BUCAF, BUTC lead R&D initiatives

BU, to collaborate with Cam Norte State College on pineapple R&D

CHED-BU ZRC spearheads R&D management training

Making the best of science and technology work ...

BUCAF receives 7.5M research grant

Bicol University College of Agriculture received 7.5M research grant from the Department of Agriculture in April 2011. Said grant will be used to finance the implementation of two research projects on rice production and indigenous breeding and dairy production facilities. The total grant amounts to Php 7,550,000.00 with Php 4,942,000 and Php 2,608,000 for the first and second projects, respectively.

BUICIT’s new pride is its recent patented utility model by Prof. Nicanor Balbin. The utility model is called Automotive Charging System with Safety Device for Instructional Use.

Automotive Charging System: BU’s Latest Patented Instructional Device

Said patented invention was granted certificate of registration on March 28, 2011 with Registration No. 2-2010-000438 through the Bicol University- Intellectual Property Rights Unit (IPRU). The application for patent was published in the Vol. XIV No. 13 issue of the Official Gazette of the IPO.

Compared to the conventional charging system trainer with live engine, this utility model makes the teaching-learning process easier, safer, better and inexpensive.

This utility model was a finalist in the 2009 DOST National Invention Contest, Creative Research Category held on November 16-20, 2009 at the Philippine Training Trade Center, Pasay City. Earlier, it won third prize in the Regional Invention Contest on September 7-9, 2009 at Pacific Mall, Legazpi City.

Mr. Balbin is an Associate Professor III of the College of Industrial Technology. He started his service in BU in 2000.

Patented invention is one of the outputs (Key Results Areas) for ISO certification and (Major Final Outcomes) for the government accomplishment reports. (RROB)

1. Equipped with safety device to protect the system and the user
2. Facilitate T-L process and improve the quality of learning output
3. Enhance the technical know-how of automotive technology students in connecting or installing charging system
4. Provide troubleshooting activities on defective alternator, defective voltage regulator, run-down battery, faulty wiring connection, open and short circuit, and belt tension
5. Can serve as a battery charger
6. Can be used in alternator overhauling and output current testing
7. No pollutants from exhaust gases during operation
As of June 2011, BUCAF has five completed researches and ten on-going researches. Completed researches deal on commodities such as arrowroot, carabao’s milk, pili, coconut as well as on enhanced potting preparation technology and butterfly species.

On-going researches deal on abaca, fuelwood, native chickens, vegetable biodiversity, upland farming, sweet potato, rice production, agroforestry models for climate change mitigation, soil and crop water utilization, and breeding and dairy production facilities.

BUTC has four completed researches and eight on-going researches. Completed researches deal on macro-invertebrate gleaning fisheries, endemic freshwater, livelihood opportunities for small scale operation and sea urchin. On-going researches deal on sea cucumber, alimusan (eel-catfish), marine crab fisheries, siganids (rabbit fish), scallops, climate impact and adaptation in the coastal environment, and coral bleaching.

Both BUCAF and BUTC have research projects with external funding, and both are headed by deans who are prolific researchers. (RROB)
Agriculture and Socio-economics

FAO-BU Project on climate risk management, extended

Food and Agriculture Organization (FAO) of the United Nations (UN) project TCP/PHI/3203 entitled Strengthening Capacity for Climate Risk Management and Disaster Preparedness in Selected Provinces of the Philippines (Bicol Region) is extended until December 2011.

Project Steering Committee (PSC) Resolution no. 2, series of 2010 approves the extension for the said project. The main basis for the extension is that the implementation of good practice (GP) options for climate change adaptation and disaster management will require three cropping cycles commencing in June 2010 until October 2011 in order to validate the effectiveness of the said GP options.

The BU personnel involved in the project include Dr. Arnulfo M. Mascariñas as National Lead Consultant, Dr. Fay Lea Patria M. Lauraya as Project Coordinator, Dr. Luis O. Amano as Project Leader, Dr. Viola L. Amano and Prof. Angelo P. Candelaria as Project Staff, and Mr. Domingo V. Bernido, Ms. Ofelia Z. Mata, Ms. Ma. Lourdes A. Abocado, Ms. Janet D. Manila and Ms. Agnes R. Caro as Project Support Staff.

Organizations involved in the project include Department of Agriculture (DA), PAGASA RO V, Office of Civil Defense (OCD) and Regional Disaster Coordinating Council (RDCC) RO V, LGUs of Albay, Sorsogon, and Camarines Sur, Central Bicol State University of Agriculture, and Bicol University.

The project was formally started with the inception meeting held on September 10, 2009 in Legazpi City. The sites are Gubat, Sorsogon; Guinobatan, Albay; and Buhi, Camarines Sur.

Supply Chain Improvement (SCI) for Abaca Project Undergoes Program Review

The Supply Chain Improvement for Abaca project underwent review on May 30, 2011 at Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) headquarters in Los Baños, Laguna.

The purpose of the review is to discuss the progress in achieving the expected outputs and further improvement in the phase-out strategy of each project component of the national program on “Supply Chain Improvement of Selected Commodities in AFNR (Phase 2): Development and Application of Supply Chain Management Models to Improve Chain Effectiveness and Efficiency.”

The supply chain improvement program was designed to put in place strategic measures to improve the supply chains of abaca, bamboo, organic fertilizer and vegetables based on the findings of the evaluation research conducted on these commodities during the Phase I. This is also being implemented by Visayas State University (VSU), Negros Oriental State University (NORSU), Northern Mindanao State Institute of Science and Technology (NORMISIST), Mariano Marcos State University (MMSU), Central Luzon State University (LSU), and Central Mindanao University (CMU). SCI for abaca project in Bicol highlighted the organizational, entrepreneurial and technