide, assist, advise an agency in the overall planning, coordination, and/or implementation of an R and D program/project.
Commissioned work team	Refers to projects/activities contracted for a fee by a private individual or company with a research institute to undertake specific work within a specific time frame.
Conference/ symposium/ seminar/ workshop/ forum	A science and technology activity where participants coming from other agencies, local or foreign, are invited to assist, guide, and provide expertise in the resolution or discussion of a given issue/problem/topic.
Conference/ symposium/ seminar/ workshop/ forum coordinator	A person who renders advisory, administrative management, coordination, and/or other service-related functions in the overall conduct of a science and technology-related activity.
Conference/ symposium/ seminar/ workshop/ forum technical secretariat	Those who render technical services like report writing and report consolidation in the conduct of these kinds of activities.
Conference/ symposium/ seminar/ workshop/ forum support staff	Those who render administrative and management-related services/assistance in the conduct of a conference, symposium, seminar, workshop, or forum. They include levels 1 and 2 as defined earlier.
Interagency committee	A group of individuals from different agencies engaged to implement a specific S and T activity, the creation of which should be initiated by a designated authority and covered by a special order.

Honorarium

Honorarium is another form of incentive granted to researchers. It aims to encourage productivity as well as acknowledge the performance and efficient delivery of services and outputs.

According to Memorandum Circular No. 001, Series of 1995 or the Implementing Guidelines on the Grant of Honoraria for DOST and the National Research Development System, which was adopted by UPLB, honorarium is a form of remuneration for services rendered beyond the minimum/regular workload of an individual whose broad and superior knowledge and expertise or professional standing in a specific field contribute significantly to scientific and technological R and D.

Moreover, an honorarium is an incentive for service rendered by officials/employees on special assignment. For this purpose, a special assignment is an undertaking by an individual or a composite group of officials/ employees, which is beyond their regular and primary functions.

The ensuing definition of various research activities as well as responsibilities according to various research involvements, types and rates of honoraria are lifted from the aforementioned memorandum.

Types of honoraria

According to Accounting and Auditing Manual for Research Operations (AMMRO) Book I), honoraria are:

- Those paid to a government official or employee or private individual who is requested to speak, lecture, or act as a resource person in seminars, workshops, conferences, symposia, trainings, or classroom sessions
- Those paid to a government official or employee by another office in which he/she is on detail or special assignment provided that if he/she is already collecting similar compensation or allowance for the same service or period for which payment is being claimed, he/she may only choose to collect whichever is higher but in no case shall he/she receive both.
- Those paid to a government official/employee or private individual for his membership in or special assignment to committees or special projects.
- Those paid to a government official or employee or private individual who is involved in the conceptualization of projects/programs; implementation of research and development activities; coordination of R and D activities; or rendition of advisory, administrative, and/or management functions in the implementation of R and D activities.

Ongoing rates for honoraria

UPLB currently follows honoraria rates set by the DOST (which includes all its Councils) effective January 1, 2004 as per DOST Memorandum Circular 001 s 2003. Proponents of other agency-funded researches should adopt the following rates in preparing payments:

Table 13. Schedule of honoraria rated being implemented at UPLB.

Involvement	Description	Rate	
I. Research Program/ Project			
Program Leader (the number of programs handled should not exceed 2 programs/ person)	1 – 2 projects 3 – 4 projects 5 or more projects	5,775.00/ month 6,600.00/ month 8,250.00/ month	
Project Leader (the number of projects handled should not exceed 2 projects/ person)		4,950.00/ month	
Project Staff (the project staff shall be allowed to handle a maximum of 2 projects at a time	Level 1 Level 2 Level 3	1,240.00/ month 1,650.00/ month 3,300.00/ month	
Program/ Project Coordinator	1 – 3 programs/ projects 4 or more programs/ projects	3,300.00/ quarter 4,950.00/ quarter	
Program/ Project Support Staff	Level 1 Level 2	495.00/ quarter 825.00/ quarter	
S and T Consultant (as referee/ evaluator)	On-call basis	825.00 – 2,475.00/consultation, not to exceed two (2) consultations/ month	
II. Special Assignment			
A. Commodity Team/ Technical Panel	Team Leader/ Chairman Team Member/ Technical Panel Member	3,300.00/ month 1,650.00/ day (not to exceed 12 days/ annum)	
B. Conference/ Symposium/ Seminar/ Workshop/ Forum		100 participants or less	more than 100 participants
Coordinator/ Chairperson	4 days or more 2 – 3 days	4,950.00/ assignment 4,125.00/ assignment	4,950.00/ assignment 4,125.00/ assignment
Member	4 days or more 2 – 3 days	2,475.00/ assignment 1,650.00/ assignment	4,125.00/ assignment 3,300.00/ assignment
Moderator		825.00/ half day	1,650.00/ half day
Technical Secretariat Member	4 days or more 2 – 3 days	2,475.00/ assignment 1,650.00/ assignment	2,475.00/ assignment 1,650.00/ assignment
Support Staff Member	4 days or more 2 – 3 days	990.00/ assignment 495.00/ assignment	1,980.00/ assignment 990.00/ assignment

Involvement	Description	Rate	
Rapporteur		495.00/ assignment	990.00/ assignment
Paper Writer/ Author of Technical Paper		3,300.00/ paper	6,600.00/ paper
Discussant/ Reactor		1,320.00/ paper	2,640.00/ paper
Resource Person		1,650.00/ paper	3,300.00/ paper
C. Inter-Agency Committee/ Working Group			
Chair		1,650.00 – 4,950.00/ month or 1,650.00/ meeting	
Member		1,320.00 – 3,300.00/ month or 1,320.00/ meeting	
Support Staff	Level 1 Level 2	825.00/ month or meeting 1,320.00/ month or meeting	
D. Training			
Coordinator		825.00/ five (5) working days but not less than two (2) days	
Training Resource Person	Lecture Laboratory	825.00/ hour 495.00/ hour	
Training Support Staff	Level 1 Level 2	330.00/ five (5) working days but not less than two (2) days 660.00/ five (5) working days but not less than two (2) days	
E. Board of Judges/ Evaluation Panel for National S and T Awards			
Chairperson		1,500.00/ assignment	
Member		1,000.00/ assignment	
III. National Policy-making Body/ Governing Council		4,950.00/ meeting	
IV. Technical Advisory Committee/ Steering Committee			
Council		3,300.00/ meeting	
Institute		3,300.00/ month	
Other equivalent National Technical Advisory Body/ Steering Committee		3,300.00 – 6,600.00 month or 3,300.00/ month	

Awards

Awards come in the form of plaques of recognition, trophies, research grants, as well as cash prizes. These are given by UPLB and other agencies such as DA, BAR, PCARRD, PCIERD, DOST, NAST, NRCP, LBSCFI and professional organizations.

The common aim of these awards is to duly recognize researches in various fields and disciplines, thus heightening the research spirit and enthusiasm, and consequently producing an environment conducive for more meaningful and useful researches.

Various awards are given by different institutions, including UPLB, to researchers in various disciplines (***Appendix H***). Details on the selection/nomination procedures, form of award, selection criteria, qualifications, and documents required for every award can be requested from the awarding agency.

UPLB Outstanding Researcher/ Research Program Awards

The UPLB Outstanding Research/ Research Team Award is an annual recognition of exemplary individual/ team performance in the different fields of research in the University. It is envisioned to promote research/creative spirit and enthusiasm and more importantly, it is the best way by which a UPLB researcher will know that his or her work does not go unappreciated.

Plaques of recognition and a P50,000 cash award each for Outstanding Researcher and Outstanding Research Team are given during a convocation marking the university's foundation anniversary.

Guidelines for the UPLB Outstanding Researcher, and Research Team Awards are available as ***Appendix I***.

UP System Academic Distinction Fund Program

Through the initiative of then UP President Francisco Nemenzo, the UP System established in 1999 important programs that aim to encourage and reward scholarship in all fields and disciplines. Still applied at present, these programs aim "to raise our academic efforts to the standards of excellence and, hopefully, to retain our bright young (and not so young) faculty on whom we pin the future of our university."

One program is the UP System Academic Distinction Fund Program which awards outstanding work of scholarship through a system of merit-based incentives. More information on these grants are available in the manual "In Support of a Culture of Scholarship and Excellence: Faculty Development, Grants and Awards" which was prepared by the OVPAA in 2004. The guidelines of this program is also available at the OVCRE

International Publication Award

This is given to regular, full-time faculty and REPS whose publications meet the required standards. It comes in the form of cash for journal articles, book chapters, and books. Since implementation of the program, the UP System reported reported in 2007, 43 journal articles and 3 book/book chapters written by UPLB were granted the International Publication Award.

For journal articles, only those full articles published in journals listed in the Institute for Scientific Information (ISI) database of selected journals qualify for the award. As in ISI-indexed journals, book chapters or books published by international publishers must have gone through a rigid blind review process.

However, the following shall not qualify for the award: papers read in international conferences and posted in the Web; articles published in newsletters or bulletins (unless these are titles of journals listed in the ISI database at ***http://www.isinet.com***); and conference proceedings (unless the proceedings is printed in a journal which is ISI-accredited).

Applicants to this award should submit a letter of application along with a reprint/ copy of the publication and a publication information sheet to the OVPAA.

Other Awards under the Academic Distinction Fund Program

There are other awards under the program geared towards research, namely: 1) Gawad sa Natatanging Publikasyon sa Filipino (Gawad para sa Publikasyon ng Orihinal na Pananaliksik, and 2) Advanced Technology Award.

Scientific Productivity System

The UP Scientific Productivity System (SPS) was established to encourage and reward scientific productivity of university personnel in the following fields: Basic/ Natural Sciences and Mathematics, Engineering and Information and Communication Technology, Medical Sciences, Agricultural Sciences and selcted fields of Social Sciences.

As an equivalent of the Civil Service Commission and Department of Science and Technology's Scientific Career System (SCS), it confers the title "UP Scientist" to deserving scientists and provides a monetary award, the UP Scientific Productivity Award.

Recommendations for appointments for the UP Scientist title are evaluated by a UPLB committee for submission to the System Screening Committee. Application form for the SPS is available as ***Appendix J***. The full implementing guidelines can be requested from the OVPAA or the OVCRE.

Grants

Grants are funding for scientific research in the various sciences. The UP System provides grants through a competitive process under the Creative and Research Scholarship Fund Program and others.

Creative and Research Scholarship Fund Program

This UP System program is aimed to raise the level and quality of scholarly and creative work by faculty and REPS. The grants are competitive and research results are submitted for

review. Under this program are grants for creative work and research, textbook writing, research for lateral entrants, and sabbatical research.

The implementing guidelines of the Creative and Research and Scholarship Program are available from the OVPAA and the OVCRE.

Grants for research and creative work

The grant aims to encourage faculty and REPS to undertake research that will lead to publications or exhibitions or performances of creative work or other significant output such as patents, new software, and advanced technologies.

The grant shall last for one year and in exceptional cases, may be extended up to six months at most, subject to justification. Regular, full-time faculty with the rank of Assistant Professor and higher, and REPS with rank of University Researcher I and higher, may apply for the grant provided they meet the minimum qualifications of applicants for the grant.

Application form of this grant is available as ***Appendix K***.

Textbook writing grant

This grant supports the writing of textbooks of core courses of undergraduate degree programs, including reference books, workbooks, and laboratory manuals, in print or other media, in whatever language the course is taught. Priority shall be given to difficult courses and/or courses with high student enrolment and courses with no good (foreign or local) textbooks available.

Regular, full-time faculty, except those on sabbatical and on secondment to other agencies, may apply for this grant. REPS who engage or assist in teaching functions may also apply.

Application form for the textbook writing grant is available as ***Appendix L***.

Incentive for lateral entrants

This research incentive is used to support highly qualified PhDs who are hired through lateral recruitment. Along with a financial package, a research contract and budget for equipment and materials are given to lateral entrants. The grant covers a period of two years, wherein the grantee is expected to complete the project.

Sabbatical research grant

Faculty members who opted to go on sabbatical can also conduct research or creative work during their period of leave. The grant is in the form of a research/ creative work contract which can also include the writing of textbooks or chapters of textbooks. The UP system annually awards three (3) grants of this type.

Other grants

The UP System Faculty Development Program grant also provides for a Postdoctoral Research Grant which is given to faculty and REPS who obtained their PhD degrees in the last three to five years preceding the grant. The postdoctoral grant is intended to provide the new PhD holder with an opportunity to publish independently by exposing him or her to an international academic environment. However, priority is given to those who obtained their PhD from UP or from a Philippine university.

University Professors can also conduct research under the University Professors Grant through University Academic Distinction Program. University Professors in active service can receive an annual grant to support their research or creative work.

Emerging Fields in Science and Technology Grants

The Emerging Fields in Science and Technology in UP as an agenda was approved by the BOR on July 28, 2006 to strengthen UP's position as the leading research and development university in the country and the region and to Strengthen science and technology programs in all UP campuses.

The UP System through the OVPAA is providing grants for high-end research on the following cutting-edge fields: Materials, Biotechnology, Pervasive Computing, and Measurement and Instrumentation.

Regular faculty with the rank of Assistant Professor and higher, and REPS with the rank of University Researcher I and higher, may use the application form (***Appendix M***) for the grant, individually or as a group.

Credits for promotion

Research is a primary source of credits for promotion. Research outputs such as publication, creative work, and extension activities are major credits for promotion.

RESEARCH STAFF DEVELOPMENT

For the professionalization program of UP, several staff development programs for academic and administrative personnel are implemented. The following opportunities are available/provided for research staff:

Graduate studies

REPS and faculty involved in research can pursue graduate studies at the masters or doctoral levels in local or foreign universities to strengthen their research capabilities. The following options are available:

Scholarship available on a limited and competitive basis

Some local and/or foreign institutions provide scholarship support/financial assistance for graduate studies in specific fields of specialization. The scholarship is a package of financial support for the duration of the study, the institution where the recipient will pursue his/her study, service contract to the mother institution or employer, etc.

Study leave with pay or study leave without pay

The university grants study leave with pay to both faculty and REPS on the condition that they have been awarded scholarships or fellowships. Otherwise, faculty and REPS can apply for study leave without pay or study on reduced fee privilege.

Those who wish to avail of the study leave should have met the conditions specified by the Board of Regents on study privileges.

Graduate study under the reduced fee program

REPS and faculty involved in research can also enjoy the privilege to study at reduced fee. Under this program, an employee is allowed to register a maximum of six (6) academic units per semester for a minimal fee of PhP 45.50. Any personnel who wishes to study under this program is required to get permission from his/her immediate supervisor or unit head and to prepare a revised work schedule.

Participation in conferences, seminars, and conventions

REPS are allowed to attend/participate in activities that promote exchange of knowledge and scientific information. They either serve as resource speaker, poster paper presenter, or paper presenter. Agencies/ organizations that sponsor such activities send invitation to the university, including the particulars for participation.

Expenses are either provided by these agencies (partially or fully), charged to project funds, or solicited from other sources.

Special detail assignment to outside agencies (full-time or part-time)

As part of the university's commitment to support other agencies that need technical assistance, other faculty members or REPS are allowed to work under special detail arrangements without taking a leave of absence from the university. Under this scheme, they still receive their regular pay from the university while getting additional remuneration from the agency where they will be detailed. They may be given attractive compensation package in case they no longer get their pay from the university.

Training

Training for specialized skills here or abroad may be available at times to REPS and faculty members as part of a certain project requirement. Individual staff may scout for training opportunities. Training participants are required to sign a service contract with the university for specific periods depending on the duration of training.

Exchange visit or study tours

Some academic or research institutions request from the university exchange visits or study tour arrangements for their researchers, faculty, and students. The common objective of this activity is to widen the staff's exposure to researches being conducted in specific areas of interest. Specific provisions for the participants are agreed upon by host agencies.

Appointment of REPS to teaching positions

REPS who been appointed as affiliate faculty and those with outstanding research accomplishments can be appointed to teaching positions (Research Assistant/ Research Associate/ Research Professors) in units where their qualifications are best suited. They are required a minimum teaching load of three units and minimum research and extension load of 12 units per year. Salary scale for faculty rates is followed.

Limited exercise of profession

The university allows appointment of Faculty and REPS to other agencies for special detail, secondment, or teaching in other institutions with which UPLB has MOAs subject to existing university rules and regulations. Details about their terms of reference, payment terms, and other benefits are covered in their specific MOA.

UNIVERSITY RESEARCH AND INTELLECTUAL PROPERTY

University Research and Intellectual Property

The University of the Philippines is an academic institution having a formidable human resource manpower composed of faculty, students and staff. This university's astute and creative resource has incessantly searched for novelty ideas through encouraging research.

University research and its outputs are products of human intellect and creativity in the form of inventions, materials, designs, technology solutions and related intellectual property which can serve the public good.

Intellectual properties are subject to ownership and require protection from theft or unauthorized use. In many instances, recognition of intellectual property rights has motivated inventors to conduct further research, ensure accessibility of research output and materials, and increase accountability. Protection of intellectual property rights may also contribute substantial financial resources for sustainability of the activities of the University and its various units as well as of the individual faculty, staff or student concerned.

Under the national law on intellectual property, the university, therefore, is covered by certain policies, rules and regulations on intellectual property rights.

Protection of Intellectual Property

On the national level, Republic Act 8293 or the Intellectual Property Code of the Philippines (IP Code) covers intellectual property and its protection. The IP Code updated and consolidated the country's laws on patents, trademarks and copyright in the light of emerging global issues in the field of intellectual property and in compliance with commitments under international conventions and treaties to which the country is a party (Expressions of Creativity, IP Philippines).

Intellectual property has two categories: industrial property and copyright and neighboring rights. Industrial property includes patents, trademarks and other marks, geographic indications, utility models, industrial designs, topographies of integrated circuits and trade secrets. On the other hand, copyrights and neighboring rights include scientific, scholarly, artistic and literary works, examples of which are, musical works, dramatic works, audio visual works, paintings and drawings, sculptures, photographic works, architectural works, sound recordings, databases and computer software, and other works embodied in Part IV (Law on Copyright) of RA 8293.

Most research outputs in UPLB are in the form of inventions, utility models, industrial designs, computer programs, as well as literary, scholarly, and artistic works. Under the IP Code, inventions are protected by patents; utility models and industrial designs by their registration; and computer programs, literary, scholarly, and artistic works by copyright.

Patent

Patent is an exclusive right granted by the State through the Intellectual Property Office of the Philippines (IP Philippines) to a patent owner for a product, process, or an improvement of a product or process for a specified period in exchange of the full disclosure of the invention.

Patentable invention offers a technical solution to a problem in any field of human activity and must fulfill three basic criteria:

1. ***Novelty or newness.*** This is determined through a search conducted by an accredited patent office to determine if the invention is new, original, and that no prior art exists over it. Prior art means everything which has been made available to the public anywhere in the world, before the filing date or the priority date of the application claiming the invention.

2. ***Inventive Step.*** There must be an inventive step involved in creating the invention. As such, the invention must not be obvious to a person skilled in the art.

3. ***Industrial applicability.*** There must be some use for the invention. It can be a practical solution to a problem that can benefit the public.

All three must be satisfied to obtain a patent. An invention has a term of protection of 20 years from the filing date of application. A patent owner has the right to prohibit any unauthorized person or entity from using, making, or selling his product or process. The right can also be transferred or assigned through licensing contracts.

Utility Models

Utility model is also known as a petty patent. To qualify, the invention must be new and industrially applicable. It has a term of protection of seven years, without renewal.

Industrial Design

This consists of composition of lines or colors or any three-dimensional forms which serve as a pattern for industrial products or handicrafts. An industrial design has a term of protection of five years which can be renewed for two consecutive periods of five years.

Layout Design of Circuits

The layout design or topography of circuits is commonly used in microchips and semiconductor chips for manufacturing. It has a term of protection of 10 years without renewal.

New Plant Varieties

To cover breeders' rights and protection of plant varieties, the Plant Variety Protection Act was signed into law. In order to qualify, the plant varieties should be new, distinct, uniform and stable. The term of protection is 25 years from the grant of Certificate of Plant Variety Protection for trees and vines. All other types, are protected for 20 years from the grant of certificate.

Trademarks

Trademark may consists of words, names and first names, signatures,acronyms among others. It serves as an indicator of source, a guarantee of quality, and an advertising tool. The right to a trademark is granted when its owner registers it with the IP Philippines. The trademarks has a 10-year protection renewable for succeeding periods of 10 years.

Copyrights

Copyright is the exclusive and legally secured right given to creators or authors for their literary and artistic works to prohibit or authorize the reproduction or copying of the work. It allows the creator to derive economic or financial reward from the use of his works by others and to claim authorship of a work and to have that authorship recognized.

The term of protection covers the lifetime of the author and 50 years after his death. Copyright application is filed with the Copyright Division of the National Library and the Supreme Court Library.

Governing Policies on Intellectual Property in UP

The Governing Principles and Policies on Intellectual Property Rights of the University of the Philippines System were approved by the Board of Regents on May 30, 2003. The UP IPR Policies have been formulated and are being implemented to promote and support the University's research function, provide an institutional mechanism for recognition of research output and protection of IPR resources to propel and sustain further research; and to establish a protocol for resolving competing interests among the various constituencies and markets.

A copy of the "Governing Principles and Policies on Intellectual Property Rights of the University of the Philippines System" is available at the Intellectual Property Office.

These policies cover all researches, research contracts, tangible research properties or outputs with or without patent or copyright protection, whether commercial or noncommercial purpose, undertaken by all faculty, researchers, students, research staff and visiting professors participating in any program, project, contract or research activity in the University using any university resource and including all technology transfer arrangements.

All types of intellectual property rights (IPRs) enumerated under the IP Code (RA 8293), namely, copyright and related rights, patents, trademarks and service marks, geographic indications, industrial designs, layout designs of integrated circuits, protection of undisclosed information and even plant variety protection are also covered by these policies.

Copyright

As a general rule, copyright of all works shall remain with the creator, except in cases of institutional or collaborative works.

1. Institutional Works

The University shall have exclusive ownership over institutional works. Institutional works include:

a) works that are supported by a specific allocation of University funds or other resources other than the usual salary and resources made available to every faculty, student or staff;
b) works created at the direction and control of the University through its official or designates for the purpose of a specific project or purpose; and
c) works whose authorship cannot be attributed to one or a discrete number of authors despite the applications of processes prescribed, namely:

    i) the said works is the result of simultaneous result of simultaneous or sequential contributions over time by multiple authors;
    ii) works created through substantial use of University resources such as libraries, research facilities, buildings, utilities, equipment, tools, apparatus including services of its employees working within the scope of their activities not for University purposes but for the personal gain or advantage of the faculty, research staff or student involved. There is a presumption of substantial use of University resources if the work has in any way been done during office hours or within the premises of the University and is related to unauthorized outside teaching or the practice of profession without requisite permission.

2. Collaborative works

In the absence of any contractual stipulation to the contrary, if the works is the result of collaborative efforts between the University, an outside entity and the creator/s, the copyright shall be jointly owned by the university, the creator/s and the outside entity.

3. Waiver of ownership of copyright by the University

In case of institutional works and works of joint ownership with the University, the University through its designated officials may waive copyright in favor of the creator if all of the following conditions are met:

a) the waiver would enhance the transfer of technology or improve the access of the works by the public in general;
b) the waiver does not violate any existing contractual obligation and to the third parties; and
c) the participation of the University in the work is acknowledged by the creator in all publications of the work, whether local or international.

If the University is unable or has not decided to publish or exhibit the works within one year from its disclosure, its copyright is automatically waived in favor of the creator. The one-year period may also be waived by the University at the request of the creator if the work is to be published in a reputable international or local journal relevant to the academic discipline to which the work belongs. The contribution of the University shall be duly acknowledged in all publications or exhibitions of the work.

<u>Patents</u>

As a general rule, rights to patents shall belong to the inventors except in commissioned inventions where the University shall own all patents.

1. Commissioned Inventions

a) Inventions that are supported by a specific allocation of University funds or other University resources;
b) Inventions produced at the direction and control of the University in pursuit of a specific project or purpose regardless of the source of funding;
c) Works whose inventorship could not be attributed to one or a discrete number of inventors despite the application of existing processes or rules;
d) Those that may be stipulated by contract as commissioned inventions.

2. Disclosure and Assignment

Creators of commissioned inventions should disclose and assign the patent to these works to the University in accordance with existing rules and implementing guidelines which may be promulgated by the President of the University.

3. Inventions as a Result of Collaborative Efforts

The identification of inventorship, whether sole, primary or joint, shall be determined as follows:

a) by contractual stipulation;
b) by applications of the rules and standards of a publication primarily intended by the collaborative effort; and
c) by alternative modes of dispute processing including mediation and arbitration.

4. Inventions Funded by Outside Entities

In the event that funding for the research is sourced by the University, wholly or partially, from outside entities, the University shall negotiate with the funding entity with respect to the ownership of the invention, patent rights and royalty sharing subject to confirmation of the Board of Regents. The agreement shall bind parties including the inventors.

5. Required Assignment of Patent to the University

Regardless of the source of funding, patents to the following inventions shall be assigned to the University:

a) those conceived or first reduced to practice by employees, faculty or students in the university in the course of the performance of their duties;
b) those created through substantial use of University resources such as libraries, research facilities, buildings, utilities, equipment, tools, and apparatus, including services of its employees working within the scope of their employment.

6. Waiver by the University of Rights to Patent

In the absence of contractual obligation to third parties, the University may release patent rights to inventors if all of the following conditions are met:

a) the University elects not to file a patent application and the inventor is prepared to do so. It shall be presumed that the University elects not to file a patent application if no application is filed two years after the disclosure of the invention or from the time the

University is reasonably presumed to have known of its existence;

b) the waiver would facilitate the transfer of technology or its access to the general public; and

c) the equity of the situation clearly indicates that such release should be given.

Neither waiver shall be given unless there is a written commitment that no further development of the invention shall be made involving the financial support or resources of the University, nor shall any waiver be made in violation of any contractual obligation of the University.

Trade and Service Marks

Trade and service marks are distinctive words or graphic symbols long associated with the University (e.g. Oblation, UP Seal, etc.) registered by the University with the Intellectual Property Philippines (IP Philippines). The University shall own trade or service marks relating to goods or services distributed by the University. These include names and symbols used by the University in conjunction with its computer programs or University activities and events.

Proprietary Information

Proprietary information includes information arising from University work. These include processes which may fall under the concept of “trade secrets.”

Tangible Research Property (TRP)

These are research results which are in tangible form (i.e. integrated circuit chips, computer software, biological organisms, engineering prototypes) which cannot be the subject of any other kind of Intellectual Property protection are presumptively considered as owned by the University. All TRPs may not be used by outside parties without the consent of the University. In no case shall biological material in any form be the subject of patents or any form of acquisition.

Invention Disclosure Procedure

a) All inventions and discoveries produced by the University personnel/unit/center shall be immediately disclosed in writing to the proper University authority. For this purpose, the University has devised the Invention Disclosure Form (***Appendix N***) to be filled up by the inventorl/unit/college concerned.

b) Where the invention or discoveries belong to the University, solely or jointly with others, or where the right to the patent is assigned to the University, the University

shall act in all matters concerned with patenting, promotion, management and protection of patents, including the use of such inventions or discoveries for the purpose of industry or commerce.

Royalty Sharing

In the absence of contractual stipulation to the contrary, royalties derived from institutional works, commissioned inventions, patents and other Intellectual Property of the University shall be shared by the University with the authors or inventor(s) as follows:

a) One-third (1/3) of the gross income shall be given to the UP System;
b) One-third (1/3) of the gross income shall be given to the constituent unit from where the author or inventor(s) originated; and
c) One-third (1/3) of the gross income shall be given to the author(s) or inventor(s).

This is without prejudice to such policies or arrangements that the constituent unit may have with respect to sharing its proportion of the net income with the department(s) or unit(s) from where the author(s) or inventor(s) originated.

Administrative Processing of IPs

Protection of university intellectual property has been institutionalized in 1997 with the creation of the Intellectual Property Office (IPO). The IPO, under the supervision of the OVCRE, is tasked to look after the interests of UPLB researchers, faculty, other staff, and even students, to ensure that their creative works are properly protected, promoted and used.

The IPO aims to monitor and evaluate intellectual property outputs that are potentially patentable and can be commercialized. The administrative process in filing for a copyright or patent application is done through the IPO. All required forms are prepared by the IPO. Please refer to ***Figure 10*** and ***Figure 11*** for the administrative procedures in filing patent and copyright, respectively.

In consideration of the developments in intellectual property rights, particularly in patenting of intellectual property, caution must be observed in publishing/promoting knowledge products that are potentially patentable. An author of a published research considered as a highly patentable research output should apply for a patent within one year of publication. This grace period is considered as non-prejudicial disclosure. Publication does not only refer to printed matter but any form of communication or activity that has made the research known to a third party or the public.

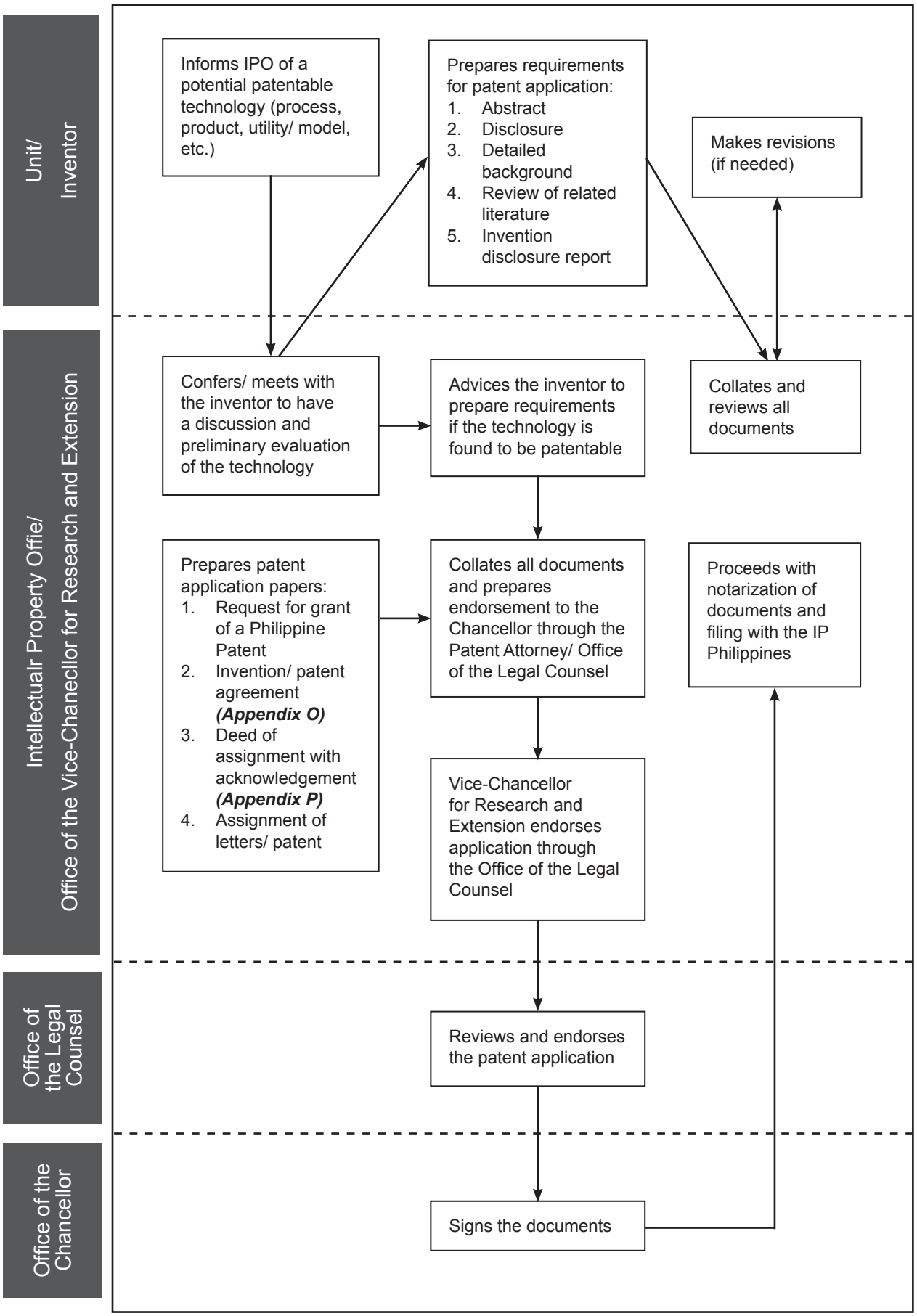

Figure 10. The process of patent application in UPLB.

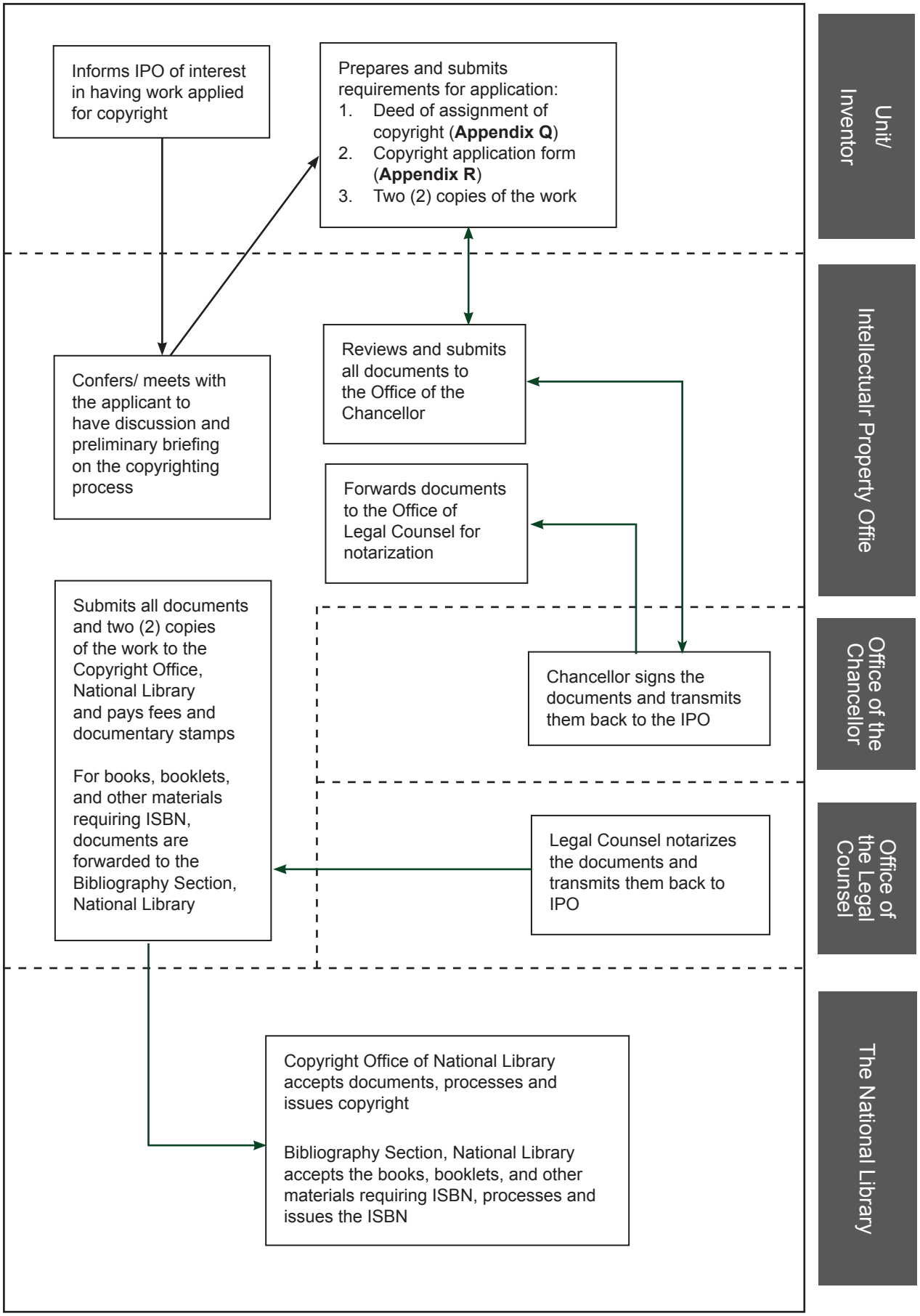

Figure 11. The process of copyright application in UPLB.

Payment of patent fees for inventions may be requested through the IPO. Priority will be given to inventions which are highly marketable or potential licensees.

New Developments

Patent Cooperation Treaty

When seeking for a patent in future activities, and if resources will allow, the university may try filing a patent application through the Patent Cooperation Treaty (PCT). This is an international filing system that allows filing of patent applications in several countries of choice through one receiving office, with one set of documents and filing fees. The countries in which a patent application may be filed with through the PCT must be contracting states of the treaty.

Issuance of Patent by IP Philippines

In the past, considering a lot of factors that hinder the issuance of patent, on the average, it took around six years to get a patent. With the reorganization of IP Philippines (formerly Intellectual Property Office), it promises that it will take around 4 years for a patent grant to be issued to applicants/inventors with the assumption that all patent applications are in the right form and context, i.e. patent claims are properly written.

Creation of the Virtual Intellectual Property Office

The Virtual Intellectual Property Office (VIPO) is an extension arm of the Intellectual Property Office under the Office of the Vice Chancellor for Research and Extension, linking various colleges, research units and offices of UPLB to IPO. It is a network of Intellectual Property representatives (IP Reps) providing assistance to and receiving assistance from IPO in all IP related matters in its efforts to strengthen the University's IP management system from creation to commercialization, broaden the base of IP practitioners, thereby making more technologies available to both the private and public sectors.

The VIPO is composed of IP representatives from various colleges, research units nominated by their respective college deans and units heads and staff each from the Legal and Business Affairs Offices.

Each resident IP Rep will be trained in various aspects of IP rights including patent, copyright, trademark and other forms of IP as well as in specialized topics as patent claim drafting, technology valuation and business plan formulation thereby serving as the unit's IP focal person.

Appendices

Name of Expert	Highest Degree Earned	Field of Specializations		
AGRICULTURE				
AGRICULTURAL SYSTEMS				
Badayos, Rodrigo B.	PhD	Pedology	Land Use	Soil Survey and Classification
Bulatao, Mary Jean G.	PhD	Animal Production/ Meat Science	Agricultural/ Farming Systems	Food Science and Community Development
Calalo, Filma C.	MS	Agricultural Education/ Extension Education	Environmental Communication	Rural Studies
Calub, Blesilda M.	PhD	Forestry	Agroforestry	Community Development/ Watershed Management
Comia, Reynaldo I.	PhD	Soil Conservation	Soil Physics	Land Use
Cosico, Wilfredo C.	PhD	Soil Fertility	Land Use	Soil Chemistry
Dayo, Ma. Helen F.	PhD	Anthropology	Gender and Development Studies	Socio-economic and Policy Studies
Escobin, Rectorino Jr., P.	PhD	Animal Science	Agricultural/ Farming Systems	Community Development
Labios, Jocelyn D.	MS	Soil Fertility	Farming Systems	Environmental Science
Lalican, Nelita M.	MS	Statistics	Agricultural Extension	Project Benefit Monitoring and Evaluation
Maghanoy, Melecio J.	MS	Wildlife	Agronomy	Extension and Rural Development
Manguiat, Ireneo P.	PhD	Soil Microbiology	Soil Fertility and Plant Nutrition	Soil Biochemistry
Matienzo, Edna Luisa A.	PhD	Development Communication	Environmental Science	Participatory Community Development, Gender Development
Medialdia, Ma. Theresa S.	MS	Agricultural Economics	Agricultural/ Farming Systems	
Medina, Cynthia R.	PhD	Environmental Science	Agricultural Economics	Farming Systems
Medina, Simplicio	PhD	Soil Conservation	Farming Systems	Agronomy
Monsalud, Florentino C.	PhD	Soil Conservation	Farming Systems	Land Use
Natural, Hospicio Jr., G.	PhD	Community Development	Animal Production	Integrated Farming Systems
Pangga, Gina V.	PhD	Soil Fertility and Plant Nutrition	Farming Systems	Soil Chemistry
Paningbatan, Eduardo Jr., P.	PhD	Soil Physics	Soil Conservation	Land Use
Ricomora, Patrick	MAgr	Soil Microbiology	Soil Fertility	Environmental Science
Sanchez, Pearl B.	PhD	Soil Chemistry	Soil Fertility and Plant Nutrition	Environmental Chemistry
Seminiano, Simeona C.	MS	Soil Science	Soil Fertility	Rural Development
Tenorio, Myrna	MM	Development Management	Community Development	Rural Extension
Tolentino, Lutgarda L.	PhD	Rural Sociology	Qualitative Research	Agricultural Extension
Valencia, Guillerma Z.	MS	Family Resource Management	Rural Development	Agricultural Economics, Extension
Villancio, Virgilio T.	PhD	Community Development	Farming Systems	Agricultural Economics
Wagan, Amparo	MS	Agricultural Systems	Environmental Studies	Agronomy

Note: This list was compiled by the OVCRE from the data submissions of various UPLB units which responded to OVCRE Memos No. 01 and 25, series of 2008

Name of Expert	Highest Degree Earned	Field of Specializations		
ANIMAL AND DAIRY SCIENCES				
Abanto, Oliver D.	MS	Meat Science		
Acda, Sonia P.	PhD	Animal Nutrition	Feed Technology	
Agbisit, Elpidio Jr., M.	PhD	Swine Production and Management	Waste Management	Poultry Nutrition
Aycocho, Isabelita O.	MS	Animal Production	Small Ruminant Production	
Barraquio, Virginia L.	PhD	Dairy Technology	Food Microbiology	Food Science
Batungbacal, Marcela R.	PhD	Veterinary Microbiology and Immunology	Avian Pathology	Poultry Production
Bautista, Jose Arceo N.	PhD	Theriogenology	Large Animal Production	Veterinary Medicine
Bejo, Mafeo B.	PhD	Animal Production	Small Ruminant Production	
Beltran, Elizabeth D.	MS, MM, ABM	Dairy Production	Small Ruminant Production	Entrepreneurship and Agribusiness Management
Bondoc, Orville L.	PhD	Animal Breeding	Genetics	Quantitative Genetics and Statistics
Bueno, Cristy M.	MS	Animal Science	Meat Science	Food Science
Capitan, Severino S.	PhD	Animal Physiology	Reproductive Physiology	
Dagaas, Clarita T.	PhD	Poultry Production and Management	Poultry Nutrition	
De Castro, Nenita L.	PhD	Animal Production Systems	Community Development	Agribusiness Management
Emata, Olivia C.	MS	Dairy Technology	Microbiology	Dairy Products Processing
Estrella, Consuelo Amor S.	MS	Animal Physiology	Molecular Genetics	
Galang, Myrna S.	MS	Dairy Extension	Agricultural Economics	Dairy Training Management
Gomez, Iluminada V.	MS	Dairy Products Processing	Post-harvest Technology	Meat Processing
Lambio, Angel L.	PhD	Animal Breeding	Genetics	Quantitative Genetics
Lavega, Cisima P.	MS	Animal Science	Poultry Production	
Loresco, Menandro M.	MS	Pasture Agronomy	Dairy Production	Agronomy
Luis, Edwin S.	PhD	Animal Nutrition	Poultry Nutrition	
Magpantay, Veneranda A.	MS	Poultry Production		
Mateo, Carmencita D.	PhD	Poultry Science		
Oliveros, Maria Cynthia R.	PhD	Animal Production	Animal Nutrition	Meat Science and Dairy Technology
Peñalba, Francisco F.	PhD	Animal Breeding	Genetics	Statistics
Rayos, Antonio A.	PhD	Theriogenology	Veterinary Medicine	Dairy Production
Roxas, Domingo B.	PhD	Animal Science	Ruminant Nutrition	
Sangel, Percival P.	MS	Animal Physiology	Biochemistry	
Sevilla, Cesar C.	PhD	Ruminant Nutrition	Ruminant Production	Farming Systems
Sulabo, Salvador F.	MS	Animal Science	Swine Production	
Supangco, Enrico P.	PhD	Range and Pasture Management	Ruminant Production	Production Systems
Vega, Renato SA.	PhD	Animal Physiology	Growth and Metabolism Physiology	
Velasco, Noe B.	MS	Dairy Production	Dairy Nutrition	Forage and Pastures
Yebron, Jr., Medino Gedeun	MS	Molecular Biology and Biotechnology	Animal Biotechnology	

Name of Expert	Highest Degree Earned	Field of Specializations		
CROP PROTECTION				
Adalla, Candida B.	PhD	Economic Entomology	Host Plant Resistance to Insects	Insect Pest Management
Adorada, Jessamyn R.	PhD	Insect Systematics	Biological Control	
Ardales, Edna Y.	PhD	Entomology	Molecular Pathology and Biotechnology	Microbiology
Bacud, Susan T.	MS	Community Development/ Sociology	Research and Development Management	Genetics
Bajet, Cristina M.	MS	Pesticide Toxicology and Chemistry	Pesticide Residue Analysis in Field Crops and Environmental Substrates	Ecotoxicological Impact of Pesticides on Aquatic Organisms, Non-target Organisms
Baltazar, Aurora M.	PhD	Herbicide Physiology	Weed Management	Weed Biology, Ecology and Physiology
Barcial, Priscilla M.	MS	Weed Science/ Weed Management	Biological Control of Weeds	Crop Protection, Serological Detection of Plant Viruses
Bariuan, Flor V.	MS	Weed Biology	Weed Ecology	Integrated Weed Management
Bariuan, Juanito V.	MS	Herbicide Physiology	Weed Ecology	Extension
Bato, Sofronio M.	PhD	Integrated Pest Management	Insecticide Toxicology	Economic Entomology
Bayot, Rizaldo G.	PhD	Phytobacteriology	Biological Control	Vegetable Disease Management
Calumpang, Susan May F.	PhD	Pesticide Management	Chemical Ecology	Pesticide Chemistry and Environmental Toxicology
Caoili, Barbara L.	PhD	Insect Pathology	Insect Virology	Molecular Biology
Castillo, Ariene G.	MS	Phytonematology	Insect Pathology	Biological Control
Cayabyab, Bonifacio F.	PhD	Integrated Pest Management	Plant Environmental Health (Quarantine Pest Surveillance, Biology and Management and Sanitary and Phytosanitary Measures for Market Access)	Biodiversity and Conservation
Ceballo, Flor A.	PhD	Insect Behavior	Biological Control	Integrated Pest Management
Cumagun, Christian Joseph R.	PhD	Fungal Genetics	Molecular Plant Pathology	Biological Control
Dalisay, Teresita U.	PhD	Mycology	Plant Pathology	Biodiversity
Ebuenga, Melvin D.	MS	Plant Disease Epidemiology	Pest Management	Plant Disease Management
Elvira, Paul Rommel V.	MS	Genetics	Molecular Plant Pathology	Molecular Biology
Fabro, Lorenzo E.	MS	Integrated Weed Management	Fertilizer Management (Plant Nutrition)	Hybrid and Inbreed Rice Seed Production
Gapud, Victor P.	PhD	Insect Systematics	Insect Ecology	Integrated Pest Management
Garcia, Rosalinda P.	PhD	Postharvest Pathology (Grain Storage and Mycotoxicology)	Seed Pathology	Biological Control
Gonzales, Pablito G.	PhD	Pest Management	Biological Control	Biodiversity and Butterfly Culture
Javier, Pio A.	PhD	Insect Pest Management in Corn, Citrus, Lanzones and Coffee	Biological Control of Insect Pests of Corn, Sugarcane, Citrus and Vegetables	Biological Control

Name of Expert	Highest Degree Earned	Field of Specializations		
Justo, Valeriana P.	MS	Insect Ecology	Pest Management	Extension
Magsino, Ester A.	MS	Entomology	Host Plant Resistance	Insect Pest Management
Magsino, Gil L.	PhD	Weed Ecology	Integrated Crop Management	Plant Nutrition
Malenab, Evangeline T.	MS	Agronomy	Business Management	
Matanguihan, Glafera Janet B.	MS	Molecular Plant Pathology	Genetics of Host Parasitic Interaction	
Medina, Celia dR.	PhD	Insect Ecology	Integrated Pest Management	Biological Control
Medina, Jose R.	PhD	Integrated Pest Management	Biological Control	Adult Education
Natural, Marina P.	PhD	Plant Pathology	Management of Bacterial and Fungal Diseases, Phytobacteriology	Host Parasite Interaction
Navasero, Marcela M.	MS	Entomology	Biological Control	Pest Management
Navasero, Mario V.	MS	Insect Systematics	Biological Control	Pest Management
Ocampo, Virginia R.	PhD	Insecticide Toxicology	Insect Physiology and Biochemistry	Environmental Toxicology, Mammalian Toxicology
Opina, Oscar S.	PhD	Epidemiology	Disease Managemet	Pest Management
Orajay, Joey I.	MS	Nematology		
Quimio, Gorgonio M.	PhD	Insect Behavioral Ecology	Biological Control and Insect Pest Management	Insect Transmission of Plant Disease
Ramirez, Analiza Henedina M.	PhD	Weed Science, Weed Ecology	Crop Protection	Crop Science
Raymundo, Avelino D.	PhD	Epidemiology	Modeling	Host Resistance
Sinohin, Alfredo M.	PhD	Rice Pathology	Disease Managemet	Biological Control
Sta. Cruz, Filomena C.	PhD	Plant and Molecular Virology	Crop Protection Biotechnology, Plant Virus Disease Diagnostics	Virus Disease Management
Sumalde, Augusto C.	PhD	Insect Transmission of Plant Pathogens	Integrated Pest Management	Insect Biology and Ecology
Tolentino, Malve S.	MS	Plant Pathology	Seed Science and Technology	Weed Science
Varca, Leonila M.	PhD	Pesticide Residues	Insect Toxicology	Analytical Chemistry
Vargas, Daniel G.	MS	Biological Control	Integrated Pest Management	Cultural Management
Velasco, Luis Rey I.	PhD	Insect Ecology	Integrated Pest Management	Biological Control
Zorilla, Rustico A.	PhD	Plant Pathology	Nematology	Biological Control
CROP SCIENCES				
Agravante, Josephine U.	PhD	Horticulture	Postharvest	Physiology
Aguilar, Edna A.	PhD	Farming Systems	Crop Production and Management	Crop Physiology
Altoveros, Nestor C.	MS	Plant Genetic Resources	Crop Evolution	Biochemistry
Angeles, Domingo E.	PhD	Crop Nutrition	Plant Propagation	Growth Regulation
Aquino, Annalissa I.	MS	Seed Technology	Organic Crop/Seed Production	Soil Conservation
Arquiza, Amihan L.	PhD	Ornamental Horticulture	Crop Physiology/ Production and Management	Biotechnology
Artes, Leonisa A.	MS	Horticulture	Postharvest	Physiology
Aspuria, Evalour T.	PhD	Crop Production	Crop Physiology	
Avenido, Renato A.				
Beltran, Marilyn M.	MM	Development Management	Training and Planning	Extension and Technical Coordination

Name of Expert	Highest Degree Earned	Field of Specializations		
Bon, Sancho G.	MS	Plant Genetic Resources and Management	Plant Pathology	Rice Breeding and Varietal Trials
Bondad, Nestor D.	MS	Crop Physiology	Crop Production	
Borromeo, Teresita H.	MS	Rice Breeding	Plant Genetic Resources Conservation and Management	Plant Physiology
Canama, Alma O.	MS	Plant Genetics	Plant Pathology	Plant Genetic Resources
Cayaban, Ernesto B., Jr.	MAgr	Plant Breeding	Agronomy	Genetics
Cedo, Ma. Lourdes O.	PhD	Plant Physiology	Plant Hormones	Tissue Culture
Colle, Marivi G.	MS	Plant Genetics	Molecular Biology and Biotechnology	Microbiology
Cuevas, Severino E.	MAGR	Agroforestry	Crops Management	Horticulture
Damasco, Olivia P.	PhD	Molecular Biology	Plant Physiology	
de Guzman, Constancio C.	PhD	Crop Physiology	Production of Spices, Medicinal Plants and Essential Oil	Urban Agriculture
de Guzman, Lucille Elna P.	MS	Seed Technology	Crop Physiology	Plant Genetic Resources Conservation and Management
Del Carmen, Dormita R.	PhD	Postharvest System Development		
Del Rosario, Edwin E.	MAgr	Plant Breeding	Crop Physiology	Horticulture
dela Cruz, Felipe S., Jr.	PhD	Plant Genetic Resources Conservation and Management.	Crop Production	Crop Physiology
Dela Cueva, Fe M.	PhD	Plant Pathology Bacteriology	Virology	Mycology
Delfin, Evelyn F.	PhD	Soil Microbiology	Plant Microbe Interaction	Plant Nutrition
Dizon, Teodora O.	PhD	Host Plant Resistance: Nematodes, Fungus, Virology	Induced Mutation	
Dolores, Lolita M.	MS	Host Plant Resistance in Vegetable, Rootcrops, Fruits	Molecular Plant Pathology	Virology
Edaño, Ma. Lourdes S.	MS	Sustainable Agriculture	Crop Production and Management	Farming System
Enicola, Elmer E.	MS	Plant Breeding		
Escamos, Senen H.	MS	Crop Breeding	Crop Physiology	Extension
Esguerra, Elda B.	PhD	Horticulture	Postharvest	Plant Pathology
Espino, Rene Rafael C.	PhD	Fruit Breeding and Genetics/Fruit Production	Crop Production and Management	Seed Production
Fernandez, Pamela G.	PhD	Seed Physiology	Sustainable Agriculture/ Ecological Agriculture	General Conservation
Flor, Noida B.	MS	Horticulture	Postharvest	Physiology
Galvez, Hayde F.	PhD	Molecular Plant Genetics	Plant Breeding	Plant Genomics
Garcia, Roberta N.	PhD	Biochemistry	Molecular Biology and Biotechnology	
Gueco, Lavernee S.	MS	Plant Breeding	Plant Genetic Resources Conservation and Management	Banana Production and Management
Hautea, Desiree M.	PhD	Plant Biotechnology	Plant Genetics and Breeding	Agricultural Botany
Hernandez, Jose E.	PhD	Plant Breeding	Cereal Breeding	Crop Production and Management
Huelgas, Visitacion	MS	PGR Documentation	Cytogenetics	Molecular Biology
Lales, Joveno S.	PhD	Crop Production and Management	Crop Physiology/ Ecology	

Name of Expert	Highest Degree Earned	Field of Specializations		
Lalican, Danilo J.	MAgr	Crop Breeding	Crop Production	Extension
Lalusin, Antonio G.	PhD	Rootcrops and Abaca Molecular Breeding	Abaca and Root Crops Breeding	Plant Genetic Engineering
Lanosia, Laureano B.	MS	Agronomy Crop Production and Management	Publications	Layout and Design
Laude, Tonette P.	MS	Plant Breeding	Corn Production	
Laurena, Antonio C.	PhD	Plant Biochemistry	Molecular Biology and Biotechnology	
Lee, Virma Rea G.	MS	Development Communication	Biotechnology Communication	Management
Lit, Merdelyn C.	PhD	Entomology (Host Plant Resistance)	Plant Stress Physiology (UV-B Stress)	Crop Production (Bamboo Propagation and Production)
Mabesa, Renato C.	PhD	Seed Technology	Plant Nutrition	Vegetable Production
Magdalita, Pablito M.	PhD	Fruit Breeding	Plant Transformation	Tissue Culture
Maghirang, Rodel G.	PhD	Plant Breeding	Organic Agriculture	Vegetable and Fruit Production
Manguiat, Proceso H.	MS	Rootcrops Breeding, Agronomy, Physiology and Utilization	Genetics	
Maunahan, Matilde V.	PhD	Agricultural Economics (Marketing and Prices)	Resource Economics	Development Communication
Mendoza, Evelyn Mae T.	PhD	Biochemistry	Molecular Biology and Biotechnology	Plant Genetic Resources
Mendoza, Teodoro C.	PhD	Farming Systems	Ecological Agriculture	Eco-Physiology
Mercado, Ma. Fatima O.	MS	Seed Technology	Sustainable Agriculture/ Ecological Agriculture	Crop Production
Namuco, Leon O.	PhD	Plant Breeding and Genetics	Fruit Crop Production and Management	Plant Genetic Resources
Naranja, Leonido R.	PhD	Plantscape Horticulture	Ornamental Horticulture	Plant Production and Management
Narciso, Josefina O.	PhD	Vegetable Production	Vegetable Breeding	Vegetable Biotechnology
Navarro, Rudy S.	MAgr	Plant Breeding	Seed Production	Extension
Nuevo, Perlita, A.	PhD	Horticulture	Botany	Morpho-Anatomy
Ocampo, Apolonio M.	PhD	Soil Fertility Management	Plant Nutrition	Stress Physiology/ Problem Soils
Ocampo, Eureka Teresea M.	PhD	Stress Physiology	Biochemistry	Molecular Biology
Ong, Susan A.	MS	Landscape Architecture	Planning and Design	Environmental Science (Agroforestry)
Opina, Nenita L.	PhD	Host Plant Resistance	Molecular Plant Pathology	Mycology/Bacteriology
Pascual, Cecilia B.	PhD	Host Plant Resistance in Cereals, Fruits and Vegetables	Molecular Plant Pathology	Induced Plant Resistance
Pateña, Lilian F.	MS	Plant Physiology	Plant and Tissue Culture	Plant Conservation
Protacio, Calixto M.	PhD	Crop Physiology	Mango Production	Plantation Crop Production
Quilloy, Reynaldo B.	MS	Crop Production	Plant Breeding	Farm Supervision
Quimio, Celsa A.	PhD	Plant Breeding	Crop Biotechnology	Plant Biochemistry
Rasco, Agripina O.	MAgr	Vegetable Seed Production	Extension	Ornamental Production
Reglos, Rocelie A.	MS	Crop Physiology	Tissue Culture	
Reyes, Melquiades, E. C.	PhD	Plant Breeding	Plant Molecular Genetics	Vegetable Crop and Seed Production
Ros, Elena C.	MS	Crop Production	Nursery Management	

Name of Expert	Highest Degree Earned	Field of Specializations		
Salazar, Artemio M.	PhD	Plant Breeding	Plant Physiology	
Sanchez, Fernando C., Jr.	PhD	Landscape Planning and Design	Landscape Establishment and Maintenance	Turf Management
Santos, Primitivo Jose A.	MS	Plant Nutrition	Plant Physiology	Horticulture (Vegetables)
Serrano, Edralina P.	PhD	Postharvest Physiology/ Biochemistry	Agricultural Chemistry	Food Science
Siar, Simeona V.	PhD	Plant Breeding	Genetics	Plant Pathology
Sison, Ma. Luz J.	MS	Entomology (Host Plant Resistance)	Plant Breeding	Molecular Biology
Sta. Cruz, Pompe C.	PhD	Crop Production (Field Crops)	Crop Nutrition	Crop Physiology
Taylo, Lourdes D.	PhD	Entomology	Host Plant Resistance Regulatory	
Valencia, Lolita DLC.	PhD	Plant Pathology	Plant Breeding	
Villavicencio, Ma. Lea H.	MS	Plant Genetic Resources Conservation and Management	Horticulture	Crop Physiology
Villegas, Gregorio M.	MS	Crop Production and Management	Corn Breeding	
Yaptengco, Kevin F.	PhD	Agricultural Engineering	Bio-industry	Postharvest Engineering
Zamora, Oscar B.	PhD	Crop Physiology/Ecology	Crop Production and Management	Agroforestry
FOOD SCIENCE AND TECHNOLOGY				
Cantre, Dennis V.	MS	Food Engineering		
Carpio, Ernesto V.	PhD	Food Science	Food Engineering	
Collado, Lilia S.	PhD	Food Science	Food Microbiology	Food Chemistry
De Villa, Teodora M.	MS	Food Science	Food Processing, Product Research and Development	
Del Rosario, Olivia M.	PhD	Food Science	Food Chemistry	Food Processing
Dia, Vermont P.	MS	Food Science	Food Chemistry	Food Processing
Dizon, Erlinda I.	PhD	Applied Microbiology	Food Fermentation	Food Processing
Flores, Floirendo P.	MS	Food Engineering	Waste Management	Food Processing
Mabesa, Linda B.	PhD	Food Science	Food Chemistry	Sensory Evaluation
Mabesa, Reynaldo C.	PhD	Food Science	Food Hygiene and Sanitation	Food Microbiology
Mopera, Lotis E.	MS	Food Microbiology	Food Biotechnology	
Ombico, Marife T.	MS	Food Science	Food Processing, Product Research and Development	
Santiago, Dennis Marvin O.	MS	Food Chemistry	Food Biochemistry	Food Analysis
Sumague, Ma. Josie V.	PhD	Food Science	Food Microbiology	Food Processing
Tan, Wilson T.	PhD	Food Engineering	Food Science	Food Processing
ARTS AND SCIENCES				
ARTS, HUMANITIES AND COMMUNICATION STUDIES				
Arejola, Ma. Teresa DV.	MA	Art	Humanities	Philippine Art
Dizon, Mabini DG.	MS	Development Communication	English	Writing
Fernandez, Jean Claire C.	MA	Speech Communication	Theater	
Gapud, Marietta A.	MPh	Western Art/ History	Oriental Art/ History	French/ Music
Gupa, Dennis D.	MA	Directing for Theater	Youth/ Children's Theater	Contemporary/ Post-modern Theater/ Performance

Name of Expert	Highest Degree Earned	Field of Specializations		
Laforteza, Dulcinea R.	MA	Technical Writing	Historical Fiction	
Mendoza, Grace Bernadette T.	MA	Speech Communication	Philippine Studies	
Torreta, Noel K.	MS	Writing/ Technical Communication	Gender Studies	Communication and Literary Studies
Yapo, Jerry R.	MA	Writing/ Journalism	Literary Theory and Criticism	Philippine Studies
BIOLOGICAL SCIENCES				
Afuang, Leticia E.	PhD	Wildlife Biology	Enviromental Science on Protected Areas Conservation and Management	Zoology/ Herpatology
Agdaca, Cheryl D	MS	Biology	Genetics	Molecular Biology
Aurellado, Maria Eleanor B.	MS	Marine Biology	Marine Protected Areas	Zoology
Avenido, Renato A.	PhD	Agricultural Science	Plant Tissue Culture/ Biotechnology	Crop Physiology
Banaay, Charina Gracia B.	MS	Microbiology	Molecular Biology	Botany (Plant Ecology)
Baril, Joselito A.	MS	Conservation Biology	Genetics and Vertebrate Biology	Environmental Science
Barrion, Adelina A.	PhD	Insects Genetics	Entomology	Genetics
Bayer, Martha Hedwig D.	MS	Microbiology	Microbial Systematics	Food Microbiology
Buot, Inocencio Jr, E.	PhD	Botany	Plant Morphology/ Anatomy/ Taxonomy	Landscape Ecology
Cabrera, Jonathan F.	Dr.ret. nat.	Systematics	Biogeography/ Phylogenetics/Plant Taxonomy	Molecular Systematics
Cadiz, Nina M.	PhD	Horticulture	Crop Physiology	Botany (Plant/ Stress Physiology)
Camacho, Ma. Vivian dlC.	PhD	Marine Ecology and Aquaculture	Fisheries Science	Zoogeography
Cardenas, Lourdes B.	Dr.ret. nat.	Plant Biotechnology	Plant Natural Products	Medicinal Plants
Castillo, Lourdes V.	PhD	Aquatic Ecology	Zoology	Fisheries Science
Cervancia, Cleofas R.	PhD	Apiculture/ Pollination Biology	Entomology	Enviromental Biology
Cruz, Wilma T.	PhD	Microbiology	Molecular Microbiology	
Cuevas, Virginia C.	PhD	Botany (Mycology)	Plant Ecology	Environmental Biology
Dacuma, Mary Grace B.	MS	Zoology	Molecular Biology and Biotechnology	Parasitology/ Immunology
Dalmacio, Ida F.	PhD	Food Science	Microbiology	Plant Pathology
De Guia, Anna Pauline O.	MS	Wildlife Biology	Zoology/Mammalogy	Environmental Resources
De Lara, Ayaloni V.	PhD	Malacology	Histology	Cellular Ecotoxicology
Dela Viña, Celia B.	MS	Genetics	Agronomy	
Diaz, Ma. Genaleen Q.	PhD	Genetics	Molecular Biology	Plant Breeding
Dimalibot, Judeline C.	MS	Zoology	Reproductive Physiology	Animal Science
Dionisio-Sese, Maribel L.	Dr.ret. nat	Botany	Plant Physiology	Molecular Biology and Biotechnology
Dupo, Aimee Lynn B.	MS	Entomology	Insect Taxonomy	Insect Ecology
Duka, Ivan Marcelo A.	MS	Genetics	Cell Biology	Molecular Biology
Encabo, Jaymee R.	MS	Microbiology	Virology	Veterinary Microbiology
Encarnacion, Gem D.	MS	Microbiology	Microbial Physiology	
Fajardo, Analinda C.	MS	Ecology/ Environmental Science	Environmental Biology	Pollination Biology

Name of Expert	Highest Degree Earned	Field of Specializations		
Gaza, Hazel L.	MS	Genetics	Plant Breeding	Molecular Biology/ Biochemistry
Gonzalez, Juan Carlos T.	MS	Wildlife Biology	Zoology/Ornithology	Widlife Ecology
Gruezo, William Sm.	PhD	Plant Systematics/ Taxonomy	Quarternary Environment	Terrestial Biodiversity
Habito, Consuelo Dl.	PhD	Aquatic Biology	Environmental Modelling and Management	Geomatics
Hadsall, Annalee S.	MS	Botanical Orchids	Botany	Horticulture
Hilomen, Vincent V.	PhD	Reef Fish Ecology	Reef Fisheries	Marine Biology
Honrade, Therese Lina A.	MPAF	Ecology	Educational Management	Botany (Plant Ecology)
Lambio, Ivy Amor F.	MS	Botany	Genetics	Conservation Biology
Lantican, Nacita B.	PhD	Agricultural Engineering	Industrial Microbiology	Crop Processing
Laude, Rita P.	PhD	Botany	Genetics	Agriculture
Lit, Ireneo Jr. L.	PhD	Entomology	Systematics	Conservation Biology
Macandog, Damasa M.	PhD	Soil Science	Botany	Agriculture
Maligalig, Ma. Dalisay G.	PhD	Vertebrate Physiology	Biochemistry	Toxicology
Manuel, Ma. Carmina C.	MS	Genetics	Cell Biology	Biochemistry
Mendioro, Merlyn S.	PhD	Genetics	Agronomy	Plant Breeding
Mendoza, Joel C.	MD	Medical Doctor	General Medicine	Cell Biology
Mendoza, Bernadette C.	PhD	Microbiology	Medical Microbioloy	Industrial Microbiology
Nacorda, June Owen O.	MS	Botany	Phycology	Biochemistry
Ocampo, Pablo P.	PhD	Vertebrate Biology and Vertebrate Pest Management (Physiology and Behaviour)	Zoology	Sociobiogy
Opulencia, Rina B.	MS	Microbiology	Plant Pathology	
Paller, Vachel Gay V.	MS	Zoology		
Raymundo, Asuncion K.	PhD	Bacteriology	Microbial Genetics	Plant Pathology
Reamillo, Ma. Cecilia S.	MS	Genetics	Biochemistry	Molecular Biology
Reyes, Roberto C.	Dr.ret. nat.	Biology	Crustacean Physiology, Behavior and Aquaculture	Silkworm Genetics and Breeding
Sabino, Noel G.	MS	Microbiology	Soil Science	Microbial Ecology
Sotto, Rachel C.	PhD	Horticulture (Crop Physiology)	Botany	Plant Biodiversity and Conservation
Torreta, Nerissa K.	MS	Morpho-Anatomy	Economic Botany	Phycology
Ubaldo, Nilda N.	MS	Development Zoology	Aquaculture	Reproductive Biology and Induced Breeding of Fish
Villegas, Lucille C.	PhD	Microbiology	Virology	
Villa, Neilyn O.	MS	Genetics	Biochemistry	Molecular Biology
Waje, Carmela C.	MS	Microbiology	Food Microbiology	Industrial Microbiology
Zafaralla, Macrina T.	PhD	Environmental Science	Phycology/Mycology	Agriculture
COMPUTER SCIENCE AND INFORMATION TECHNOLOGY				
Albacea, Eliezer A.	PhD	Design Analysis and Series Parallel Algorithms		
Flores, Giovanni A.	MS	Series/ Parallel Algorithms	Programming Languages	Databas Management
Jacildo, Arian J.	MS	Design Analysis of Algorithms		
Khan, Concepcion L.	MS	Data Mining	E-learning Information Systems	
Mariano, Vladimir Y.	PhD	Computer Vision	Digital Image Processing	Pattern Recognition
Merle, Enrico S.	MS	Voice-over-Internet Protocol	Web Development	Network Administration

Name of Expert	Highest Degree Earned	Field of Specializations		
Pabico, Jaderick P.	MS	Soft Computing	High-Performance Computing	Algorithms
Paterno, Margarita C. S.	MS	Neural Networks	Image Processing	Algorithms
Samaniego, Jaime M.	MS	Design and Analysis of Algorithms	Combinatorial Optimization	Bioinformatics Algorithms
CHEMICAL SCIENCES				
Angelia, Mark Rikard N.	MS	Biochemistry	Molecular Biology	Agricultural Chemistry
Catahan, Macario P.	PhD	Agricultural Chemistry	Physical Chemistry	
Fajardo, Norma N.	PhD	Agricultural Chemistry	Molecular Biology	Biochemistry
Flavier, Maxima E.	PhD	Analytical and Environmental Chemistry	Agricultural Chemistry	Biochemistry
Hernandez, Hidelisa P.	PhD	Agricultural Chemistry	Organic Chemistry	Natural Products
Lacsamana, Marivic S.	PhD	Biochemistry	Food Science	Agricultural Chemistry
Librojo-Basilio, Nieva T.	PhD	Biochemistry	Nutritional Toxicology	Chemical Toxicology
Merca, Florinia E.	PhD	Agricultural Chemistry	Biochemistry	Food Science
Micor, Jose Rene L.	MS	Chemistry	Agricultural Chemistry	
Monterola, Conrado P.	MS	Chemical Engineering	Physical Chemistry	
Peralta, Milagros M.	PhD	Organic Chemistry	Chemistry	Agricultural Chemistry
Rodriguez, Evelyn B.	PhD	Chemistry	Agricultural Chemistry	Organic Chemistry
Rodriguez, Myrna S.	PhD	Chemistry	Agricultural Chemistry	Bio-inorganic Chemistry
Sabularse, Veronica C.	PhD	Food Chemistry	Biochemistry	Food Science
Solivas, Josefina L.	MS	Soil Science	Chemistry	Agricultural Chemistry
Tamayo, Jelynne P.	MS	Chemistry	Physical Chemistry	
Torio, Mary Ann O.	PhD	Biochemistry	Molecular Biology	Food Science
Villar, Teofila dC.	MS	Food Technology	Agricultural Chemistry	Analytical Chemistry
HUMAN KINETICS				
Abueg, Myra Luz G.	MS	Sports/ Dance	Fitness	Recreation
Buan, Aivi R.	MS	Sports	Recreation	Leisure Studies
Buot, Merites M.	MS	Dance	Philippine Studies	Exercise Gerontology
Calabig, Medelson B.	MS	Sports		
Cardenas, Rowena C.	MS	Sports		
Dela Cruz, Jovita S.	MS	Sports	Dance	Philippine Studies
Dirain, Leonora A.	MS	Sports	Dance	Recreation
Enriquez, Naomi M.	MS	Dance	Fitness	Choreography
Luna, Jocelyn Ann C.	MS	Dance	Sports	Recreation
Maculada, Sharon T.	MS	Sports		
Marilag, Virgilio B.	MS	Sports	Fitness/ Recreation	Dance
Monte, Rowena N.	MS	Recreation	Leisure Studies	Dance
MATHEMATICAL AND PHYSICAL SCIENCES				
Albao, Marvin A.	PhD	Condensed Matter Physics	Surface Physics	Computational Materials Science
Alinea, Allan A.	MS	Computational Physics	Complex Systems	Mathematical Physics
Altoveros, Nelio C.	MS	Instrumentation	Computer Hardware	Electronics
Carambas, Benedicta M.	PhD	Physics Education		
Cuaresma, Genaro A.	MS	Numerical Analysis	Operations Research	Mathematics Education
Cuaresma, Ma. Cristeta N.	PhD	Group Theory	Combinatorics	Actuarial Science
Dimasuay, Lynie B.	MS	Mathematics Education	Matrix Theory	

Name of Expert	Highest Degree Earned	Field of Specializations		
Domingo, Alleli C.	MS	Operations Research	Mathematics Education	
Dorado, Crisanto A.	PhD	Actuarial Science	Stochastic Modeling	Risk Theory
Eusebio, Rosemarie D.	MS	Physics Education		
Florido, Emmanuel A.	MS	Materials Science	Instrumentation	Optoelectronics/ Optics
Herrera, Marvin U.	MS	Materials Science	Superconductors	
Lawas, Vernel M.	MS	Mathematics Education	Differential Equations	Matrix Theory
Loyola, Jean O.	PhD	Semigroup Theory	Graph Theory	Mathematics Education
Panopio, Rolando G.	MS	Graph Theory	Mathematics Education	Combinatorics
Piñol, Chrysline Margus N.	MS	Computational Biophysics	Statistical Mechanics	Instrumentation
Ramos, Rolando E.	PhD	Graph Theory	Combinatorics	
Sison, Virgilio P.	PhD	Coding Theory	Finite Ring Theory	Combinatorics
Sotto, Meredith Anne C.	MS	Surface Science	Ceramics	Instrumentation
Tapia, Alvin Karlo G.	MS	Electroactive Polymers	Instrumentation	Computational Materials Science
SOCIAL SCIENCES				
Abrigo, Girlie Nora A.	MA	Sociology of Agriculture	Disaster Studies	Social Organization
Añonuevo, Augustus T.	MA	Overseas Migration and Development	Sociology of Religion	Filipino Psychology
Boncocan, Rhina A.	M	Social History	Local History	Social Movements
Diestro, Dwight David A.	M	Philippine History	Local History	Art Studies
Nelson, Gloria Luz M.	PhD	Population Studies	Migration (Internal), Disaster, Aging	Population and Environment
Santos, Antonio L.	PhD	Political Theory	Political Dynamics	International Relations
Tapay, Nenita E.	PhD	Sociology	Social Impact Assessment	Social Organization
BIOTECHNOLOGY				
Aggangan, Nelly S.	PhD	Plant Nutrition	Forest Pathology	Bioremediation
Alcantara, Edwin P.	PhD	Entomology	Biochemistry	Molecular Biology
Alcantara, Virgie A.	MS	Enzyme Purification	Food Chemistry	Analytical Chemistry
Anarna, Juliet A.	MS	Forest Biotechnology	Agroforestry	
Bautista, Ma. Anita M.	MS	Molecular Biology		
Brown, Marilyn B.	PhD	Plant Pathology	Mycology, Soil Micrcobiology	Medicinal Fungi
Calapardo, Marilou R.	MS	Food Science	General Biotechnology	Plant Tissue Culture
Custodio, Liza G.	MM	Development Management	Human Resource	
Ebora, Reynaldo V.	PhD	Entomology	Plant Biotechnology	Genetic Engineering for Insect Resistance
Elegado, Francisco B.	PhD	Food Science	Fermentation Technology	Sugar Technology
Escaño, Cristopher S.	MS	Plant Pathology		
Espiritu, Bayani M.	PhD	Agricultural Biotechnology	Soil Microbiology, Plant Physiology	Soil Science
Exconde, Severina B.	PhD	Microbiology/ Plant Pathology	Virology/Immunology	Entomology
Garcia, Imelda V.	MS	Development Communication	IEC Materials Development	Project Management
Lales, Estrella H.	MS	Soil Science	Soil Fertility	Agronomy
Marfori, Eufrocinio DC.	PhD	Plant Tissue Culture	Plant Secondary Metabolism	Natural Products

Name of Expert	Highest Degree Earned	Field of Specializations		
Mendoza, Danilo M.	PhD	Soil Microbiology, Plant Nutrition	Agroforestry	Biochemistry/ Biotechnology
Mercado, Margarita A.	MS	Food Microbiology	Food Science	Food Enzymes
Mercado, Susana M.	PhD	Food Science	Enzyme Technology	Food Biotechnology
Migo, Veronica P.	PhD	Analytical and Environmental Chemistry	Wastewater Treatment	Laboratory Accredication
Monsalud, Rosario G.	PhD	Microbial Resource Conservation	Bacterial Systematics	Environmental Microbiology
Montes, Ana Reylene J.	MM	Development Management	Extension	Educational Communication
Nayve, Fidel Rey P. Jr.	PhD	Bioprocess/ Biochemical Engineering	Bioremediation	Animal Cell Culture
Opeña, Luz B.	MBA	Economics	Extension, Intellectual Property Rights	Marketing, Economic Development
Padilla, Virginia M.	PhD	Soil Science, Soil Microbiology	Agroforestry	Biochemistry/ Biotechnology
Padua, Leodegario E.	DA	Microbiology in Plant Pathology		
Pajares, Irene G.	MS	Microbiology	Biofuel	Molecular Biology
Papa, Irene A.	MS	Microbiology	Food Science	
Pedro, Mannix S.	PhD	Biotechnology		
Perez, Ma. Teresa M.	MS	Microbial Genetics	Food Microbiology	Molecular Biology
Pham, Laura J.	PhD	Food Science	Biotechnology	Chemistry (Lipids)
Ramirez, Teresita J.	MS	Food Microbiology	Animal Products Food Processing	General Biotechnology
Ramos, Claire S.	MS	Plant Virology	Plant Tissue Culture for Micropropagation	
Rasco, Precy M.	MS	Food Science	Nutrition (Biochemistry)	Human Nutrition (Veterinary Pharmacology)
Saguibo, Jennifer D.	MS	Food Microbiology	Biochemistry	Molecular Biology
Sapin, Arsenia B.	MS	Food Science	Enzyme Biotechnology	Food Fermentation
Saul, Concepcion DL.	MS	Library and Information Science	Database Development	Information Network Development
Sedano, Susan A.	MS	Veterinary Microbiology	Biochemistry	Food Microbiology
Simbahan, Jessica F.	PhD	Microbial Community Studies/Mol Bio	Bioremediation	Agricultural Biotechnology
Sison, Ma. Lourdes Q.	PhD	Soil Microbiology	Soil Fertility	Agronomy
Tambalo, Fides Z.	MS	Industrial Microbiology	Environmental Science	Soil Science
Tambalo, Richard D.	MS	Industrial Microbiology	Biochemistry	Molecular Biology
Tavanlar, Mary Anne T.	PhD	Microbiology	Molecular Biology	Biochemistry
Torres, Fe G.	MS	Soil Science	Soil Microbiology	Microbiology
Trinidad, Lorele C.	PhD	Environmental Biotechnology	Microbiology	Electron Microscopy
Violanta, Ronilo P.	MM	Agribusiness Management	Extension	Business Planning
Zarate, Jocelyn T.	PhD	Soil Microbiology	Soil Nutrition/ Genetics	Molecular Biology
Zulaybar, Teofila O.	MS	Microbiology	Biochemistry	
DEVELOPMENT COMMUNICATION				
Aleria, Liza P.	MS	General Development Communication		
Bariuan, Julienne V.	MS	Community Broadcasting		
Cabral, Hermilea Marie P.	MS	Science Communication	Social marketing	
Calara. Ma. Ciejay J.	MM	Community Broadcasting		
Centeno, Edmund G.	MS	Educational Communication	Photography	

Name of Expert	Highest Degree Earned	Field of Specializations		
Custodio, Pamela A.	MS	Qualitative Communication Research		
Daya, Romel A.	MS	Educational communication		
De Villa, Rhodora Ramonette M.	MA	Educational communication	Communication Research	
Flor, Benjamina Paula G.	PhD	Community broadcasting	Communication and Culture	
Jamias, Serlie B.	PhD	Development Journalism	Science Communication	
Moscoso, Mildred O.	MM	Educational Communication	Community Broadcasting	
Osalla, Ma. Teresita B.	MS	Community Broadcasting		
Sandoval, Roberto Pedro Isabelo, Jr.	MPAd	Communication	Development Entreprenuership	
Suva, Madeline M.	PhD	Mass Communication	Communication Evaluation/ Research	Development Journalism
Tatlonghari, Rosario V.	MPS	Science communication	Communication Research	
Tirol, Ma. Stella C.	MS	Educational Communication	Community Broadcasting	Communication Materials Pre-testing, Monitoring and Evaluation
Torres, Cleofe S.	PhD	Science communication	Strategic Communication Planning	Risk Communication
Velasco, Ma. Theresa H.	PhD	Science Communication	Strategic Communication Planning	Social Marketing
ECONOMICS AND MANAGEMENT				
AGRIBUSINESS MANAGEMENT				
Aquino, Nanette A.	MM	Business Management	Marketing	
Arrienda, Faustino III., Q.	MM	Agribusiness Management	Entrepreneurship	
Ascan, Tricia C.	MM	Agribusiness Management		
Banzon, Agnes T.	PhD	International Marketing	Agribusiness Management	
Depositario, Dinah Pura T.	DBA	Agribusiness Management	Business Administration	Agricultural Economics
Guieb, Victoria R.	MS	Agribusiness Management	Agribusiness	Agricultural Economics
Madamba, Jeanette Angeline B.	MM	Business Management	Operations	
Melgar, Carolyn V.	MS	Managerial Economics	Entrepreneurship	
Mojia, Loida E.	MM	Agribusiness Management	Marketing Management	
Montes, Nimfa D.	MBA	Agribusiness Management	Entrepreneurship	Business Management
Perilla, Mario V.	PhD	Business Management	Agricultural Economics	Business Administration
Ragudo, Teresita Flordeliz M.	MM, CPA	Business Management	Accounting	
Tan, Reynaldo L.	PhD	Agribusiness Management	Resource and Environmental Economics	Managerial Economics
Williams, Jimmy B.	MBA, MS, MA	Finance	Agribusiness Management	Agricultural Economics
Zapata, Normito Jr., R.	MS	Agribusiness Management	Financial Management	Investment Management

Name of Expert	Highest Degree Earned	Field of Specializations		
AGRICULTURAL ECONOMICS				
Aragon, Corazon T.	PhD	Agricultural Economics	Project Analysis, Monitoring and Evaluation, Marketing and Supply Chain Analysis	Policy and Development, Production Economics
Carambas, Nora D.	MS	Agricultural Economics	Production Economics and Farm Management, Natural Resource and Environmental Economics	Policy and Development
Catelo, Salvador P.	PhD	Agricultural Economics	Project Analysis, Monitoring and Evaluation	Farm Management and Production Economics
Delos Reyes, Julieta A.	MS	Agricultural Economics	Agricultural Marketing	Urban and Regional Planning
Elauria, Marilyn M.	PhD	Agricultural Economics	Agricultural Marketing, Farm Finance	Business Management
Evangelista, Danilo L.	MS	Agricultural Economics	Production and Rural Development	
Gordoncillo, Prudenciano U.	PhD	Agricultural Economics	Policy and Development Economics	Monitoring and Evaluation
Lantican, Flordeliza A.	PhD	Agricultural Economics	Marketing and Price Analysis, Policy and Development	Postharvest Economics, Food and Nutrition Economics, and Supply (Value) Chain Analysis
Manilay, Alessandro A.	MS	Agricultural Economics	Farm Management/ Investment Analysis/ Market Analysis, Value Chain Analysis	Agricultural Marketing
Pabuayon, Isabelita M.	PhD	Agricultural Economics	Marketing and Price Analysis, Policy and Development	Forest Products Marketing and Trade
Piadozo, Ma. Eden S.	PhD	Agricultural Economics	Agricultural Marketing	International Trade
Quicoy, Cesar B.	PhD	Agricultural Economics	Farm Management and Production Economics, Marketing	Natural Resource Economics
Quilloy, Antonio Jesus A.	MS	Agricultural Economics	Natural Resource Economics	Farm Management
Rañola, Roberto Jr., F.	PhD	Agricultural Economics	Natural Resource Economics	Development Economics
Rapera, Corazon L.	PhD	Forestry	Forest Economics	Natural Resource Economics, Policy and Project Analysis
Yorobe, Jose Jr., M.	PhD	Agricultural Economics	Agricultural Marketing and Prices, Agricultural Policy and Development	Economics of Biotechnology and Corn and Livestock Economics
ECONOMICS				
Abrina, Anna Floresca F.	MS	Public and Institutional Economics	Development Economics	Macroeconomic Theory
Alcalde, Jhoana V.	MA	Public Economics	International Trade	Natural Resource Economics
Bayani, Jaimie Kim E.	MA	Environmental and Natural Resource Economics	International Trade	

Name of Expert	Highest Degree Earned	Field of Specializations		
Bello, Amelia L.	MA	Development/ Monetary Economics	Economics of Education	Microeconomic Theory
Cabanilla, Liborio S.	PhD	Agricultural and Rural Economics Development	Agricultural Policy	International Trade
Camacho, Jose Jr., V.	DrEcon	Economics of Human Resource/ Labor and Development Economics	Gender, Institutions and Economics of Education	Japanese Economy
Carnaje, Gideon P.	PhD	Labor Economics	Institutional Economics	Microeconomic Theory
Catelo, Ma. Angeles O.	MA	Natural Resource and Environmental Economics	Livestock Economics	Monetary Economics/ Microeconomic Theory
Cuevas, Agham C.	MA	Institutional Economics	Public Economics	
Endriga, Benjamin A.	MA	International Trade	Monetary Economics/ Macroeconomics	
Garcia, Yolanda T.	PhD	Econometrics	Fishery Economics	Resource and Environmental Economics
Manalo, Niño Alejandro Q.	MA	International Economics	Public Economics	Development Economics
Paris, Tirso B.	PhD	Agricultural Policy and Development/ Natural Resource Economics	System Modelling	Economic Theory
Quicoy, Alicia R.	MM	Development Management		
Ramirez, Paul Joseph B.	MA	International Economics	Natural Resource Economics	Public Economics
Rodriguez, U-Primo E.	MEcon Dev	Quantitative Economics	International Trade	
Saplaco, Romel R.	MS	Natural Resource Economics	Quantitative Economics	Econometrics
Sumalde, Zenaida M.	PhD	Natural Resource and Environmental Economics	Agricultural Marketing and Policy	Technology Assessment
Valientes, Rodger M.	MDev Econ	Labor Economics	Development Economics	Microeconomic Theory
ENGINEERING				
AGRICULTURAL ENGINEERING				
Casas, Edgardo V.	MPSci	Food Engineering (Optimization)	Environment	Waste Management
Castro, Marion Lux Y.	MS	Agrometorology/ Meteorology	Hydrometeorology	
Dorado, Moises A.	MS	Agrometorology/ Meteorology	Controlled Environment	Agricultural Structures
Elauria, Jessie C.	PhD	Energy (Biomass)	Environment (Climate Change and Life Cycle Analysis)	Agricultural Processing
Elepaño, Arnold R.	PhD	Energy	Mechanical Engineering	Agricultural Processing
Madamba, Ponciano S.	PhD	Food Engineering	Agricultural Process Engineering	Biosystems Engineering
Peralta, Engelbert	PhD	Agricultural Process Engineering	Food Process Engineering	Bioprocess Engineering
Saludes, Ronaldo B.	PhD	Agrometorology/ Meteorology	Agricultural Meteorology	Agricultural and Forest Engineering

Name of Expert	Highest Degree Earned	Field of Specializations		
AGRICULTURAL MECHANIZATION				
Amongo, Rossana Marie C.	PhD	Agricultural Mechanization	Machine Design and Testing	Land, Water, and Machinery Management
Bato, Pepito M.	PhD	Machine Vision and Robotics	Renewable Energy Systems	Agricultural Mechanization
Paras, Fernando O., Jr.	MS	Machine Design and Testing	Renewable Energy Systems	Machinery Management
Resurrecion, Arsenio N.	PhD	Agricultural Mechanization	Machine Design and Testing	Control Systems Engineering
Suministrado, Delfin C.	PhD	Power and Machinery	Instrumentation and Control System	Tillage Systems
Zubia, Omar F.	MS	Machine Design and Testing	Renewable Energy Systems	Anthropometry
CHEMICAL ENGINEERING				
Abrigo, Casiano S., Jr.	PhD	Agricultural Chemistry	Waste Management and Sugar Engineering	Environmental Engineering
Alfafara, Catalino G.	PhD	Chemical Engineering	Fermentation Technology	Biological Wastewater Treatment
Borines, Myra G.	MS	Chemical Engineering	Sugar Technology	Biochemical Engineering
Demafelis, Rex B.	MS	Chemical Engineering	Environmental Engineering	Biofuel Production
Movillon, Jovita L.	PhD	Sugar Technology	Bioethanol Production	Sugar Production and Economics
CIVIL ENGINEERING				
Cabaltica, Angeli D.	MS	Environmental Engineering		
Madlangbayan, Marish S.	MS	Structural Engineering		
Palaypayon-Ana, Mylene M.	MS	Environmental Engineering		
Sundo, Marloe B.	MS	Transportation Engineering		
Zafra, Richelle G.	MS	Structural Engineering		
INDUSTRIAL ENGINEERING				
Dionila, Trima dC.	MS	Operations Research	Production Systems	Information Systems
Layaoen, Haerold Dean	MS	Production Systems	Engineering Economics	Operations Research
Leander, Liza P.	MS	Production Systems	Methods Engineering	Operations Research
Manaligod, Herbert T.	MM	Product design	Value Engineering	Methods Engineering
Reyes, Ma. Isabel D.	MS	Operations Research	Engineering Economics	System Simulation
ENVIRONMENTAL SCIENCE AND MANAGEMENT				
Alcantara, Antonio J.	PhD	Soil Science/ Land Use	Industrial Ecology	Landscape Ecology
Briones, Nicomedes D.	PhD	Environmental Economics	Environmental Impact Assessment	Agricultural Economics
Coladilla, Jesusita O.	PhD	Environmental System Analysis	Soil Science	Agricultural Land Use Planning
Espaldon, Maria Victoria O.	PhD	Human and Cultural Geography	Social Impact Assessment	Participatory Monitoring and Evaluation

Name of Expert	Highest Degree Earned	Field of Specializations		
Florece, Leonardo M.	PhD	Fire Ecology and Management	Silviculture and Social Forestry	Agroforestry and Natural Resource Assessment
Rebancos, Carmelita M.	PhD	Environmental Extension	Community Development	Social Impact Assessment
Sobremisana, Marisa J.	MS	Resource Engineering	Environmental Impact Assessment	Green Productivity
Vergara, Dante K.	MSt	Geographic Information System	Environmental Modelling	Land Use Planning
FORESTRY AND NATURAL RESOURCES				
Abasolo, Willie P.	PhD	Wood and Fiber Anatomy	Non-Timber Forest Products	Bio-based Composites
Abraham, Emmanuel Rodantes G.	PhD	Remote Sensing	Watershed Management	
Acda, Menandro N.	PhD	Bio-based Composites	Wood Protection	
Andrada, Rogelio II, T.	MS	Forest Resources Management	Watershed Management	Parks and Outdoor Recreation Management
Arizala, Benjamin D.	MSF	Silviculture	Forest Nursery and Management	Part and Ecotourism Management
Baguinon, Nestor T.	PhD	Forest Ecology	Silviculture	Biodiversity
Balahadia, Nicasio M.	MF	Silviculture	Agroforestry	Urban Forestry
Barile, Joselito R.	MS	General Forestry	Forest Protection	Public Management
Balatibat, Juancho B.	MS	Entomology	Zoology	Biodiversity
Bantayan, Nathaniel C.	PhD	Geographic Information System	Environmental Modelling	Land Use Planning
Bugayong, Leonida A.	PhD	Silviculture and Forest Influences	Development Management	Social Forestry
Cabahug, Rowena D.	MS	Forest Biological Science	Extension Education	Agroforestry
Cabanilla, Daylinda B.	PhD	Anthropology	Sociology	Social Forestry
Calderon, Margaret M.	PhD	Forest Resource Economics		
Calimag, Corazon	MA	Social Development Studies	Development Communication	Community Development
Camacho, Leni D.	PhD	Forestry Economics and Policy	Rural Development Planning	Agricultural Economics/ Social Forestry
Camacho, Sofronio C.	MSF, MS	Applied Science in Remote Sensing	Forest Resource Management	Land Use
Carandang, Antonio	PhD	Natural Resources Economics and Policy	Watershed/ Forest Management	Environmental Planning
Carandang, Myrna G.	PhD	Forest Biometry	Operations Research	
Carandang, Wilfredo M.	PhD	Tree Improvement	Forest Genetics	Silviculture
Casin, Ma. Cynthia S.	MS	Sociology	Social Forestry	Forest Policy Research
Castillo, Arturo SA.	PhD	Silviculture	Forest Fire Management	
Castillo, Manuel L.	PhD	Plant Taxonomy	Botany/ Horticulture	Silvicultural/ Social Forestry
Castillo, Stella Villa A.	MS	Pulp and Paper Technology	Lumber Manufacture	
Cereno, Roberto P.	MM	Ecotourism	Parks and Protected Areas Management	Nature and Botanic Gardens
Corpuz, Eumelia B.	MSF	Forest Economics and Policy	Silviculture and Forest Influences	Forestry Policy Research
Cruz, Rex Victor O.	PhD	Watershed Management	Environmental Management	Climate Change
Daracan, Vivian C.	MS	Wood Anatomy	Forest Products Marketing	
Dela Cruz, Loretto U.	PhD	Forest Soils	Forest Influences	
de Luna, Catherine C.	MS	Social Forestry	Agroforestry	Seed Technology

Name of Expert	Highest Degree Earned	Field of Specializations		
Devera, Edgar E.	MS	Wood Science and Technology	Wood Furniture Manufacture	
Dolom, Priscila C.	PhD	Silviculture and Forest Influences	Environmental Science	Forest Policy Research
Donoso, Leonito A.	MSF	Silviculture and Forest Influences	Forest Ecology	Forest Policy Research
Eslava, Felix Jr., M.	PhD	Social Forestry	Forest Extension/ Communication	Program Planning and Evaluation
Espiritu, Nena O.	PhD	Resource Economics	Development Economics	Forest Policy Research
Fernando, Edwino S.	PhD	Plant Taxonomy	Plant Morphology	Plant Anatomy
Gaddi, Rowena ST.	MS	Silviculture	Development Management	Foresty Watershed and Management
Galang, Marco A.	MS	Silviculture		
Garcia, Mercedes U.	PhD	Forest Genetics	Soil Microbiology	Cytology
Gascon, Antonio F.	PhD	Forest Influences	Environmental Forestry	
Hernandez, Jocelyn M.	MS	Coastal Resources Management	Aquaculture	Marine Ecology
Jara, Aileen A.	MS	Wood Science and Technology	Wood Seasoning	
Landicho, Leila D.	MS	Crop Protection and Management	Agricultural Education	Development Management
Lapitan, Portia G.	PhD	Tree Physiology	Forest Genetics	Forest Biotechnology
Lapitan, Renato L.	PhD	Remote Sensing	Forest Harvesting	Geographic Information System
Lit, Ireneo Jr., L.	PhD	Systematics and Forest Entomology	Zoology	Biodiversity
Luna, Amelita C.	MS	Silviculture	Permanent Plot Monitoring	Forest Pathology
Malabayabas, Felisa L.	MS	Community Broadcasting	Environmental Science	
Malabrigo, Pastor Jr., L.	MS	Plant Taxonomy	Genetics	Biodiversity
Manalo, Mutya Q.	PhD	Microbiology	Forest Pathology	Foresty Biotechnology
Manalo, Nestor R.	MF	Range Management	Biodiversity Assessment and Management	
Manalo, Ronniel D.	MS	Wood Science and Technology	Environmental Science	
Mariano, Rebecca Romana E.	MF	Silviculture	Community Development	Forestry Extension/ Community-based Natural Resources Management
Mendoza, Marlo D.	MDev Mgt	Watershed Enterprise/ Forest Development and Management	Program Planning/ Project Development and Management	Organizational Management and Development
Militante, Ernesto P.	PhD	Forest Pathology	Mycology	Tree Care and Maintenance
Paelmo, Roselyn F.	MS	Plant Breeding	Crop Protection and Management	Agroforestry
Palacpac, Aresna B.	PhD	Development Communication	Social Research and Extension	Forest Policy Research
Palijon, Armando M.	PhD	Urban Forestry	Arboriculture	Non-wood Forest Products/ Silviculture
Pampolina, Nelson M.	PhD	Environmental Biology	Mycorrhizal Technology Bioremediation	Ecology and Biodiversity
Peralta, Eleno O.	PhD	Policy and Administration	Environmental and Natural Resource Governance	Terrestial Ecology and Biodiversity Conservation
Perez, Rose Jane J.	MF	Social Forestry/ Community-based Forest Management	Climage Change Vulnerability and Adaptation	Natural Resources Policy and Administration
Pulhin, Florencia B.	PhD	Silviculture and Forest Influences	Forests and Climate Change	Industrial Management and Forest Policy

Name of Expert	Highest Degree Earned	Field of Specializations		
Pulhin, Juan M.	PhD	Social Forestry/ Community-based Natural Resource Management	Natural Resources Policy and Institutions	Climage Change, Impacts, Vulnerability and Adaptation
Quimado, Marilyn O.	PhD	Botany	Genetics	Biotechnology
Racelis, Diomedes A.	PhD	Forest Resources Management	Land Use Planning	Climate Change
Racelis, Elenita L.	MS	Silviculture	Social Forestry	
Rañola, Fe M.	MS	Applied Sociology and Anthropology	Social Research and Methodology	Social Forestry/ Community-based Policy Research
Razal, Ramon A.	PhD	Wood Chemistry and Bio-chemistry	Non-Timber Forest Products	Forestry Education and Training
Santos, Elsa P.	MS	Social Theory and the Environment	Rural Development Management	Social Forestry
Sargento, Jose O.	PhD	Forest Resources Management	Silviculture	Community Development
Tiburan, Cristino Jr., L.	MS	Forest Resources Management	Geographic Information System	
Tolentino, Enrique Jr., L.	PhD	Forest Tree Seeds	Silviculture	Land Use Planning
Villanueva, Ma. Magdalena B.	MF	Forest Policy Research	Industrial Management	Forest Policy Research
Villanueva, Teodoro R.	PhD	Forest Biometry	Environmental Planning and Management	
Visco, Roberto G.	PhD	Agroforestry	Silviculture	
HUMAN ECOLOGY				
COMMUNITY AND ENVIRONMENTAL RESOURCE PLANNING				
Bartolome, Benjamin J.	MS	Soil Management	Land Use Planning	Environmental Planning and Management
Mendoza, Raymundo Jr., B.	MAgr	Agriculture/ Urban-Rural Development	Urban-Rural Human Settlements Planning	Tourism Planning
Piadozo, Raden G.	MS	Agricultural Economics	Environmental Economics	Environmental Resource Planning and Management
Rogel, Ronaldo O.	MURP	Urban and Regional Planning/ Community Development	Social Infrastructure Support Planning/ Impact Assessment	Environmental Planning
Rola, Walfredo R.	PhD	Agricultural Resource Economics	Human Settlements Planning	Environmental Education
HUMAN AND FAMILY DEVELOPMENT STUDIES				
Cacho, Nona M.	MFLCD	Family Life and Child Development	Child Development/ Psychology	
Dy, Marison R.	PhD	Developmental Psychology	Child Development/ Psychology	Adolescent Development/ Psychology
Ferido, Melissa P.	MS	Family Resource Management	Craft Design	
Saguiguit, Sue Liza C.	PhD	Family and Child Ecology	Human Ecology	Human Development/ Human Environment and Design
Sanchez, Ria D.	MS	Early Childhood Development	Human Development	

Name of Expert	Highest Degree Earned	Field of Specializations		
HUMAN NUTRITION AND FOOD				
Africa, Leila S.	MS	Nutrition	Applied Nutrition	
Arroyo, Esther Joy N.	MS	Nutrition	Food Service Administration	
Barrion, Aimee Sheree A.	MS	Nutrition	Applied Nutrition	
Bustos, Angelina R.	MPS-FNP	Nutrition	Food Nutrition Planning	
Hurtada, Wilma A.	PhD	Food Technology	Food Science/ Food Processing	Food Biochemistry
Narciso, Melanie H.	MS	Nutrition	Food and Nutrition Science	
Pablo, Angela Kathrina C.	MS	Nutrition	Applied Nutrition	
Talavera, Ma. Theresa M.	MS	Nutrition	Public Health	
Tuazon, Ma. Antonia G.	PhD	Human Ecology	Food Nutrition Planning	
Yee, Marites G.	PhD	Agriculture	Applied Nutrition	Food Science
SOCIAL DEVELOPMENT STUDIES				
Gozum, Johanna R.	MS	Sociology	Public Management	Community Development
Mendoza, Maria Emilinda T.	MA	Sociology	Human Ecology	Population and Environment
Visco, Emilia S.	PhD	Extension Education	Development Communication	Social Forestry
PUBLIC AFFAIRS				
AGRARIAN AND RURBAN DEVELOPMENT STUDIES				
Bello, Rolando T.	MS	Resource Economics	Agrarian Studies	Political Economy
Mercadal, Julieta J.	MA	Agrarian Studies	Anthropology	Cultural Anthropology
Pantoja, Blanquita R.	MS	Agricultural Economics	Agrarian Studies	Agricultural Finance
Peñalba, Linda M.	PhD	Agricultural Economics	Environmental Studies	Agrarian Studies
COMMUNITY EDUCATION				
Baconquis, Rowena DT.	PhD	Extension Education	Public Administration	Economics
Bumatay, Ernesto L.	PhD	Education Management	Educational Administration	Physical Education Management
Cardenas, Virginia R.	PhD	Extension Education	Community Development	Agricultural Education
Cruz, Federico A.	PhD	Community Development	Extension Education	Agriculture (Animal Husbandry)
Dizon, Josefina T.	PhD	Community Development	Social Forestry	Agriculture (Agronomy)
Quimbo, Maria Ana T.	PhD	Education	Extension Education	Agriculture Economics
Santillana, Carolina P.	PhD	Education Management	Agricultural Education	Elementary Education
Domingo, Lorna P.	MS	Extension Education	Community Development	Agricultural Extension
Ripley, Yolanda M.	MS	Community Development	Development Management	Program Development Management
Sulabo, Evangeline C.	MS	Education	Extension Education	Community Development
Tan, Francisca O.	MS	Community Development	Family Resource Management	Home Technology

Name of Expert	Highest Degree Earned	Field of Specializations		
DEVELOPMENT MANAGEMENT AND GOVERNANCE				
Carada, Wilfredo B.	MS, MA	Development Management	Local Governance Development and Administration	Policy, Program and Project Formulation to Evaluation
Gonzales, Vivian A.	PhD	National Security Administration	Community Development	Philippine Studies
Javier, Aser B.	PhD	International Development and Cooperation Studies	Local Governance Development and Administration	Public Management Education
Mananghaya, Rufino A.	DBA	Financial Management/ Fiscal Administration	Business Administration	Information Technology
Ocampo, Mimosa S.	PhD	Community Development	Microfinance	Human Resource Development and Management
Querijero, Nelson B.	MM	Rural Development and Management	Project Development and Management	Organizational and Institutional Management
Rosacia, Constancia Z.	MS	Project Development and Management	Microfinance and Microenterprise Development	Community-based Management and Local Resource Mobilization
RURAL FINANCE AND COOPERATIVES				
Castillo, Eulogio T.	PhD	Rural Finance	Agricultural Economics	Cooperatives
Medina, Severino Jr., I.	MS	Development Communication	Cooperatives	Rural Finance/ Marketing/ Agricultural Economics
Medina, Winifrida D.	MS	Rural Sociology	Cooperatives Education	Agrarian Studies
Manila, Anselma C.	MS	Cooperatives	Agrarian Reform	Economics
Peria, Arminga B.	MS	Cooperatives	Agrarian Reform	Economics
STRATEGIC PLANNING AND POLICY STUDIES				
Chupungco, Agnes R.	MS	Agricultural Economics	Marketing	
Dumayas, Elvira E.	MS	Agricultural Economics		
Elazegui, Dulce D.	MS, MA	Science and Technology Policy, Technology Policy and Innovation Management	Agricultural Development Economics	Agricultural Economics
Nguyen, Miriam R.	PhD	Community Development	Agricultural Marketing	
Paunlagui, Merlyne M.	PhD	Demography	Rural Sociology	Social Policy
Umali, Macrina G.	MM	Development Management	Agricultural Economics	
Rola, Agnes C.	PhD	Agricultural Economics and Policy	Sustainability Science	Statistics
Tagarino, Rogelio N.	PhD	Agricultural and Resource Economics	Resource Economics	Agricultural Economics
Reyes, Jaine C.	DPA	Public Administration	Rural Sociology	R and D Management; Science and Technology Policy, Development Communication

Name of Expert	Highest Degree Earned	Field of Specializations		
VETERINARY MEDICINE				
Abalos, Jovencio Hubert A.	MS	Equine Medicine	Equine Surgery	Microbiology
Acorda, Jezie A.	PhD	Large Animal Surgery	Medical Imaging	Alternative Medicine
Alcantara, Amadeo A.	MS	Swine Production and Medicine		
Baldrias, Loinda R.	PhD	Meat Hygiene	Zoonoses	Microbiology
Baticados, Waren N.	PhD	Veterinary Protozoology	RNA Interference	
Bernardo, Francis Andrew Eugene M.	MVSt	Poultry Production and Medicine	Small Animal Medicine and Surgery	Small Animal Dermatology
Bombio, Ariel M.	DVM	Gross Anatomy	Equine Medicine	
Caraballe, Marla F.	DVM	Veterinary Microbiology		
Constante, Jesalyn L.	DVM	Large Animal Medicine	Poultry Production	
Cruzana, Bella C.	PhD	Microscopic Anatomy	Developmental Anatomy	Macroscopic Anatomy/ Physiology
De Luna, Maria Catalina T.	MAgr	Physiology	Neuroendocrinology	Animal Reproduction
De Ocampo, Grace D.	MPhil	Microscopic Anatomy	Electron Microscopy	Developmental Anatomy
Divina, Billy P.	MS	Veterinary Parasitology	Veterinary Public Health	
Ducusin, Rio John T.	PhD	Large Animal Medicine and Surgery	Ruminant Production	Animal Reproduction
Eduardo, Salcedo L.	PhD	Parasitology	Immunoparasitology	
Estacio, Maria Amelita C.	DAgr	Neuroscience	Endocrinology	Physiology
Flores, Marianne Leila S.	MHA	Canine Medicine	Feline Medicine	Small Animal Surgery
Gicana, Karlo Romano B.	DVM	Equine Medicine & Surgery	Small Animal Medicine and Surgery	
Lapuz, Randy Rhon Simoun P.	PhD	Poultry Disease Diagnostics	Veterinary Microbiology	Wildlife Medicine
Maala, Ceferino P.	PhD	Gross Anatomy	Microscopic Anatomy	Applied Anatomy
Maligaya, Rhea L.	DVM	Wildlife Management and Medicine		
Manigbas, Elaine P.	MS	Small Animal Surgery	Small Animal Medicine	Small Animal Orthopedics
Marte, Benjamin Reuel G.	MS	Veterinary Pathology	Veterinary Physiology-Pharmacology	Swine and Poultry Medicine
Masangkay, Joseph S.	PhD	Veterinary Pathology	Laboratory Animals	Wildlife
Matawaran, Veronica A.	MS	Veterinary Pathology	Veterinary Diagnostics	
Molina, Helen A.	MVS	Veterinary Pathology	Pathophysiology	Veterinary Diagnostics
Morales, Abigail B.	DVM	Veterinary Pathology		
Olarve, Joseph P.	DVM	Animal Nutrition	Gross Anatomy	
Padilla, Mildred A.	DrPH	Public Health (Parasitology)	Epidemiology	
Paraso, Michelle Grace V.	MSc	Physiology	Pharmacology	Toxicology
Recuenco, Frances C.	DVM	Small Animal Medicine	Medical Imaging	
Rovira, Hope G.	PhD	Microbiology	Immunodiagnostics	Vaccines
Sanchez, Romeo E. Jr.	PhD	Virology	Immunology	Swine Medicine
Torres, Eduardo B.	PhD	Theriogenology	Large Animal Medicine	Large Animal Surgery
Umali, Dennis V.	DVM	Small Animal Medicine	Small Animal Surgery	
Valdez, Conrado A.	PhD	Theriogenology	Large Animal Medicine and Surgery	Ruminant and Poultry Production

Laboratory	Unit Base	Contact Details	Services Offered
Animal Nutrition Analytical Service Laboratory	Animal and Dairy Sciences Cluster College of Agriculture	536-2551	Evaluation of feeds' potential value to animals
Veterinary Molecular Biology, Immunology and Virology/ Vaccine Research and Development Laboratories	College of Veterinary Medicine	536-2730	Diagnostic services for animal health using existing diagnostic products, conduct of basic and applied researches on immunology and molecular aspects of animal diseases and development of diagnostic procedures and kits for bacterial and parasitic pathogens.
Biotechnology Central Analytical Service Laboratory	National Institute of Molecular Biology and Biotechnology	536-0587 *casl_biotech@ yahoo.com.ph*	Routine chemical analysis of plant tissues, soils, fertilizers, raw materials, and by-products of fermentation processes
Electron Microscopy Service Laboratory	National Institute of Molecular Biology and Biotechnology	536-0587 *lct_emsl@yahoo.com*	Ultra-structure analysis and support for sample preparation of biological specimens using transmission, scanning electron, digital microscope and other supporting equipment.
Fermentation and Engineering Services Laboratory	National Institute of Molecular Biology and Biotechnology	536-2725	Conduct of upstream and downstream optimization studies to come up with scale-up strategies for biotechnologies.
Philippine National Collection of Microorganisms	National Institute of Molecular Biology and Biotechnology	536-2884 *pncm@laguna.net*	Provision of pure cultures for research purposes and microbiological analytical services.
Chemical Analytical Service Laboratory	Institute of Chemistry College of Arts and Science	536-2359	Routine chemical analyses, glass blowing services and short to long-term analytical projects
Chemical Control, Pesticide Toxicology and Chemistry Laboratory	National Crop Protection Center-Crop Protection Cluster College of Agriculture	536-0959	Analyses of pesticide products, determination of pesticide residues and risk assessment of pesticide residues in farm commodities
Crop and Soils Analytical Service Laboratory	Institute of Plant Breeding-Crop Science Cluster College of Agriculture		Full range of analyses from sample preparation to determination of plant and soil components through standard means such as colorimetry, titrimetry, and others; proximate analysis, colorimetric analysis, mineral analysis, nutritional and medicinal component analysis and vitamin analysis.

Laboratory	Unit Base	Contact Details	Services Offered
Environmental Remote Sensing and Geo-information Laboratory	Institute of Renewable and Natural Resources College of Forestry and Natural Resources	536-2557	Use of GIS and remote sensing for agriculture forestry, and natural resources planning and management
Instrumentation Service Laboratory	Department of Electrical Engineering College of Engineering and Agro-industrial Technology	536-2465/ 6031	Maintenance services for consumer electronics, information and communication technology, eletrco-mechanical and refrigerated equipments
Agricultural Machinery Testing and Evaluation Center	College of Engineering and Agro-industrial Technology	536-1584	Formulation and development of agriculture and fisheries machinery standards, testing and evaluation of agriculture and fisheries machinery

Agricultural Systems (Farming Systems, Soil Science and Agricultural Education)

1. Assessment of plant residue quality and its effects on nutrient supply to rice
2. Assessment of the production and marketing of fruit crops planting materials in the Philippines
3. Decision-aid model for coconut-based farming systems (DAM-CBFS)
4. Development of potentials of upland soils in the Philippines for agriculture and forestry
5. Mapping of higher educational institutions and program in Region IV
6. Participatory rural appraisal guidebook
7. Role of soil and water management on the enhancement of mineral biofortification in rice grains
8. Simplification of the Philippine soil series identification for rice and corn cultivation
9. Soil fertility evaluation and improvement for sustained high corn yields in major corn growing areas
10. Stratification of nutritional problems and their solutions for high economic corn yield in major soil types of key corn production areas
11. Systematic coordination of on-station and on-farm corn research, development and extension programs in the Philippines

Agricultural and Chemical Engineering

1. Biodiesel production from Jatropha curcas using a co-solvent
2. Development of three-dimensional groundwater model for sustainable shallow aquifer management in the Philippines
3. Enhancing the implementation of AFMA through improved agricultural engineering standards
4. Greenhouse technology development for local ornamental crops
5. Harnessing UPLB's human resource development - Component II. Harnessing newly returned PhD degree holders. Project 3. Characterization of contaminant transport behavior of selected soils in the Philippines for groundwater quality protection
6. Installation and utilization of agrometeorological stations in two corn producing provinces: Isabela and Cagayan
7. Installation, testing and evaluation of data logging equipment in monitoring weather parameters in the Agrometeorological Station
8. Liquid-phase polymer-based removal and recovery of heavy metals by cellulose acetate membranes from nata de coco
9. National farm mechanization needs survey and analysis
10. Suitability of selected hybrid rice for brown rice in the Philippines: Palay drying and brown rice storage

Animal, Dairy and Veterinary Sciences

1. Assessment of dairy systems constraints and opportunities for the development of RDE network
2. Assessment of the productivity and development of breeding and management strategies for beef cattle
3. Characterization, improvement and conservation of goats
4. Development of local lactic acid bacterial inoculant and its utilization in silage
5. General and specific combining abilities in growth and laying performances involving different genetic groups of mallard ducks (Genetic improvement of the egg production performance efficiency of the Philippine mallard ducks)
6. Increasing beef productivity in the uplands through strategic supplementation of cows and early weaning of calves
7. Insulin-like growth factor (IGF)-1 mRNA expression in hepatic and extrahepatic tissue of Paraoakan native chickens
8. ISCOM-ELISA based detection of the occurrence of Neospora caninum in cattle and water buffaloes
9. Organic production of chicken
10. Performance evaluation of backcrosses of Landrace x Large White crossbreds as breeding females for the smallholders
11. Policy studies on animal genetic improvement and production in the Philippines
12. Production of high quality Philippine dairy type animals through the use of reproductive biotechnologies
13. Protease of Philippine Fasciola gigantica:Identification, characterization and its use in an ELISA
14. Quality milk production: standards and model for the Philippine Dairy Industry
15. S and T anchor program on farm-managed clean production facility for small and medium scale swine industry in fuel and fertilizer production - Project 1. Baseline information and development database on swine waste management systems
16. Small ruminant genetic improvement program
17. Study of estrogenic activity in water samples from Laguna de Bay
18. Study of the swine genetic resources in two Region IV Provinces: Its implications to the Philippine swine industry

Biological Sciences

1. Bacterial biofilms in water reservoirs and water delivery lines
2. Biological and molecular strategies to improve poly-B-hydroxybutyrate (PHB) production
3. Conservation program for the endemic freshwater sardine, Sardinella tawilis in Taal Lake
4. Construction of metagenomic library of thermophilic microorganisms from Mt. Makiling mudspring as potential source of restriction enzymes
5. Control of Phytophthora disease of Asparagus by Trichoderma harzianum UV-irradiated strain
6. Crops R&D biotechnology program: Proj. 1. Cloning of important genes from coconut
7. Development of DNA-based detection methods of banana strains of Ralstonia solanacearum in soil and banana fruits
8. DNA fingerprinting of fruit flies, Bactrocera sp. (Tephritidae) in the Philippines
9. Documentation of vascular plants on the Northern Slope of Mt. Isarog, Camarines Sur, Philippines
10. Efficacy test of fabricated biofermentor for semi-commercial production of the inoculant of the UPLB Trichoderma biotechnology
11. Establishment of a PCR-based detection method for the photosynthetic rhizobia for studying their diversity and distribution in the Philippines
12. Establishment of transformed root and other organ cultures of selected Philippine plants for their secondary products
13. Evaluation of the paratoid glands of the Philippine toad, Bufo biporcatus as source of compounds with pharmacological properties
14. Molecular genetic analysis and identification of molecular markers in selected Philippine species of Trichoderma
15. Multi-objective model for the renaturation of overexploited lake ecosystems: The case of Taal Lake
16. Pilot mass production of Trichoderma biocon granules and its bioefficacy trials on some cash crops
17. Systematics of Geometridae in selected forested areas of Luzon
18. Temporal variations in biomass and community composition of epipelagic zooplankton of Sulu and adjacent seas
19. Trophic development of Taal Lake and the evaluation of toxicity of its bloom-forming algae
20. Use of lime, compost and Trichoderma species in the control of club root disease of cabbage
21. Use of lime, compost and Trichoderma species in the control of club root disease of cabbage - Part II. Dissemination of the method of control to Cordillera farmers

Biotechnology

1. Application of BIOTECH produced microbial proteases for food, feeds and other industries
2. Application of enzyme biotechnology for essential oil production from different plant sources
3. Archaeal diversity of mudspring, Mt. Makiling
4. Bioactive metabolites from Ganoderma and related species
5. Biochemical and genetic characterization of heavy metal-resistant bacteria
6. Biological control of Ralstonia solanacearum and Erwinia carotovora by use of locally isolated bacteria
7. Characterization and modification of midgut receptor delta-endotoxins of Bacillus thuringiensis Berliner in Asiatic corn borer Ostrinia furnacalis Guenee
8. Demonstration of the efficacy of biofertilizers on high value crops
9. Development of banana transformation system for the production of transgenic banana expressing viral genes conferring resistance
10. Development of locally produced kits for genetically modified corn and soybeans
11. Development of monoclonal antibody based technology for the detection of abaca bunchy top virus (ABTV), abaca mosaic virus (AMV) and abaca bract mosaic virus (ABMV)
12. Development of rapid diagnostic kits for aflatoxin B1, zearalenone and fuminisin
13. Development of trichosetin as a therapeutic agent in poultry
14. Diagnosis of Haemophilus paragallinarum using PCR-based detection system
15. Electron microscopy: Sample preparation techniques for biological specimens
16. Enhancement of productivity of banana farms through management of banana bunchy top and “bugtok” diseases - Component 4. Production of diagnostic kits for indexing banana bunchy top virus and training
17. Establishment of Bio-N mixing plant in strategic regional areas
18. Establishment of BIO-N mixing plants in selected regions of the country (Phase II)
19. Feeding trials on the efficacy of BIOTECH acid protease as feed additive in swine and poultry (Phase II)
20. Field evaluation of developed Bacillus thuringiensis (Bt) and nuclearpolyhedrovirus (NPV) products for the control of Lepidopterous pests attacking crucifers and shallots
21. Forest biotechnology program - Application of forest biotechnology for the mass production of genetically superior trees for agroforestry, community-based forestry and industrial project plantation: Proj. 1. Macroselection for superior phenotypes of selected industrial timber species

22. Harnessing mycorrhizae for growth improvement of selected Vanda spp. and Dendrobium spp. with high commercial value
23. Harnessing UPLB's human resource development - Component 2. Harnessing senior scientists to sustain human resource development in RDE - Proj. 2. DNA analysis of the different Spodoptera litura (Lepidoptera: Noctuidae) NPV collected from Luzon area
24. High value products from starches of rootcrops by enzyme biotechnology
25. Identification of molecular and biochemical markers in locally isolated high alcohol yeast strains
26. Improvement of legume inoculants for enhanced tolerance to heat and desiccation stresses
27. Improvement of productivity of banana farms in the Philippines - Technical support system - Component 2. Production of monoclonal antibodies for indexing virus diseases and training/support system
28. Incidence of Aeromonas hydrophila in seafoods sold at Los Baños Public Market
29. Isolation, preservation and identification of microorganisms from mangrove ecosystem in Mindoro with degradative and antimicrobial potential
30. Molecular characterization of bacteriocins and DNA fingerprinting of bacteriocin-producing lactic acid bacteria from indigenous fermented foods
31. National program on production and utilization of Bio-N for sustainable production of agricultural crops
32. Production and marketing of BIO-N
33. Promotion, marketing and distribution of BIO-N in Region VII
34. Protein engineering of Bacillus thuringiensis Cry 1 Ab-delta-endotoxin
35. Screening of local Bacillus and Actinomycete isolates as potential antibiotic producer against pathogens affecting poultry
36. Studies on the applications of cellulases for the feed and other food industries
37. Technology commercialization of Salmonella DAS
38. Testing the efficacy of BIO-N inocula on onions
39. UPLB-IPM CRSP Project: Activity 1.5 - Effect of NPV-CRSP formulation against 3rd instar larvae of the common cutworm, Spodoptera litura, attacking onions
40. UPLB-IPM-CRSP Project - Activity 1.10. Biological control of Meloidogyne graminicola and other soil borne pathogens in rice-vegetable systems using specific biological control agents
41. UPLB-IPM-CRSP Project: Management of soil-borne diseases of onions in rice-onion system using vesicular arbuscular mycorrhizae and Trichoderma sp.
42. Utilization of BIOTECH cellulase as feed additive for poultry and swine diets and other application studies (Phase II)
43. Utilization of plant growth promoting rhizobacteria in vegetable production and propagation of ornamentals

Crop Protection (Entomology and Plant Pathology)

1. Bioecology of the mirid bug, Helopeltis spp. (Hemiptera: Miridae)
2. Biological and cultural management of major insect pests of eggplant
3. Biology, life cycle and mass rearing of Spoladea recurvalis as biocontrol agent against Trianthema portulacastrum
4. Bioremediation technology for insecticide residues in horticulture
5. Characterization and control of mango scab
6. Chemical analysis of booting odors of rice in relation to rodent behavior
7. Chemically-mediated insect behavior in an herb-vegetables sustainable cropping system
8. Computer modeling and forecasting of corn leaf diseases
9. Delaying the development of resistance to Bt corn in the population of Asian corn borer, Ostrinia furnacalis (Guenee)
10. Detection, risk assessment, and containment of quarantine pest
11. Development of an effective pest management scheme against two major arthropod pests of orchids with biological control as main component
12. Development of tomato and squash plants that express coat protein genes of importation RNA viruses
13. Diversity of baculovirus infecting the diamondback moth, Plutella xylostella (Lepidoptera: Yponomeutidae) in the Philippines
14. DNA fingerprints and probes for differentiation of the insect pathogenic fungi Beauveria basiana and Metarhizium anisopliae
15. Ecology and management of fruit flies attacking cucurbits with emphasis on the melon fruit fly, Bactrocera cucurbitae (Coq.) (Diptera:Tephritidae)
16. Effect of Halictophagus sp. (Strepsiptera: Halictophagidae) on the reproduction of mango leafhopper, Idioscopus clypealis (Lethierry) (Hemiptera-Homoptera: Cicadellidae)
17. Enhancing productivity and quality of carabao mango through integrated pest management - Component 3. Pesticide management
18. Epidemiology and integrated virus disease management in the Bicol Region - Component III. Integrated control of vectors of abaca mosaic and bunchy top virus
19. Evaluation of biofumigation for soil-borne disease management in tropical vegetable production

20. Farmer-scientists training program in corn-based production system for sustainable agricultural development - Part II. Expansion of pilot areas in Argao and Barili, Cebu to other areas in the country
21. Field bioecology of Asian corn borer, Ostrinia furnacalis in Bt and non Bt hosts
22. Field trials of detection kits for plant viruses and vaccines for livestock and poultry
23. Genetic diversity of Fusarium isolates from corn: differentiation by vegetative compatibility and aggressiveness
24. Genetic improvement of insect pathogenic fungus Metarhizium anisopliae against Asiatic cornborer and diamondback moth
25. Harnessing UPLB's human resource development - Component 2. Harnessing senior scientists to sustain human resource development in RDE - Proj. 3. Development of sustainable management strategies for melon fly (Bactrocera cucurbitae), field infestation in ampalaya (Momordica charantia L.)
26. Identification of virus diseases of corn, Zea mays, in the Philippines
27. Indigenous parasitoids with potential for the biological control of mealybugs attacking high value crops
28. Integrated disease management of anthracnose and stem-end rot of carabao mango
29. Isolation and characterization of baculoviruses for the control of diamondback moth, Plutella xylostella (Linn.) (Lepidoptera: Yponomeutidae)
30. Management of nematode pests of calamansi
31. Management of purple blotch of onion, garlic and shallot using antagonists and systematic acquired resistance
32. Minimizing the off-site impact of pesticides from agricultural systems- A risk based approach
33. NCT for irrigated lowland rice - Phase I. Special rice insect and disease screening, and grain quality 2002 dry and wet seasons - Study 3B. NCT for insect and disease screening
34. Operationalization of the silkworm breeding and egg production center and development/ improvement of silkworm strains for Philippine agro-climatic environment
35. Pesticide and cultural control of fruitworm, thrips, parasitic nematodes and bacterial wilt on tomato - Sub-project 5. Pesticide management of major pests and diseases of tomato
36. Pesticide residues in vegetables (bittergourd, stringbeans, highland crops)
37. Philippine leaf-feeding beetles of the Subfamily Alticinae (Coleoptera: Chrysomelidae of important food plant crops and ornamentals
38. Plant-feeding ladybird beetles (Coleoptera, Coccinellidae: Epilachninae) in the Philippines
39. Production of antiserum of bunchy top, bract mosaic viruses in abaca, Musa textilis Nee
40. R & D on community-based production and utilization of egg parasitoids for the control of major lepidopterous pest (COMPUTEC-CONLEP)
41. R&D for crop protection decision support system - Proj. 1. Field-based pest mapping and pest modelling yield-loss assessment
42. Risk assessment of pesticide residue levels on selected vegetable crops
43. S & T Anchor program for mango (Phase II) - Proj. 1. Pre-harvest disease management of anthracnose and stem-end rot of 'Carabao' mango
44. Survey, biology and mass rearing of common phytoseiid predators of ornamental mite pests
45. Taxonomic verification of the distribution of the mango seed weevil, Sternochetus mangiferae (Fabr.) in the Oriental and Australian Regions
46. UPLB-IPM CRSP: Efficacy of directed post plant herbicide application with a shielded nozzle in farmers' fields
47. UPLB-IPM CRSP: Efficacy of Spoladea recurvalis as biocontrol agent against horse purslane (Trianthema portulacastrum)
48. Variation in and cross protection among citrus triztesa closterovirus (CTV) in the Philippines (fr. NB Bajet)
49. Vegetative compatibility groupings of Fusarium oxysporum isolates from different vegetable crops at East-West Seed Co., Philippines

Crop Sciences (Agronomy, Horticulture, Plant Breeding, Post-harvest)

1. Assessment of genetic diversity in Cercospora canescens Wilczek, the causal fungus of mungbean Cercospora leafspot
2. Assessment of plant residue quality and its effects on nutrient supply to rice
3. Assessment of the production and marketing of fruit crops planting materials in the Philippines
4. Basic seed production
5. Biochemical characterization of sesame and safflower as oil sources for specific food and feed uses
6. Breeding for special maize types
7. Breeding of parental lines and two-line hybrids
8. Characterization of Ralstonia solanacearum strains from eggplant
9. Characterization of the postharvest behavior and extension of shelf life of fresh durian fruits
10. Cloning and molecular characterization of genes encoding insecticidal proteins from plants, insects and microbial sources: Bacterial and insect-gut specific chitinases
11. Combined resistance of eggplant, Solanum melongena L. to leafhopper, Amrasca biguttula (Ishida) and the eggplant borer, Leucinodes orbonalis Guenee
12. Commercialization of postharvest for off-season supply of tomato

13. Comprehensive germplasm characterization in purple-fleshed greater yam (Ubi, D. alata Lin.)
14. Control of ripening of papaya and mango by genetic engineering
15. Crops R&D biotechnology program - Proj. 1. Development of gene constructs and appropriate transformation systems for the fatty acid modification of coconut oil
16. Determination of the physicochemical and functional properties of the native and recombinant coconut 11S globulin
17. Determination of isozyme polymorphism in abaca (Musa textilis)
18. Development of banana bunchy top virus (BBTV) gene constructs for banana transformation
19. Development of banana varieties resistant to banana bunchy top virus (BBTV) - Proj. 1. Development of bunchy top virus resistance in banana by genetic engineering
20. Development of banana varieties resistant to banana bunchy top virus (BBTV) - Proj. 2. Biotechnology-assisted development of bunchy-top virus resistance in banana by mutation breeding
21. Development of biomaterials from indigenous sources for use as films and coating
22. Development of colored multi-petaloid Mussaenda suited for potted ornamentals
23. Development of inbred lines for transplanted irrigated lowland rice
24. Development of inbred varieties for direct-seeded irrigated lowland
25. Development of regeneration system for biolistic mediated transformation for abaca
26. Development of sweet potato feathery mottle virus (SPFMV)-resistant sweet potato varieties through agrobacterium-mediated transformation - Proj. 1. Development of sweet potato varieties resistant to feathery mottle through agrobacterium-mediated transformation
27. Development of transgenic papaya resistant to PRSV - Proj 4. Agrobacterium-mediated transformation of Davao 'Solo' papaya for PRSV resistance
28. Development of transgenic papaya resistant to PRSV - Proj. 1. Development of ringspot virus resistant through genetic engineering
29. Development of transgenic weevil-resistant sweetpotato
30. Development of yellow corn germplasm with adequate level of resistance to bacterial stalk rot (Erwinia chrysanthemi) and diplodia ear rot (Diplodia macrospora)
31. Documentation, selection and registration of Philippine orchids
32. Ecotypic variation of the Asian corn borer (Ostrinia furnacalis) populations in the Philippines
33. Effect of raw material handling on final product quality pre-processing systems for tamarind and sugar palm
34. Enhancement of nitrogen fixation in mungbean (Vigna radiata L.) through restriction of nodulation by ineffective rhizobia
35. Enhancement of productivity of banana farms through management of banana bunchy top and "bugtok" diseases: Component 1. Program Coordination
36. Enhancement of productivity of banana farms through management of banana bunchy top and "bugtok" diseases: Component 2a. Community-based piloting of control strategies for banana bunchy top and "bugtok" diseases and rehabilitation of affected areas
37. Enhancement of productivity of banana farms through management of banana bunchy top and "bugtok" diseases: Component 3a. Mass production of disease-free planting materials of banana
38. Enhancement of productivity of banana farms through management of banana bunchy top and "bugtok" diseases: Component 5. Development of information materials and capability building
39. Enhancing adaptation and utilization of location specific corn-based technologies in eight major corn growing areas
40. Enhancing potential of the Philippine rice genetic resources and continuing effective conservation of its biodiversity
41. Enhancing the export competitiveness of the fresh Philippine sugar mango: Postharvest behavior and quality of irradiated 'Carabao' mango under controlled or modified atmosphere conditions
42. Enhancing the productivity and quality of 'Carabao' mango through integrated pest management (IPM) - Component 2. Postharvest systems improvement
43. Establishment of cell suspension cultures and induction of somatic embryogenesis on local banana cultivars
44. Establishment of protocol for rapid assessment of aflatoxin B1 contamination in corn during procurement
45. Evaluation of host resistance in tomato during off-season against major diseases and insect pests
46. Field evaluation of mutagen treated abaca plants from tissue culture
47. Fine mapping of Hawaii 7996 x WVa700 bacterial wilt resistance mapping population and analysis of QTL across environments and strains of Ralstonia solanacearum
48. Genetic diversity, host resistance and epidemiology of Diplodia macrospora (Earle) causing leaf blight, ear rot and stalk rot in maize
49. Genetic progress in improving mungbean and peanut yield potential in the Philippines
50. Germplasm collection and varietal development of squash (Cucurbita moschata Duch. ex Lamk) for processing
51. Gumamela franchising project of the celebrity star hibiscus hybrid series
52. Harnessing UPLB's human resource development - Component 1. Harnessing newly returned PhD holders for globally competitive researchers and technology development - Proj. 1. Overcoming the recalcitrance in plant regeneration and mungbean and pole sitao

53. Harnessing UPLB's human resource development - Component 2. Harnessing senior scientists to sustain human resource development in RDE - Proj. 1. Collecting, propagation, characterization and conservation of species and genetic diversities of Philippine mangifera
54. Identification of eggplant varieties resistant to leafhopper, shoot and fruit borer and phomopsis blight and bacterial wilt
55. Improved transport/shipment of 'lakatan', 'latundan'and 'saba' bananas
56. Improvement of cultural management technology for off-season tomato production
57. Improvement of flowering potted Mussaenda production technology for adoption and commercialization
58. Improvement of productivity of banana farms in the Philippines: Technical support system - Component 1. Extension support system and development/production of information materials
59. Improvement of productivity of banana farms in the Philippines: Technical support system - Component 3. Satellite indexing laboratory in Mindanao
60. Improvement of productivity of banana farms in the Philippines: Technical support system - Component 4. Production of planting materials and technical support for tissue culture facilities
61. Improvement of the handling system of eggplant
62. Integrated ornamental horticulture R&D program - Proj. 1.6. Breeding of exportable foliage plants
63. Integrated ornamental horticulture R&D program - Proj. 3.6. Orchid breeding for the Philippine ornamental industry
64. Marker assisted identification and utilization of outstanding tall populations and hybrids for accelerated coconut replanting
65. Mechanism of induction of chilling injury in pineapple and alleviation
66. Molecular map-based isolation and characterization of resistance genes for downy mildew in maize
67. Morpho-biochemical pathway of KNO3 in mango flower induction
68. On farm trials of eggplant
69. On-site performance evaluation of potential off-season tomato varieties
70. Osmotic adjustment and its relationship to dry matter partitioning and seed yield in drought stressed mungbean
71. Participatory rural appraisal guidebook
72. Plant pathogen interaction, virus-vector relationship and to namamarako luteovirus in ampalaya
73. Postharvest management of anthracnose and stem-end rot of carabao mango fruits
74. Postharvest training on fruits and vegetables
75. Postproduction technologies and handling of Chrysanthemums and Mussaenda
76. Production of certified and foundation seeds in support of the GMA-HVCC Program
77. Production of high quality of vegetable in support of the "Gulayan sa niyugan"
78. Project 1000: Seed production and commercialization of IPB corn hybrids for resource-poor farmers (Phase 1)
79. Propagation and field evaluation of virus-free and true-to-type planting materials of garlic (Allium sativum L.)
80. Protected cultivation of high value vegetable crops using simple nutrient addition program (SNAP) in hydroponics for home and commercial growers
81. Protective structures for organic high value vegetables production in containers as an approach to urban agriculture
82. Protective structures for production of high value vegetable crops
83. Quality assurance system for dried plant materials
84. Quality assurance systems for minimal processing of selected fruits and vegetables
85. Quality enhancement of priority cutflowers through post-production systems improvement
86. Quality evaluation of different varieties of tender coconut and optimization of postharvest treatments for minimal processings
87. Quantative and qualitative loss assessment on selected high value food crops
88. S & T Anchor Program for Mango (Phase II) - Project 2. Commercial trial on the effectivity of heat treatment during controlled atmosphere (CA) storage
89. Seed production of improved large-seeded peanut varieties
90. Testing and production of white corn, special corn types and yellow corn varieties
91. Tropical fruits and coconut biotechnology program - Proj. 1. Development of transgenic papaya with delayed ripening characteristics containing the ACC oxidase gene via agrobacterium-mediated transformation
92. Tropical fruits and coconut biotechnology program - Proj. 2. Agrobacterium-mediated transformation of papaya with resistance to PRSV
93. Tropical fruits and coconut biotechnology program - Proj. 4. Tissue culture of mango var. 'Carabao'
94. UPLB-IPM CRSP Project - Evaluation of the performance of selected cultivars with resistance to the eggplant fruits and shoot borer, eggplant leafhopper and bacterial wilt farmers' fields
95. UPLB-IPM CRSP Project - Influence of host plant resistant and grafting on the incidence of bacterial wilt in eggplant
96. Variations among populations of the bean pod borer, Maruca testulalis (Geyer) (Lepidoptera: Pyralidae)
97. Varietal evaluation on selected vegetables under organic conditions
98. Varietal improvement and management system of tomato against late blight

Food Science and Human Nutrition

1. Antioxidant components of Philippine vegetables and fruits
2. Antibiotic residues in poultry and prawn
3. Antioxidant components of pili
4. Development and promotion of new vegetable snack foods
5. Development, fabrication and testing of a low-cost kit for determining process schedule in thermal processing food
6. Evaluation of white maize varieties for food uses
7. It's eggciting to learn through Eggducation
8. Nutrient content of minimally processed tropical fruits and vegetables
9. Pilot production of coconut milk beverage

Forestry and Natural Resources

1. Carbon sink potential and soil amelioration capacity of alley cropping system
2. Development of GIS-based furniture and handicraft material resource inventory
3. Forest biotechnology program - Application of forest biotechnology for the mass production of genetically superior trees for agroforestry, community-based forestry abd industrial project plantation - Proj. 3. Micropropagation of genetically superior trees for agroforestry
4. Forest biotechnology program - Application of forest biotechnology for the mass production of genetically superior trees for agroforestry, community-based forest and industrial forest plantation – Proj. 1. Program Management
5. Institutionalizing forest certification in support of the furniture and handicraft industries
6. Management and decision support for smallhold plantation developers
7. Permanent field laboratory areas for effective forest and natural resources management, conservation and development
8. Research and development program and capability building on the mass propagation of rattan through tissue culture
9. Silvical characterization of malapapaya (Polyscias nodosa) under a coconut-based agroforestry systems in Luisiana, Laguna
10. Towards the adoption of tissue culture as a strategy for the propagation of premium industrial plantation trees

Physical, Mathematical and Computer Sciences

1. An analysis of diagonalization method to obtain the powers of a sparse square matrix
2. Auto-calibration system for object dimension measurement
3. Biochemical and chemical methods for coconut coir fiber production
4. Design and implementation of a parallel genetic algorithm for constrained statistical matching
5. Design of a pin matrix-based I/O device to provide sense of touch to internet communications
6. Development of an estimation procedure in generating barangay level poverty statistics
7. Development of an open E-learning system based on intelligent softwares
8. Development of chemical and biochemical sensors for the qualitative and quantitative determination of heavy metal pollutants
9. Establishing a knowledge-based crop forecasting system for corn in the Department of Agriculture pilot testing in Isabela
10. Homogeneous distance bounds for linear codes over finite Frobenius rings
11. Homogeneous factorizations of odd graphs
12. Identification and quantification of health-promoting phytochemicals in fruits, vegetables and other plant foods
13. Isolation and characterization of antifungal compounds from Trichoderma harzianum
14. Modeling and simulation in astrophysics and high-energy physics using a Beowulf-Class Cluster Computer (BC3) system
15. Study on students' misconceptions regarding physics concepts
16. Yield gap analysis in selected corn producing areas in the Philippines

Social Sciences (Economics and Management, Policy Studies and Community Development)

1. Acceptance and readiness of mango and vegetable farmers for information and communication technology in three Southern Tagalog Provinces
2. Analysis of employment generated from smallholder upland development projects in selected CBFM sites
3. Assessment of community-based upland livelihood programs: A policy study
4. Benchmark assessment of the research productivity of UP Los Baños

5. Coordination, monitoring and evaluation of the CBPEM trainors' training program
6. Corporatization of selected State Colleges and Universities in the Philippines: A pre-feasibility study
7. Determinants of community assessment approaches methods and tools by UPLB researchers
8. Economic implications of reforestation as a forest restoration strategy under the community-based forest management program in Quirino province
9. Evaluation of the marketing system and demand requirements for abaca
10. Evolvement of local institutional initiatives for subsistence living in Philippine coconut-coastal communities
11. Ex-ante assessment, policy analysis and communication strategies for selected agricultural biotechnology products
12. Gender impacts of selected agricultural modernization on selected agricultural commodities
13. Gender issues on occupational safety and health in laboratories at the Los Baños Science Community
14. Interdependence of access, use and control of land and water-based resources in selected agroecological Philippine areas
15. New frontiers in research for sustainable development
16. Participatory action research, Extension and communication for sustainable corn productivity
17. Participatory, monitoring and evaluation of the Maunlad na Niyugan Tugon sa Kahirapan Program
18. Performance evaluation and impact assessment of the PCARRD techno gabay program
19. Problems and prospects for the production of fibercrops in the Philippines
20. Regional level assessment of the vegetable industry in the Philippines
21. Research management at the Research Management Center (RMC): Theoretical themes and trends in twenty years
22. S & T anchor program for banana - Proj. 3.3 . Assessment of factor conditions affecting the efficiency of smallhold banana production in the Philippines
23. S & T anchor program for banana: Proj. 3.5. Analysis of marketing efficiency and development of innovative marketing strategies for smallhold banana growers
24. Supply and demand analysis for Philippine ornamentals
25. Taskforce on agroforestry education (TAFE)
26. The interplay of determinants of poverty incidence in selected rurban communities in Regions IV and V
27. Tracking policies and analyzing their implications on the development of rootcrop starches
28. Utilization of broadcast media for barangay development with mass based trainings (MBT) on the Tulong Ugnayan Radio Program (TURP)
29. Wood supply and demand study: Region 4A

Institutional Development Grants and other Projects

1. Acquisition of testing equipment for the use of AMTEC
2. CHED Zonal research center for Regions IV and V
3. Dissemination of information on bioprospecting to UPLB constituents
4. Establishment of a Toyota/Unesco chair in children's environmental education
5. Financial assistance on the aquatic and marine network management and operations – Zonal Center II
6. Financial assistance on the national training course on freshwater fish identification
7. Financial support for the upgrading of the Electron Microscopy Laboratory (EMSL)
8. Financial support for the upgrading of the equipment
9. FITS databases content build-up
10. Harnessing UPLB's research capabilities through an internally-managed research grant - Component 3-A - Harnessing facilities and specialized equipment for the advancement of research and extension activities (Purchase of specialized equipment, office furnitures and fixtures for Network Headquarters and Central Administration)
11. Harnessing UPLB's research capabilities through an internally-managed research grant - Component No.4 - Harnessing research information dissemination capability (A. Dissemination of research results/scientific information)
12. Institutional development support for strengthening capacities of research and development centers: Renovation of the Old PLDT Building to support DA-BAR Networks Operations and Management
13. Knowledge networking towards enterprising agricultural communities (K-AGRINET)
14. Maintaining and updating PCASTRD-FAST database
15. Strengthening of the NARRDS through the zonal center operation: Zonal center management and operations for Southern Luzon (Zonal Center II)
16. Strengthening university relevance in research and Extension through publication and information dissemination
17. Support to RACO activities related to regional information, education and communication
18. Support to the AMTEC strategic plan
19. Techno gabay buhay para sa masa program
20. Upgrading/rehabilitation of facilities for effective implementation of BIOTECH researches

National Government Agencies	Local Corporations
1. Commission on Higher Education (CHED) 2. DA-National Meat Inspection Service (NMIS) 3. DA Regional Field Unit IVB (RFU IVB) 4. DA-Agricultural Credit Policy Council (ACPC) 5. DA-Bureau of Agricultural Research (BAR) 6. DA-Bureau of Fisheries and Aquatic Research (BFAR) 7. DA-BFAR Fisheries Resource Management Project (FRMP) 8. DA-Bureau of Postharvest Research and Extension (BPRE) 9. DA-National Agricultural and Fishery Council (NAFC) 10. DA-Fiber Industry Development Authority (FIDA) 11. DA-GMA Corn Program (GMA Corn) 12. DA-Philippine Coconut Authority (PCA) 13. DA-Philippine Rice Research Institute (PhilRice) 14. DENR-Protected Areas and Wildlife Bureau (PAWB) 15. Department of Agrarian Reform (DAR) 16. Department of Agriculture (DA) 17. Department of Energy (DOE) 18. DOE-National Power Corporation (NAPOCOR) 19. DOE-National Transmission Corporation (TRANSCO) 20. DOE-PNOC-Alternative Fuel Corporation (PNOC-AFC) 21. Department of Environment and Natural Resources (DENR) 22. DENR-Philippine Forest Corporation (PhilForest) 23. Department of Health-Philippine Institute of Traditional and Alternative Health Care (DOH-PITAHC) 24. Department of Science and Technology (DOST) 25. DOST-Food and Nutrition Research Institute (FNRI) 26. DOST- Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) 27. DOST- Philippine Council for Aquatic and Marine Resources Research and Development (PCAMRD) 28. DOST-National Research Council of the Philippines (NRCP) 29. DOST-Philippine Council for Advanced Science and Technology Research and Development (PCASTRD) 30. DOST-Philippine Council for Health Research and Development (PCHRD) 31. DOST-Philippine Council for Industry and Energy Research and Development (PCIERD 32. DOST-Technology and Livelihood Resource Center (TLRC) 33. National Agri-Business Corporation (NABCOR) 34. National Commission for Culture and the Arts (NCCA)	1. Absolut Chemicals, Inc. 2. AGRO-K Corp. 3. ANE Agricultural Corp. 4. APF Corp. 5. Ariela Marketing Corp. 6. Bayer Philippines Inc. 7. BIOMIN Innovative Animal Nutrition GmbH Philippines 8. CMPI 9. Consolidated Distillers of the Far East, Inc. 10. Croplife Philippines 11. CWC 12. DANISCO A/S 13. DELSTASIA Sdn Bhd 14. DOW AgroSciences 15. ECOSERV. Inc. 16. E-Konek Pilipinas, Inc. 17. East-West Seed Company, Inc. 18. EASY BIO Philippines 19. Euroduna, Pacific Ltd., Co 20. Exquisite Focus Philippines, Inc. 21. Far East Alcohol Corp. 22. Filinvest 23. First Generation Corporation Inc. 24. First Media Services, Inc. 25. First Pacific Company 26. Fort Dodge Animal Health Division – WYETH 27. Grain Pro Inc. 28. Jardine Davies Inc. 29. JBS United, Inc. 30. Lactobacillus Pafi Techno Resources Corporation 31. LAKPUE Drug, Inc. 32. Marsman-Drysdale Biotech and Research Corp. 33. MISR Hytech Seed International 34. Monsanto Philippines 35. Nanosys International, Inc. 36. New Guinea Fruit Co. Ltd. 37. Pioneer HiBred International Inc. 38. Schering-Plough Animal Health Corp. 39. SEASTEMAS International, Inc. 40. SPARK 41. Sucrex Marketing Corp. 42. Syngenta Philippines, Inc. 43. Task Force-Palico, Absolut Chemicals, Inc. 44. Tayben Woodlands Foundation, Inc. 45. Terra Concepts Inc. 46. Tribio Technologies Corp. 47. Tropi-Cuke Inc. 48. UBM Corp.

Local Agencies, NGOs and Programs	Foreign Government Organizations and Universities Abroad
1. Basecom Mill District Development Committee-Mt. Pinatubo Commission (BMDDC-MPC) 2. Halcon Mountaineers Association, Inc.-Mindoro 3. Laguna Water District (LWD) 4. Land O'Lakes Foundation Philippines 5. Municipality of Laurel, Batangas 6. Nordson Green Earth Foundation 7. Office of the Representative, 4th District Laguna 8. Organic Producers and Traders Association (OPTA) 9. Philippine Agriculture and Resources Research Foundation, Inc. (PARFFI) 10. Philippine Sugar Millers Association Inc. (PSMA) 11. Philippine—Australia Basic Education Assistance for Mindanao (BEAM) 12. Pilipinas Shell Foundation 13. Plan Philippines 14. Tanggapang Panligal ng Katutubong Pilipino (PANLIPI) 15. Universal Levy Funded-NPC Watershed Department 16. University of the Philippines Manila Development Foundation, Inc. (UPMDFI) 17. Visayas College of Agriculture (VisCA)	1. Agricultural Biotechnology Research Institute of Iran 2. Commonwealth of Australia 3. Ethiopian Agricultural Research Organization (EARO) 4. European Union (EU) 5. National Institute for Environmental Studies, Japan (NIES) 6. Katholieke Universiteit Leuven- Flemish Inter-University Council of Belgium 7. Spanish National Research Council (CSIC) 8. Wagenigen International (WI)
International Funding Institutions and Programs	**International Organizations**
1. ASEAN-Korea Environmental Cooperation Unit (AKECU) 2. Asian Development Bank (ADB) 3. Japan Bank for International Cooperation (JBIC) 4. Sustainable Agriculture and Natural Resource Management Collaborative Research Support Program (SANREM CRSP) 5. Swedish International Development Cooperation Agency (SIDA) 6. United Nations Food and Agriculture Organization (UN-FAO) 7. United Nations Institute for Training and Research (UNITAR) 8. United Nations International Childrens Educational Fund (UNICEF) 9. United States Agency for International Development (USAID) 10. USAID Cereals Comparative Genomics Initiative 11. USAID-Economic Modernization through efficient Reforms and Governance (EMERGE) 12. World Bank (WB) 13. World Education (WE) 14. World Health Organization (WHO) 15. World Wide Fund for Nature International (WWFN)	1. American Soybean Association International Marketing (ASAIM) 2. Asian Vegetable Research and Development Center (AVRDC) 3. Australian Center for International Agricultural Research (ACIAR) 4. Center for International Environmental Law (CIEL) 5. Center for International Forestry Research (CIFOR) 6. CGIAR Systemwide Program on Urban and Peri-Urban Agriculture (Urban Harvest) - Users' Perspectives With Agricultural Research and Development (UPWARD) 7. Conservation International 8. Consultative Group on International Agricultural Research (CGIAR) 9. International Atomic Energy Agency (IAEA) 10. International Centre for Research in Agroforestry (ICRAF) 11. International Development Research Center (IDRC) 12. International Foundation for Science (IFS) 13. International Livestock Research Institute (ILRI) 14. International Maize and Wheat Improvement Center (CYMMIT) 15. International Network for Improvement of Banana and Plantain (INIBAP) 16. International Plant Genetic Resources Institute (IPGRI) 17. International Potato Center (IPC) 18. International Rice Research Institute (IRRI) 19. International Service for National Agricultural Research (ISNAR) 20. International Service for the Acquisition of Agri-biotech Applications (ISAAA) 21. International Tropical Timber Organization (ITTO) 22. Southeast Asia Regional Center for Graduate Study and Research in Agriculture (SEAMEO-SEARCA) 23. Third World Academy of Sciences (TWAS) 24. Winrock International

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GUIDELINES FOR THE PREPARATION OF STUDY PROPOSALS FOR FUNDING UNDER THE UPLB BASIC RESEARCH PROGRAM
(Revised, 2008)

OBJECTIVES:

The UPLB Basic Research Program provides financial assistance for basic studies in the natural sciences and mathematics, social sciences and the humanities. The research program also supports UPLB's teaching function and is responsive to national development needs.

A. NATURE OF THE STUDY

1. The proposed research project should be basic in nature and neither funded ordinarily by other agencies nor done by other institutions.
2. Higher priority shall be accorded to basic studies which are mission oriented, i.e. with long-range development goals.
3. The proposal should be prepared following the prescribed format.

B. PROPONENT

1. The proponent must be a full-time faculty member or researcher of UPLB and must have at least an MS or MA degree.
2. Priority shall be given to proponents who have no other research study/project and/or have recently received their MS or PhD degrees and wish to do follow-up studies on their thesis or dissertation.
3. Proponents are encouraged to enjoin other relevant agencies or researcher(s) to participate in the project. Aside from the possibility of cost and personnel sharing, such alliances simplify inter-agency arrangement often required in the conduct of the study, as well as strengthen capability for addressing research problems.

C. STUDY COST

1. Any reasonable amount may be requested as financial assistance. In general, however, the requested funding for any single year must be kept below P100,000.00 for non-laboratory studies and P160,000.00 for laboratory studies.
2. The line-item-budget (LIB) must be sufficiently detailed, keeping in mind that actual expenditure shall be subjected to government accounting and auditing rules and thus, should be properly documented.
3. The hiring of full-time study personnel is discouraged. Instead, existing research personnel may be tapped for additional duties and corresponding incentives.
4. Under this program, there is no provision for honoraria of study leaders, equipment and capital outlay.

D. DURATION

1. Studies with expected substantial results obtained within one year are preferred.
2. The duration limit for any single proposal is two (2) years. This does not preclude sequel work which builds upon previously completed work by the proponent.
3. The OVCRE reserves the right to discontinue the study or the granting of financial assistance upon recommendation of the technical review committee that decides if the results obtained or expected for the study do not justify further investigation or activity. The proponent shall be notified at least one (1) month prior to termination of the study.

E. REPLACEMENT OF STUDY LEADER

In case of change in study leadership, the study leader shall communicate in writing with the OVCRE his/her recommended replacement, attaching the bio-data of the new study leader. A study staff which will be replaced by reason of resignation/transfer shall submit his/her recommendation/transfer letter to OVCRE.

F. SUBMISSION OF REPORTS

1. The researcher shall submit four (4) copies of the annual progress report as a basis for the renewal of the project in accordance with the prescribed format. Upon completion of the project, the researcher is required to submit three (3) printed and one electronic copies/copy, respectively, of the terminal report based on the results of the study, and a publishable journal article or a poster paper.
2. All reports, articles, and similar materials intended for publication must be submitted to OVCRE. The UPLB Basic Research Program should be properly acknowledged as provider of financial and other assistance.
3. Final/terminal reports are due within two months of the termination of the study.

G. BUDGET RELEASE

Funds shall be released on a quarterly basis. Expenses for the operation of the study shall be disbursed as indicated in the Advice of Sub-Allotment (ASA) and shall be subjected to existing accounting and auditing rules.

H. DISCOVERIES/INVENTIONS

Patents arising from discoveries or inventions resulting from the basic research study shall be governed by existing rules and regulations of UPLB.

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UPLB BASIC RESEARCH PROGRAM
CAPSULE PROPOSAL FOR FINANCIAL ASSISTANCE
(Revised, 2008)

Note: This form enumerates the various steps that have to be taken by a proponent to present a proposal for financial assistance from the UPLB Basic Research Program. This must be submitted in four (4) copies to the Vice-Chancellor for Research and Extension (VCRE) in computerized form and must contain all the information herein required. All text should be in Point 10 Arial font. The capsule proposals must be reviewed at the level of the proponent's unit. All proposals must be endorsed by the Department Chairman or Institute/Center Director and the Dean of the college.	
A. BASIC INFORMATION	
1. Study title	
2. Proponent	
Name and Signature	Department/ Institute/ College
Designation	Email Address
Telephone Number (s)	Fax Number (s)
3. Implementing Units	
Name of lead implementing unit	Address (es)
Name of collaborating agency (ies), if any	
4. Project Duration (maximum of 2 years)	
5. Project location (State specific location, e.g. barangay, town, province)	
6. Total budget requested (in Philippine pesos)	

B. TECHNICAL DESCRIPTION

7. Rationale
(State the rationale in at most 3 pages)

8. Objectives
(State specific objectives, purpose of the study including problems intended to be solved, hypotheses to be tested, etc.).

9. Expected Output
(State outputs of the study, i.e. information, general knowledge, publishable journal article, poster paper for presentation, etc.)

10. Gains or Impact
(A compelling effect of the project upon an individual or society as a whole.)

11. Milestones
(Significant point/mark in any progress or development of the project.)

12. Intended users of findings and outputs

13. Budget requirement

14. Brief profile of proponent

Education

Name and address of educational establishment	Degrees obtained and area of specialization	Month/ Year	
		From	To

Other studies conducted		
Subject area and title(s)	Place of conduct	Dates of conduct
Publications (Bibliographic entry of all publications)		
Trainings/ workshops/ technical seminars participated in (As regular participant, resource person, trainor, etc.)		

C. ENDORSEMENTS	
To be filled up by the proponent	
Submitted by: _____ Proponent's Name and Signature _____ Unit	 _____ Designation _____ Date
To be filled up by the immediate supervisor	
Endorsed by: _____ Supervisor's Name and Signature _____ Unit	 _____ Designation _____ Date
To be filled up by the College Dean or Research Institute Director	
Endorsed by: _____ Name and Signature _____ Unit	 _____ Designation _____ Date
To be filled up at the Office of the Vice-Chancellor for Research and Extension	
Received by: _____ Receiving Clerk OVCRE	 _____ Date

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UPLB BASIC RESEARCH PROGRAM
DETAILED PROPOSAL FOR FINANCIAL ASSISTANCE
(Revised, 2008)

Note: This form enumerates the various steps that have to be taken by a proponent to present a proposal for financial assistance from the UPLB Basic Research Program. This must be submitted in four (4) copies to the Vice-Chancellor for Research and Extension (VCRE) in computerized form and must contain all the information herein required. All text should be in Point 10 Arial font. All proposals must be endorsed by the Department Chairman or Institute/Center Director and the Dean of the college.

A. PROPOSAL SUMMARY

1. Title

2. Proponent

Name and Signature	Department/ Institute/ College
Designation	Email Address
Telephone Number (s)	Fax Number (s)

3. Cooperating Agency (ies), if any

Name of Agency (ies)	Address (es)

4. Project Cost

Requested from the program	Others sources, if any	Total Cost

5. Summary		
Project location	Duration in months	Estimated date of start of implementation
Brief description of the proposed plan of work		

B. TECHNICAL DESCRIPTION

6. Objectives
(State specific objectives, purpose of the study including problems intended to be solved, hypotheses to be tested, etc.).

7. Expected output
(e.g. technical paper and poster, method, product, others).

8. Significance
(Give justification for the study, stating the benefits to be derived, e.g., new products, improved quality of products, conservation of natural resources, utilization of waste products, acquiring better understanding of physical and/or social phenomena that would contribute to development and/or to science in general).

9. Present status of the proposed study
(State what has been done in the area of research of the study, both locally and abroad by the proponent)

10. Review of literature
(Include the literature review and bibliography cited for this study)

Continuation (Review of literature)

11. Procedure/ Methodology
(State proposed procedures, conceptual framework and/or methodology to be used. If possible, present research design, questionnaires to be used, sampling procedures/techniques, etc.).

Continuation (Procedure/ Methodology)

C. PLAN OF WORK

12. Schedule of activities
(State estimated time to be spent for the study in terms of weeks, for the various phases of the study, by following the format below):

Phase	Description of activity	Duration in weeks	Expected output

13. Financial plan
(Present a summary of the financial plan for the study according to the format below. If the study is to last for more than one (1) year, a separate plan for each year or a fraction thereof should be presented. The plan should include, if any, the type and amount of counterpart the proponent or any other agency would give for the study.)

Summary

	Total Amount (₱)	Requested from the program (₱)	Other sources (₱)
Personal Services		(Not applicable)	
Maintenance and Operating Expenses			
Total Cost of Study			

Detailed Line-Item Budget (Basic Research Component)

Particular	Amount (₱) Year 1	Amount (₱) Year 2
Travel		
Supplies		
Sundries/ Other Services		
Subtotals		
Total Amount		

14. Brief Profile of Proponent

Education

Name and address of educational establishment	Degrees obtained and area of specialization	Month/ Year	
		From	To

Other studies conducted		
Subject area and title(s)	Place of conduct	Dates of conduct

Publications
(Bibliographic entry of all publications)

Trainings/ workshops/ technical seminars participated in
(As regular participant, resource person, trainor, etc.)

D. ENDORSEMENTS	
To be filled up by the proponent	
Submitted by: _____ Proponent's Name and Signature _____ Unit	 _____ Designation _____ Date
To be filled up by the immediate supervisor	
Endorsed by: _____ Supervisor's Name and Signature _____ Unit	 _____ Designation _____ Date
To be filled up by the College Dean or Research Institute Director	
Endorsed by: _____ Name and Signature _____ Unit	 _____ Designation _____ Date
Received by: _____ Receiving Clerk OVCRE	 _____ Date

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UPLB BASIC RESEARCH PROGRAM
ANNUAL REPORT FORM
(Revised, 2008)

Note: This form is to be used in preparing and submitting the annual report of a study funded under the UPLB Basic Research Program. This must be submitted in four (4) hard-copies and one (1) soft-copy to the Vice-Chancellor for Research and Extension (VCRE) in computerized form and must contain all the information herein required. Text should be in Point 10 Arial font. Annual reports should be submitted through channels.

A. BASIC INFORMATION

1. Title	2. Annual Progress Report No. _____ (Indicate if No. 1, 2 or so)	3. Period covered by the report (Indicate dates)

4. Author (s) of the report

Name (s)	Designation (s)	Department/ Institute/ College

5. List of assisting technical and non-technical personnel

Name (s) and designation (s)	Areas of research/ duties	Compensation given

6. Cooperating Agency (ies), if any

Name of Agency (ies)	Address (es)

7. Date of implementation

Date project started	Expected date of completion

8. Project funding

Amount approved for the year	Amount released	Balance for the year	Amount disbursed

B. TECHNICAL DESCRIPTION

9. Project background

10.Objectives (vis-à-vis) percent accomplishment for the entire project duration

Objectives of the study (Itemize overall objectives as approved by the Evaluation Committee)	Percent accomplishment (Indicate overall accomplishment in terms of percentage on the specific objective)

11. Methodology
(State procedures, conceptual framework and/or methodology used. If possible, present research design, questionnaires used, sampling procedures/techniques, etc.).

12. Accomplishments and major findings
(Accomplish an exhaustive narrative report, at least 10 pages on the progress of the work. Include relevant tables and figures.)

13. Project Summary (accomplish in Point 8 Arial font)

Specific Objectives	Activities	Output/ Milestones	Date Accomplished (d/m/y)	Budget

14. Plan of activities for the coming year (accomplish in Point 8 Arial font)

					Gantt Chart											
Activity No.	Major activities	Planned start (d/m/y)	Planned end (d/m/y)	Duration in months	1	2	3	4	5	6	7	8	9	10	11	12

15. Original work plan (accomplish in Point 8 Arial font)

Activity No.	Major activities	Planned start (d/m/y)	Planned end (d/m/y)	Duration in months	Gantt Chart 1	2	3	4	5	6	7	8	9	10	11	12

C. PROJECT MANAGEMENT

16. Last year's comments of evaluators and action taken, if applicable

Comments	Action taken

17. Problems encountered and recommendations

Problems (State encountered problems related to administrative processes, research implementation, infrastructure and equipment reliability, among others)	Recommendations (State constructive comments on how to improve research implementation and monitoring)

D. ENDORSEMENTS	
To be filled up by the proponent/ author	
Submitted by: _____ Proponent's Name and Signature _____ Unit	 _____ Designation _____ Date
To be filled up by the immediate supervisor	
Noted by: _____ Supervisor's Name and Signature _____ Unit	 _____ Designation _____ Date
To be filled up by the College Dean or Research Institute Director	
Noted by: _____ Name and Signature _____ Unit	 _____ Designation _____ Date
Received by: _____ Receiving Clerk OVCRE	 _____ Date

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UPLB BASIC RESEARCH PROGRAM
TERMINAL REPORT FORM
(Revised, 2008)

Note: This form is to be used in preparing and submitting the annual report of a study funded under the UPLB Basic Research Program. This must be submitted in four (4) hard-copies and one (1) soft-copy to the Vice-Chancellor for Research and Extension (VCRE) in computerized form and must contain all the information herein required. Text should be in Point 10 Arial font. Terminal reports should be submitted through channels.

A. BASIC INFORMATION

1. Title

2. Proponent (s)

Name (s)	Designation (s)	Department/ Institute/ College

3. Implementing Agency (ies)

Name of lead agency	Address
Name of collaborating agency (ies)	Address (es)

4. Project duration and location

Date project started	Date of completion	Location

5. Project funding

Total approved budget	Total amount released	Actual expenses

B. TECHNICAL DESCRIPTION

Important Instructions:

6. Prepare in Arial font and insert in this section the required information:

I. Executive Summary
II. Acknowledgement
III. Table of Contents
IV. List of Tables, Figures, and others
V. Abstract
VI. Introduction
VII. Review of Literature
VIII. Methodology
IX. Results and Discussion
X. Bibliography
XI. Appendices

C. PROJECT MANAGEMENT

7. Summary of yearly comments of evaluators and action taken, if applicable

Comments	Action taken

8. Problems encountered and recommendations

Problems (State encountered problems related to administrative processes, research implementation, infrastructure and equipment reliability, among others)	Recommendations (State constructive comments on how to improve research implementation and monitoring)

D. ENDORSEMENTS	
To be filled up by the proponent/ author	
Submitted by: _____ Proponent's Name and Signature _____ Unit	 _____ Designation _____ Date
To be filled up by the immediate supervisor	
Noted by: _____ Supervisor's Name and Signature _____ Unit	 _____ Designation _____ Date
To be filled up by the College Dean or Research Institute Director	
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UPLB RESEARCH ACTIVITIES DATABANK
REPORT FORM
(Revised, 2008)

Note: This form is to be used in reporting all research activities of the unit, to be submitted every October 31of each year. This must be submitted in one (1) hard-copy and one (1) soft-copy to the Vice-Chancellor for Research and Extension (VCRE) in computerized form and must contain all the information herein required. All text should be in Point 10 Arial font. For Part B, replicate the table and paste into a new page for each individual project. The accomplished form should be printed in A4 size paper.

A. NARRATIVE REPORT OF SIGNIFICANT RESEARCH HIGHLIGHTS OF UNIT

(The unit should provide an executive summary, at most 2000 words or eight (8) paragraphs, describing its most of significant accomplishments in terms of research work. The summary should reflect all research activities and institutional research programs conducted for the year.)

B. INDIVIDUAL REPORT OF HIGHLIGHTS OF RESEARCH PROJECTS

1. Project Title	
2. Project Team	
Project Leader (State name and position)	Project Staff (State name(s) and position)
3. Project Type (Indicate if Core-Funded Research, UPLB Basic Research, or Externally-funded Research)	

3. Project Implementation

Status (Indicate if New, Ongoing, Completed)	Period Duration		
	Date started	For ongoing, projects, expected date of completion	Date completed

4. Project Funding

Fund Source	Fund Administration (Indicate if by UPLB or UPLBFI)	Total Project Budget	Budget for the Year

5. Highlights of Accomplishments

(Briefly state the project's significant accomplishments and research findings, by study).

6. Problems Met

D. ENDORSEMENTS	
To be filled up by the staff who accomplished the form	
Submitted by: _____ Name and Signature _____ Unit	 _____ Designation _____ Date
To be filled up by the immediate supervisor	
Certified correct by: _____ Supervisor's Name and Signature _____ Unit	 _____ Designation _____ Date
To be filled up by the College Dean or Research Institute Director	
Noted by: _____ Name and Signature _____ Unit	 _____ Designation _____ Date
To be filled up at the Office of the Vice-Chancellor for Research and Extension	
Received by: _____ Receiving Clerk OVCRE	 _____ Date

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UPLB EXTENSION ACTIVITIES DATABANK
REPORT FORM
(Revised, 2008)

Note: This form is to be used in reporting all extension activities of the unit, to be submitted every October 31 of each year. This must be submitted in one (1) hard-copy and one (1) soft-copy to the Vice-Chancellor for Research and Extension (VCRE) in computerized form and must contain all the information herein required. All text should be in Point 8 Arial font. A table row should only contain one (1) entry. For Part B, replicate the table and paste into a new page for each individual action project. The accomplished form should be printed in legal size paper (8.5 x 14 inches).

A. NARRATIVE REPORT OF SIGNIFICANT HIGHLIGHTS/ ACCOMPLISHMENTS ON EXTENSION ACTIVITIES FOR THE YEAR
(The unit should provide an executive summary, at most 1000 words or four (4) paragraphs, describing its most of significant accomplishments in terms of extension work. The summary should reflect all extension activities and institutional extension programs conducted for the year.)

B. LIST OF ONGOING LONG-TERM ACTION/ EXTENSION PROJECTS

Name of Project	*Sample: Farmer-Scientist Program for Corn in Cebu*			Brief Accomplishments for the Year
Date Started	*January 1, 2008*	Expected Date of Completion	*December 31, 2009*	*(State the program or project's accomplishments for the year in at most 1000 words or four (4) paragraphs. Confine the text inside this box only)*
Office Base of Project	*Office of the Municipal Agriculturist, Argao, Cebu*			
Project Sites	*Argao, and six other municipalities*			
Type of Clientele/ Beneficiaries/ Recipients	*Corn farmers, rice farmers, housewives, out-of-school youth, agricultural technicians, agrarian reform beneficiaries and others beneficiaries*			
Cooperating Agencies	*Department of Agriculture* *Department of Agrarian Reform* *DA-RFU VI* *Office of the Mayor, Argao*	Source of Funds/ Funding Agencies	*DA* *DA-RFU VI* *DA-BAR*	
Total Budget Allocation	*1,500,000.00*	Funds Deposited to	*UPLB Central Administration*	

Program/ Project Staff Involved			
Name	Title	Designation in the Project	Office/ Address

Other UPLB Units Involved in the Project	
Name of Unit	Involvement in the Project

C. NON-DEGREE TRAINING ACTIVITIES CONDUCTED BY THE UNIT

Type of Activity [a/]	Title of Activity	Date/ Duration	Venue	Participants		Unit Staff Involved			Sponsoring Units/ Agencies
				Type [b/]	Number	Name(s)	Nature of Involvement [c/]	No. of Hours Rendered	
Sample: *Seminar-workshop*	*Seminar Workshop on Research Project Implementation*	*April 17-18, 2008*	*UPLB, College, Laguna*	*Researchers*	*38*	*Ruth Almario* *Ma. Ellenita de Castro* *Elias Abao, Jr.*	*Coordinator* *Coordinator* *Resource Person*	*16* *16* *2*	*OVCRE-UPLB*

[a/] Indicate if: long-term training, summer short course, short training, seminar, workshop, non-scientific conference, symposium, dialogue, consultation, etc.
[b] Indicate if: farmer, fisherfolk, student, homemaker, extension worker, researcher, policy makers, etc.
[c/] Indicate if: resource person, coordinator, training staff, support staff, etc.

D. INDIVIDUAL INVOLVEMENT OF THE UNIT'S FACULTY AND STAFF ON EXTENSION ACTIVITIES CONDUCTED BY OTHER UNITS/ AGENCIES

Name of Staff Involved	Type of Activity [a/]	Title of Activity	Nature of Involvement [c/]	Total No. Hours Spent	Date	Venue	Conducting Unit	Sponsoring Unit/ Agency
Sample: *Ruth Almario*	*Seminar*	*Seminar Workshop on Research Project Implementation*	*Coordinator*	*16*	*April 17-18, 2008*	*UPLB, College, Laguna*	*PMES-OVCRE, UPLB*	*OVCRE-UPLB*

[a/] Indicate if: long-term training, summer short course, short training, seminar, workshop, non-scientific conference, symposium, dialogue, consultation, etc.
[b/] Indicate if: resource person, coordinator, training staff, support staff, etc.

F. CONSULTANCY/ SUPPORT SERVICES PROVIDED BY FACULTY AND STAFF OF THE UNIT						
Name of Staff	Client/ Agency Served	Nature/ Type of Service Provided	Duration of Service	Terms/ Conditions (free or with fee)	No. of hours or days/ month	Manner of Delivery (if applicable)

G. INVENTORY OF EXTENSION INFORMATION MATERIALS PRODUCED DURING THE YEAR					
Printed Materials					
Type of Publication [1/]	Title	Author (s)/ Editor (s)	Date Produced/ Published	Frequency of Publication	Intended Users

Audio-Visuals						
Type of Visual [2/]	Title	Developer	Number of Sets	Number of Pieces / Set	Date Produced	Intended End-Users

Radio and TV Broadcast					
Title of Program	Radio Station/ TV Channel	Day and Time of Broadcast	Date Aired/ Time and Day	Target Audience	Staff Member Involved Name/Type of Involvement

Exhibits and Displays Put Up				
Subject Matter	Location	Occasion/Event Celebrated	Inclusive Dates Shown	Person-in-charge/ Members of Exhibit Team

[1/] *Indicate if pamphlet, brochure, leaflet, flyer, circular, technical bulletin, newsletter, handbook, how-to's, etc.*
[2/] *Indicate if posters, slide, film, transparency set, synchronized sound and slide set, PowerPoint slide presentation, etc.*

E. ENDORSEMENTS	
To be filled up by the staff who accomplished the form	
Submitted by: _____ Name and Signature _____ Unit	 _____ Designation _____ Date
To be filled up by the immediate supervisor	
Certified correct by: _____ Supervisor's Name and Signature _____ Unit	 _____ Designation _____ Date
To be filled up by the College Dean or Institute Director	
Noted by: _____ Name and Signature _____ Unit	 _____ Designation _____ Date
To be filled up at the Office of the Vice-Chancellor for Research and Extension	
Received by: _____ Receiving Clerk OVCRE	 _____ Date

UNIVERSITY OF THE PHILIPPINES LOS BAÑOS
Office of the Vice-Chancellor for Research and Extension
OVCRE Building, Kanluran cor Lanzones Roads, UPLB, College, Laguna 4031
Telefax No: (049) 536-5326 • Local VOIP: 1500 and 1501
Email: ovcre@uplb.edu.ph • Website: http://www.uplb.edu.ph/rde

UPLB INTELLECTUAL PRODUCTIVITY DATABANK
REPORT FORM
(Revised, 2008)

Note: This form is to be used in reporting intellectual productivity of the unit, to be submitted every June 15 and November 15 of each year. This must be submitted in one (1) hard-copy and one (1) soft-copy to the Vice-Chancellor for Research and Extension (VCRE) in computerized form and must contain all the information herein required. All text should be in Point 9 Arial font. A table should only contain one (1) entry; copy and replicate the table as needed for more entries.

A. JOURNAL ARTICLES

Title of article	
Author (s) of article	
Field	Indicate if 1) Arts and Humanities, 2) Social Sciences, 3) Natural Sciences and Engineering or 4) Management and Economics
Abstract	
Title of journal where article was published	
Journal type	Indicate if 1) ISI-indexed journal, 2) Other international refereed journal, 3) Regional Asian refereed journal or 4) Local refereed journal
Name of publisher	
Publisher type	Indicate if 1) Foreign publisher, 2) Local publisher, 3) UPLB-published
Volume and Number / ISSN/ Number of pages	
Date and place of publication	

B. BOOKS, BOOK CHAPTERS AND OTHERS

Title of the publication	
Author (s) of publication	
Editor (s) of publication	
Field	Indicate if 1) Arts and Humanities, 2) Social Sciences, 3) Natural Sciences and Engineering or 4) Management and Economics
Summary of publication	Brief summary (about 100 words)
Publication type	Indicate if 1) Book, 2) Book chapter, 3) Manual, 4) Monograph, 5) Textbook, 6) Others
Name of publisher	
Publisher type	Indicate if 1) Foreign publisher, 2) Local publisher, 3) UPLB-published
ISBN and number of pages	
Date and place of publication	

C. SCIENTIFIC PAPERS READ/ PRESENTED

Title of the paper	
Author (s) of publication	
Field	Indicate if 1) Arts and Humanities, 2) Social Sciences, 3) Natural Sciences and Engineering or 4) Management and Economics
Name of conference or scientific meeting	
Dates and venue of the event	
Type of event	Indicate if 1) International – Outside Country, 2) International – Philippines, or 3) Local

D. NEW TECHNOLOGIES DEVELOPED

Title of the technology	
Technology developer (s)	
Classification of technology	Indicate your classification of the technology (e.g. economic crop variety, ornamentals, farming system, crop protection technology, feeds and feeds supplements, biotechnology product, biotechnology process, food technology, farm machinery and implements, etc.)
Brief description / significance of the technology	Brief summary (about 100 words)
Stage of development	Indicate if 1) Laboratory stage, 2) Pilot-testing, 3) Commercial production
Date/ year of development	
Mode of dissemination	Indicate if 1) Basic data, 2) IEC material, 3) Actual material or product, 3) Technical assistance, 4) Training, 5) Others

E. ENDORSEMENTS

To be filled up by the staff who accomplished the form

Submitted by: _____ Name and Signature _____ Unit	_____ Designation _____ Date

To be filled up by the immediate supervisor

Certified correct by: _____ Supervisor's Name and Signature _____ Unit	_____ Designation _____ Date

To be filled up by the College Dean or Research Institute Director

Noted by: _____ Name and Signature _____ Unit	_____ Designation _____ Date

To be filled up at the Office of the Vice-Chancellor for Research and Extension

Received by: _____ Receiving Clerk OVCRE	_____ Date

Title of Award	Award-Giving Agency	Usual Month of Deadline of Submission
UPLB Most Outstanding Researcher/ Research Program/ Creative Artist	UPLB	February
UPLB Most Extensionist/ Extension Program/ Project Award	UPLB	February
Metro Bank Foundation Outstanding Teacher (Higher Education Category)	Metro Bank Foundation	February
Lingkod Bayan Awards	CSC	March
Dangal ng Bayan Awards	CSC	March
Pag-asa Awards	CSC	March
Gawad Saka Outstanding Agricultural Scientist	DA	March
CHED Republica Awards (National and Zonal Outstanding Research and Publication Awards)	CHED	March
CHED Best Higher Education Institution Research Program	CHED	March
Most Distinguished Alumnus/ Alumna Award	UPAA	April
Lifetime Distinguished Achievement Award	UPAA	April
Outstanding Professional Award	UPAA	April
Community Service Award	UPAA	April
E.O. Tan Memorial Awards for Marine Fisheries and Aquaculture/ Inland Fisheries Publication	PCAMRD-DOST	May
M.S. Swaminathan Outstanding Research Award	LBSCFI	May
F.S. Pollisco R and D Award	LBSCFI	May
PARRFI R and D Award	LBSCFI	May
F.O. Tesoro Technology Transfer Award	LBSCFI	May
Pantas Award for Outstanding Researcher	PCARRD-DOST	June
Pantas Award for Outstanding Research Administrator	PCARRD-DOST	June
Tanglaw Award for Most Outstanding Research Institution	PCARRD-DOST	June
Gawad LIDER in Science Education	SEI-DOST	June
Dr. Eusebio Y. Garcia Award for Molecular Biology and Molecular Pathology	NRCP-DOST	June
Outstanding R and D Project in Advanced Science and Technology	PCASTRD-DOST	September
International Award for the Arts	UP System	November
Gawad sa Natatanging Publikasyon sa Filipino	UP System	November
Advanced Technology Award	UP System	November
President's Award for Innovation in Teaching	UP System	November
Washington SyCip Award for Best General Education Learning Material	UP System	November
Concepcion Dadufalza Award for Distinguished Achievement	UP System	November
International Publication Award for Journal Articles	UP System	-
International Publication Award for Books/ Chapters of Books	UP System	-
Outstanding R and D Award (Eduardo Quisumbing Medal for Basic Research, Julian Banzon Medal for Applied Research)	NAST-DOST	November
Outstanding Science and Technology Communicator Award	NAST-DOST	November
Outstanding Science Administrator Award (Dioscoro Umali Award)	NAST-DOST	November
Outstanding Technology Commercialization Award (Gregorio Zara Medal)	NAST-DOST	November
Outstanding Young Scientists	NAST-DOST	November
TWAS Prize for Young Scientists in the Philippines	NAST-DOST	November
NAST-Du Pont Talent Search for Young Scientists	NAST-DOST	November
Outstanding Scientific Paper	NAST-DOST	November
Outstanding Book and/ or Monograph	NAST-DOST	November
Pro Scientia Transformatrix Award	NAST-DOST	November
NAST-Hugh Greenwood Environmental Science Award	NAST-DOST	November
NAST-LELEDFI Award for Outstanding Research in Tropical Medicine	NAST-DOST	November
Magsaysay Young Engineers/ Technologists	NAST-DOST	November

UNIVERSITY OF THE PHILIPPINES LOS BAÑOS
College, Laguna

GUIDELINES FOR THE UPLB OUTSTANDING RESEARCHER, CREATIVE ARTIST AND RESEARCH TEAM AWARDS

A. ***Purpose***

Research has been defined by the Presidential Committee on Outstanding Researcher Award in October 1984, University of the Philippines, as follows:

"...an investigation which contributes to new knowledge and/or finds solutions to problems whether undertaken within a single discipline or in multi-disciplinary areas."

Echoing this statement, the UPLB Outstanding Research Award is thus a recognition of exemplary individual performance in the different fields of research in the University. While research in UPLB may be noted as one of the more amply rewarded and recognized financially, it is also a glaring fact that UPLB research/creative work has suffered from a dearth of recognition within the University. Hence, this special University recognition is envisioned to promote research/creative spirit and enthusiasm. More importantly, this could be the best way by which the researcher/creative artist will know that his work does not go unappreciated. It may also contribute towards academic excellence in research.

The University also recognizes the value of excellence in the arts. Hence, another special University recognition in the form of Outstanding Creative Artist Award is given to a UPLB faculty, researcher or staff who has shown remarkable achievements in the creative arts.

B. ***Nature of Award***

One award each for Outstanding Researcher, Creative Artist and Outstanding Research Team will be given during a convocation marking the Foundation Anniversary of UPLB.

The individual and team awardees will be given each a:

1. plaque of recognition
2. ₱55,000 cash award

C. ***Minimum Qualifications***

All faculty members and REPS doing research/creative work and with unquestionable moral integrity shall be eligible for nomination.

Any staff member whose moral integrity is doubtful should not be considered for nomination. While it is true that it is difficult to measure a person's moral integrity, nevertheless, one who is known to have committed gross acts of plagiarism, intellectual dishonesty and other acts of unprofessionalism should not be nominated for the award.

D. ***Needed Supporting Documents***

Research/Creative work in the form of publications and presentations in the last three years including papers presented in international conferences are needed.

E. ***Criteria for Selection***

1. Originality – the research/creative work should contribute to a new principle, theory, technology, concept, method, technique, or art creation (30%).

2. Productivity – shall consider number of research projects completed or creative works undertaken as principal investigators/creators (10%).

3. Research/Creative work and publications – assessment shall be based on researches published in the last three years indicating the titles of journals where these were published or creative works presented/published and papers presented in international conferences and unpublished reports of completed projects (20%).

4. Significance of research findings and creative works – the research findings and creative works should have significant contribution to science, technology generation, national development policies and programs or to the culture and well-being of Philippine society (20%).

5. Contribution to institutional development – the research or creative work should have contributed to the development of the University or furtherance of its objectives as a host institution for the researches. This can be in the form of promotion/enhancement of academic programs, provision of new or upgraded facilities/equipment for instruction and further research, and recognition for the University as a result of the impact of the research/creative work on clients (10%).

6. Recognition given to the research/creative work – citations, awards and other forms of recognition from academic institutions, scientific or learned societies (national and international) given to the research/creative work (or the researcher/creator) shall be taken into account (10%).

F. ***Selection Procedure***

1. **Selection at the Department/Institute Level**

Additional criteria for selection of nominees at the department/institute and college level shall be decided upon by the individual units.

The Academic Personnel Committee chaired by the department/institute chair/director shall select not more than two nominees who satisfy the minimum qualifications.

2. **Selection at the College Level**

The College Academic Personnel Committee chaired by the College Dean shall evaluate the nominees submitted by each unit and select not more than two nominees. A formal letter of nomination shall be accomplished for each nominee and all the pertinent documents shall be submitted to the University Committee created for this purpose.

3. **Final Selection**

The University Committee shall evaluate the nominations endorsed by the deans and select one Outstanding Researcher and one Outstanding Research Team. The decision of the University Committee is final. The Chancellor shall constitute this committee win the following composition:

Vice-Chancellor for Research and Extension as Chair
One selected UPLB Faculty Member
One selected UPLB Researcher
One selected UPLB Alumnus

For the Outstanding Creative Artist Award, another University committee shall be constituted by the Chancellor. This committee shall evaluated the nominations endorsed by the Deans and select one Outstanding Creative Artist Awardee.

G. ***Recipients of the award may be eligible for renomination three years after receiving the award.***

UPSPS Form 1 (Mar '06) Version 3/31/06

APPLICATION FOR ADMISSION TO THE SCIENTIFIC PRODUCTIVITY SYSTEM (SPS)
As of December 2007

Name:_____ Current UP Position Rank: _____
Department/Institute:_____ College:_____
UP Constituent University _____

A. Minimum requirements for initial appointment

Doctoral degree in specific field of specialization or MD with MS/MA
Original degree as stated in your diploma: _____
Attach a copy of your Diploma (labeled as Attachment A).

B. PRODUCTIVITY AS SCIENTIST

List all scientific accomplishments for the last 5, 7, and 10 years depending on the rank being applied for (5 yrs for Scientist I, 7 yrs for Scientist II, and 10 yrs for Scientist III). However, only accomplishments in the last 5 years (January 2003 – December 2007) will be given corresponding points for appointment as UP Scientist.

I. SCIENTIFIC REFEREED PUBLICATIONS

1. Scientific publications in refereed scientific journals

The U.P. must be the author's address in the articles in order for these to be credited. Use the following format for your entries:

Cruz, J. V. , Asuncion, C. J., and Vicente, M. A. (2006). Rare earth elements in the particulate matter of the Philippine Trench. *Cosmochim. Geochim Acta,* Vol. 65 (2), pp. 187-199.

a. Papers published in national journals – maximum 3 points (1-2 authors – 3 pts; 3-4 authors – 2.4 pts; 5 or more – 1.8 pts)
Provide copies of the title pages of your articles (as Attachment B.I.1.a).

Points
1. _____ _____
_____
2. _____ _____
_____

b. Papers published in non-ISI-indexed international journals – maximum 5 points (1-2 authors – 5 pts; 3-4 authors – 4 pts; 5 or more – 3 pts)
Provide copies of the title pages of your articles (as Attachment B.I.1.b).

Points
1. _____ _____
_____
2. _____ _____
_____

c. Papers published in ISI-indexed journals – max 7 points (1-2 authors – 7 pts; 3-4 authors – 5.6 pts; 5 or more – 4.2 pts)
Provide copies of the title pages of your articles (as Attachment B.I.1.c).

Points
1. _____ _____
_____
2. _____ _____
_____

2. Scientific or technological/technical books or chapters in books by reputable publishers

a. Books or chapters of a book (non-textbook) published by a local publisher with national circulation (7 pts per chapter; 35 pts for a whole book)

Provide copies of the cover page, table of content, title pages of your books/chapters, publisher (as Attachment B.I.2.a).

O.D. Corpuz, 1998. *An Economic History of the Philippines* University of the Philippines Press

Points

1. _____ _____
2. _____ _____

b. Books or chapters of a book (non-textbook) published by an international publisher with international circulation (10 pts per chapter; 50 pts for a whole book). Use the following format for your entries:

Murphy, K.P., 2001. *Protein Structure, Stability, and Folding*. New Jersey: Human Press.

Provide copies of the cover page, table of content, title pages of your books/chapters, publisher (as Attachment B.I.2.b).

Points

1. _____ _____
2. _____ _____

TOTAL FOR SCIENTIFIC REFEREED PUBLICATIONS [ ]

II. PEER REVIEWED TECHNOLOGICAL OUTPUTS

1. Patents (15 pts. for local, 50 pts. for international)
Provide supporting documents for your patents (as Attachment B.II.1).

Points

Type of Patent: _____ _____
Patent No._____ Assignee:_____
Date of Issue:_____ Place of Issue:_____
Co-inventor(s), if any:_____
(List all entries.)

2. Original peer-reviewed designs: (10 pts per design)
Provide supporting documents for your designs and the peer-review process (as Attachment B.II.2).

Points

Title of Design: _____ _____
_____
(List all entries.)

TOTAL FOR TECHNOLOGICAL OUTPUTS [ ]

III. SCIENTIFIC STANDING (INTERNATIONAL)

1. Editor of international reputable scientific journal/book (20 pts. per journal, maximum of 2 journals for 5-year period)
Provide copies of title page and list of editorial board (as Attachment B.III.1).

Points

a. Name of Journal/Book: _____ _____
_____
Address: _____
Inclusive dates: _____
b. Name of Journal/Book: _____ _____
_____
Address: _____
Inclusive dates: _____

2. Peer reviewer in a scientific journal (3 pts per article, maximum of 2 reviews for 5-year period)
Provide copy of actual review sent to publisher (as Attachment B.III.2).

Points

a. Name of Journal/Book: _____ _____
_____
Address:_____
Inclusive dates:_____
b. Name of Journal/Book: _____ _____
_____
Address:_____
Inclusive dates:_____

3. Member of Editorial Board of Refereed Scientific Journal (5 pts. per journal, maximum of 2 journals with at least one year appointment within 5-year period)
Provide copies of title page and list of editorial board (as Attachment B.III.3).

Points

a. Name of Journal/Book: _____ _____
_____
Address: _____
Inclusive dates: _____
b. Name of Journal/Book: _____ _____
_____
Address: _____
Inclusive dates: _____

TOTAL FOR SCIENTIFIC STANDING | |

IV. PROFESSIONAL STANDING (INTERNATIONAL)

1. Invited member of prestigious international scientific bodies, by direct invitation only (10 pts per invitation; maximum of 2 invitations within 5-year period)
Provide copies of the invitation (as Attachment B.IV.1).

Points

a. Name of international organization:_____ _____
_____
Position:_____
b. Name of international organization:_____ _____
_____
Position:_____

2. International scientific awards (10 pts per award; maximum of 2 awards within 5-year period)
Provide copies of the award certificates (as Attachment B.IV.2).

Points

a. Name of Award:_____ _____
Awarding Organization:_____
b. Name of Award:_____ _____
Awarding Organization:_____

3. Invited keynote speaker in scientific international conferences, symposia, congresses (50 pts per invitation/paper; maximum of 2 invitations within 5-year period)
Provide copies of the invitation and program (as Attachment B.IV.3).

Points

a. Name of Conference, Symposia, Congress:_____ _____
_____
Place and Date of Conference, Symposia, Congress:_____ _____
_____

b. Name of Conference, Symposia, Congress:_____ _____

_____

Place and Date of Conference, Symposia, Congress:_____ _____

_____

4. Invited plenary speaker in scientific international conferences, symposia, congresses (10 pts per invitation/paper; maximum of 2 invitations within 5-year period)
Provide copies of the invitation and program (as <u>Attachment B.IV.4</u>).

Points

a. Name of Conference, Symposia, Congress:_____ _____
Title of Paper Read:_____
b. Name of Conference, Symposia, Congress:_____ _____
Title of Paper Read:_____

TOTAL FOR PROFESSIONAL STANDING | |

Summary of Points

I. Scientific refereed publications _____

II. Technological outputs _____

III. Scientific standing _____

IV. Professional standing _____

UP SCIENTIST RANK _____

APPLICATION FORM
RESEARCH AND CREATIVE WORK GRANT

Please follow this format and supply all required information. Submit complete application to the Office of the Vice President for Academic Affairs, through channels. There are two System deadlines each year: ***April 30*** *and* ***October 31****. The OVPAA will process only applications endorsed by the Chancellor and received by the OVPAA on or before the above deadlines.*

Category: [ ] Research [ ] Creative Work

1. Name (list all proponents if applying as a group)
2. Position and rank
3. Employment status (permanent or temporary) and years in UP service
4. Department/Institute, College, and CU
5. Postal, e-mail address and telephone number, fax
6. Date of birth
7. Education (degree completed, school, and inclusive dates; honors and awards received; include current graduate program enrolled in, if any, and number of units completed)
8. Previous academic positions and/or relevant experience
9. List of relevant publications/creative work in the last five years. Supply full bibliographic information (or equivalent information for creative work).
10. List of previous research/creative grants funded by System, if any; status of these projects; publications or other output arising from the grants
11. Other relevant publications (not listed in above)
12. Other relevant and completed research, creative, and scholarly work

Details of Proposed Research or Creative Work:

13. Capsule description and significance of proposed work (minimize jargon; explain how topic/subject matter fits into unit/CU's thrusts and focus; how it relates to your other current and previous work; why work should be supported; if work is part of larger project or program)
14. Duration of project and expected output
15. List of other funded research/creative projects in progress; amount and source of funding.
16. Attach detailed proposal (follow acceptable format for projects in the discipline, such as: Title, Abstract, Significance, Background, Objectives, Theoretical Framework and Methodology, Work Plan; format may be modified depending on project and intended output)

This is to certify the correctness of the information presented above.

_____

Applicant's signature and date

APPLICATION FORM
TEXTBOOK WRITING GRANT

Please follow this format and supply all required information. Submit complete application to the Office of the Vice President for Academic Affairs, through channels. There are two System deadlines each year: ***April 30*** *and* ***October 31****. The OVPAA will process only applications endorsed by the Chancellor and received by the OVPAA on or before the above deadlines.*

1. Name (list all authors if applying as a group)
2. Position and rank
3. Employment status (permanent or temporary) and years in UP service
4. Department/Institute, College, and CU
5. Postal, e-mail address and telephone number, fax
6. Date of birth
7. Education (degree completed, school, and inclusive dates; honors and awards received; include current graduate program enrolled in, if any, and number of units completed)
8. Previous academic positions and/or relevant experience
9. List of relevant publications/creative work in the last five years. Supply full bibliographic information (or equivalent information for creative work).
10. Other relevant publications (not listed in above)
11. Other relevant and completed research, creative, and scholarly work

Details of Proposed Textbook:

12. Description and significance of proposed textbook: why and how the proposed work differs significantly from those already in use or are available; distinguishing features; why work should be supported.
13. Course where proposed textbook will be used
14. Number of years proponent has taught course
15. Average number of students in the course (give most recent figures)
16. Other courses which could use the textbook (if any)
17. Textbook currently being used for the course (if any)
18. Attach the following:
    a. Chapter/section outline of proposed book, preferably with brief description of chapters
    b. Sample/draft chapters, any sample writing

I attest to the correctness of the information presented above. I also certify that I am not currently receiving any textbook-writing grant from the University.

_____

Applicant's signature and date

GENERAL GUIDELINES FOR THE APPLICATION OF "EMERGING S&T FIELDS GRANT"

1. This Grant shall support inter-/multi-disciplinary research programs/projects related to the BOR-approved list of emerging fields in S&T.

2. The components of the "Emerging S&T Grant" are the following:

   a. **Institutional Development Grant** – for the acquisition of equipment and for maintenance and operating costs to be used by existing as well as proposed R&D programs

   b. **Emerging S&T Research Grant** – for undertaking research projects in support of the emerging S&T fields research programs. The guidelines shall be patterned generally on the existing UP System Research and Creative Work Grant.

3. Regular faculty with the rank of Assistant Professor and higher, and REPS with the rank of University Researcher I and higher, may apply for the Grant, individually or as a group.

4. The following application process shall be followed:
   a. Proponent(s) shall submit 6 copies of research proposals using OVPAA Emerging S&T Form - 01 and/or 02.
   b. Preliminary screening shall be done at the CU level. The proposals shall be endorsed through channels to the System Committee on Emerging S&T Fields, c/o OVPAA.
   c. After a preliminary evaluation by the System Committee, the proponents, together with the Vice Chancellor(s) for Research (or the equivalent) of all CUs involved in case of research programs shall be invited for interview and requested to present (powerpoint presentation) their proposals before the System Committee. The latter shall assist the proponents improve on the proposals, if necessary.
   d. The proponents shall revise the proposals as agreed upon during the presentation/interview.

5. The System Committee shall recommend to the President the research programs/projects to be funded.

6. The number of grants to be awarded shall be subject to availability of funds. Research programs which require big amounts of funding may be submitted as a UP proposal to other funding agencies like DOST, with substantial UP counterpart.

6. The CU Offices of the Vice Chancellor for Research (or the equivalent) shall be responsible for monitoring the progress of the research programs/projects. An annual reports shall be submitted to the OVPAA.

7. Should results of the research programs/projects be published or publicly presented, the funding support from the University shall be acknowledged. The provisions of the University's intellectual property rights shall be followed.

8. The provisions of the contract particularly the terms of reference and the contractual obligations shall be discussed with the grantee(s) prior to execution of the contract.

9. Additional guidelines shall be set as need arises.

OVPAA Emerging S&T Form - 02
August 2006

APPLICATION FORM FOR EMERGING S & T GRANT

EMERGING S&T RESEARCH GRANT

I. RESEARCH PROJECT TITLE (concise and descriptive of the proposed research)

II. PROPONENT/INSTITUTIONAL AFFILIATION

- Name
- Highest educational degree, university, year obtained
- Institutional affiliation (Department/Institute, College, UP Constituent University)

III. BRIEF DESCRIPTION (not more than 300 words)

- description of research project
- indicate the research program in which proposed research project is part of
- general/specific objectives
- duration

IV. Rationale: include the ff. (not more than 300 words)

- originality
- novelty
- scientific merit
- how proposed project supports the corresponding research program indicated above
- potential socio-economic impact
- target beneficiaries

V. RELATED RESEARCH PROJECTS UNDERTAKEN/ON-GOING SINCE YEAR 2000

TITLE	FUNDING AGENCY	AMOUNT OF GRANT	PERIOD	PUBLICATION/ PATENT
I. Finished researches				
II. On-going researches				

VI. MAINTENANCE AND OPERATING EXPENSES REQUESTED, if any

VII. EXPECTED OUTPUTS/DELIVERABLES: include the following, as applicable

- Process(es)/product(s)
- Patent and/or copyright/publication(s)
- Degree program(s) supported and potential # of undergraduate and graduate students involved per year

VIII. TIMETABLE (use Ghant chart)

IX. ENDORSEMENTS:

_____	_____
DIRECTOR/DEPARTMENT CHAIR	DEAN
_____	_____
VICE CHANCELLOR FOR RESEARCH AND DEVELOPMENT (or equivalent)	CHANCELLOR

UPLB IPO Form No. 01
Revised 2008

UNIVERSITY OF THE PHILIPPINES

INVENTION DISCLOSURE REPORT

INVENTORS

Name	College/ Department	Home Address	Citizenship
1.			
2.			
3.			

TITLE OF INVENTION: _____
_____
_____

DESCRIPTION OF INVENTION:

_____
_____
_____
_____

SUPPORT FOR INVENTION

Sponsor(S)	Address	Nature of Support

INVENTORS' NAME AND SIGNATURES

_____ _____
_____ _____

WITNESSES

_____ _____
_____ _____

SIGNATURE OF THE DEAN/ DIRECTOR

_____ _____
Director Dean

UPLB IPO Form No. 02
Revised 2008

UNIVERSITY OF THE PHILIPPINES

INVENTION PATENT AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

This Agreement entered into by and between:

The **UNIVERSITY OF THE PHILIPPINES SYSTEM**, through the **UNIVERSITY OF PHILIPPINES LOS BAÑOS**, a state institution of higher learning existing pursuant to Act 1870, as amended by P.D. 58, with office at Los Baños, Laguna, herein represented by its Chancellor, _____, hereinafter referred to as UPLB

and

_____, of legal age, with official address at _____, UP Los Baños, hereinafter referred to as the Employee.

WITNESSETH: THAT

WHEREAS, the University of the Philippines encourage and supports research among its faculty, students and staff. Complimentary to its pedagogical tasks, the University is engaged in various research activities to expand its stock knowledge thereby enriching its ability to implement educational programs and to engage in socially responsive extension work;

WHEREAS, the University of the Philippines is desirous to effectively document and register intellectual property rights;

WHEREAS, Section 5, Number 4 of The Governing Principles and Policies on Intellectual Property Rights of the University of the Philippines System provide for the ownership of, as well as the disclosure and assignment of patents;

NOW, THEREFORE, pursuant to all foregoing, the parties hereby agree as follows:

1. The term invention, as understood in this agreement, shall mean all inventions which may relate to a product, process, or an improvement of any of the foregoing, that is new, involves an inventive step, is industrially applicable and potentially patentable, including utility models and industrial designs referred to in the Governing Principles and Policies on Intellectual Property Rights of the University of the Philippines System guidelines as inventions;

2. The employee who is the creator of commissioned inventions should disclose and assign the patent to these works to the University.

2.1 Commissioned works shall mean the following:

a. Inventions that are supported by a specific allocation of University funds or other University resources;

b. Inventions produced at the direction and control of the University in pursuit of a specific project or purpose regardless of the source of funding;

c. Works whose inventorship could not be attributed to one or a discrete number of inventors despite the application of processes provided in Governing Principles and Policies on Intellectual Property Rights;

d. Those that may be stipulated by contract as “commissioned inventions.”

3. In addition to the foregoing, regardless of the source of funding, the employee shall sign the patents to the following inventions to the University:

a. Those conceived or first reduced to practice by the employee in the course of the performance of his duties, during office hours or with university resources regardless of the amount;

b. Those created by the employee through substantial use of University resources such as libraries, research facilities, buildings, utilities, equipment, tools and apparatus, including services of other employees working within the scope of their employment.

4. The parties hereby adopt and incorporate into this agreement the provisions of the Governing Principles and Policies on Intellectual Property Rights of the University of the Philippines System

IN WITNESS WHEREOF, the parties have hereunto set their hands this _____ at _____.

_____	_____
Employee	Chancellor
CTC No.:	CTC No.:
Date and Place:	Date and Place:
_____	_____
Witness	Witness

REPUBLIC OF THE PHILIPPINES)
PROVINCE OF LAGUNA …….) s.s.
MUNICIPALITY OF LOS BAÑOS)

PERSONALLY APPEARED before me, a Notary Public for Laguna this _____, the above-named persons showing their respective community tax certificates, the numbers, places and dates of issue whereof appearing above below their respective names, known to me and to me known to be the persons who executed the foregoing instrument and made oath that the same is their free and voluntary act and deed.

WITNESS MY HAND AND SEAL.

Doc. No.
Page No.
Book No.
Series of 20____

UPLB IPO Form No. 03
Revised 2008

UNIVERSITY OF THE PHILIPPINES

DEED OF ASSIGNMENT
(of Patent Application/Letter Patent)

WHEREAS, THE **UNIVERSITY OF THE PHILIPPINES LOS BAÑOS** with principal office address at College, Laguna and _____
_____
_____
_____
(Name(s), Address(es) of other Assignors)

hereafter referred to as Assignors, have made in-joint ownership, application for letters patent/ did obtain letters of patent of the Philippines for _____
_____
_____
_____
(Title of Invention)

which bear(s) application Serial No./Letters Patent No. _____ filed/issued on _____, 20_____.

WHEREAS, **UNIVERSITY OF THE PHILIPPINES LOS BAÑOS** with principal address at College, Laguna 4031, represented by its Chancellor, _____
_____
(Name and Address of other Assignee)

hereinafter referred to as Assignee, is desirous of acquiring interest therein.

NOW, THEREFORE, Assignors herein, by these presents, do hereby assign and transfer unto said Assignee the whole right and interest to the said patent application/letters patent be/are granted as fully and entirely as the same would have been held by the Assignors herein had this assignments not been made.

This Deed of Assignment shall be subject to the University Policies, Rules and Regulations Governing Copyrightable and Patentable Works Produced by University Personnel as approved by the Board of Regents on its 982nd meeting dated November 28, 1985.

DONE IN _____ on _____.

_____ _____
FOR THE UNIVERSITY OF THE PHILIPPINES LOS BAÑOS (Signature and Title, if any, of other Assignors)

REPUBLIC OF THE PHILIPPINES)
PROVINCE OF LAGUNA ……) s.s.
MUNICIPALITY OF LOS BAÑOS)

PERSONALLY APPEARED before me, a Notary Public for Laguna this _____, the above-named persons showing their respective community tax certificates, the numbers, places and dates of issue whereof appearing above below their respective names, known to me and to me known to be the persons who executed the foregoing instrument and made oath that the same is their free and voluntary act and deed.

WITNESS MY HAND AND SEAL.

Doc. No.
Page No.
Book No.
Series of 20____

UPLB IPO Form No. 04
Revised 2008

UNIVERSITY OF THE PHILIPPINES

DEED OF ASSIGNMENT
(Copyright)

WHEREAS, **THE UNIVERSITY OF THE PHILIPPINES LOS BAÑO**S with principal office address at College, Laguna and _____ with principal office address at _____ hereafter referred to as Assignors, have made in-joint ownership, application for copyright for

_____
(Title of Publication)

which bear(s) Copyright Registration No. _____ filed/issued on _____, 20_____.

WHEREAS, **UNIVERSITY OF THE PHILIPPINES LOS BAÑOS** with principal address at College, Laguna 4031, represented by its Chancellor, _____hereinafter referred to as Assignee, is desirous of acquiring interest therein.

NOW, THEREFORE, Assignors herein, by these presents do hereby assign and transfer unto said Assignee, the whole right and interest to the said copyright; the same to be held and enjoyed by Assignee hereof to the full end of the term for which said copyright as fully and entirely as the same would have been held by the Assignors herein had this assignment not been made.

This Deed of Assignment shall be subject to UP Guidelines on Intellectual Property as approved by the Board of Regents on its 1171st meeting dated May 30, 2003.

DONE IN _____ on _____.

_____
FOR THE UNIVERSITY OF
THE PHILIPPINES LOS BAÑOS

CTC No.:
Date:
Place:

_____
(Signature and Title, if any, of other Assignors)

CTC No.:
Date:
Place:

REPUBLIC OF THE PHILIPPINES)
PROVINCE OF LAGUNA …….) s.s.
MUNICIPALITY OF LOS BAÑOS)

PERSONALLY APPEARED before me, a Notary Public for Laguna this _____, the above-named persons showing their respective community tax certificates, the numbers, places and dates of issue whereof appearing above below their respective names, known to me and to me known to be the persons who executed the foregoing instrument and made oath that the same is their free and voluntary act and deed.

WITNESS MY HAND AND SEAL.

Doc. No.
Page No.
Book No.
Series of 20___

T.N.L. NO.\24. (3rd Revision)

APPLICATION FOR COPYRIGHT
(Please Read Instructions Carefully Before Filling Blanks)

___ (Published)
___ (Unpublished)

_____ **FILING DATE**
PAPER NO. _____

The Director, *The National Library, Manila* Date _____

SIR: I have the honor to apply for the copyright registration of the (a) unpublished (b) published work named herein of which (c) 2 complete copies are herewith deposited compliance with the provisions of REPUBLIC ACT 8293. The amount of P120.00 for the registration fee and ten pesos worth of documentary stamp to be affixed to the certificate are also enclosed. The data required by the rules and regulations of that office are the following:

1. Name and address of copyright owner _____
(Claimants full legal name)
_____
(Street number, municipality and provinces)
2. Name of author(s): _____
3. Country of which the author is citizen: _____
(Country)
4. If alien, state Alien Certificate No. and where domiciled in the Philippines: _____
_____
5. Title of the Work: _____
(Title as it appears on the front part of the title page of the work followed by the edition number, if any)
_____
6. Class to which the work belongs: _____
7. If copyright is claimed upon a new matter in a reissued work, state new matter specifically: _____
_____
(Additional chapters by numbers followed by inclusive pages in parenthesis; other more or less short but materials alterations)
8. (d) Completed (e) Printed or Reproduced copies on the _____ day of _____
(Date when the work or its printing was completed)
at _____ by _____
(Municipality, Province) (Person or Establishment)
9. First published or sold to the public in the Philippines on the _____ day of _____
(Date when the work was placed on sale, sold or publicly distributed)
_____ by _____
(Municipality, Province) (Person or Establishment)
10. Send certificate of registration to: _____
(Name and address)
11. Unit price if reproduced in copies for sale: P _____

Very respectfully,

For UP Los Baños:

_____
(Signature of Applicant)

==========

Deposit received on _____ Certificate issued on _____
Application received on _____ Signed by _____
Affidavit received on _____ Certificate mailed by _____
Fee received P _____ O.R. _____ Certificate received by _____
(Signature of receiver)
Date of registration _____ XXc _____

• Of the lines marked (a) to (c) use the ones which apply and cross out the lines not used
•• The word author embraces a translator, a composer, painter, sculptor or other artists, or a photographer or a producer of a cinematographic film or publisher of a periodical, or an editor of work without known authors.
+ In case of periodicals, the title includes the volume and number as well as the date of each issue separately registered e.g. Philippine Magazine Vol. XXX No. 2, July 1933.
++ See class designations at the bottom of the reverse or backside hereof. A representative may sign the application under the name of the claimant. Accomplish this application form in duplicate;

TYPEWRITTEN ONLY
(THIS FORM IS NOT FOR SALE AND MAY BE REPRODUCED)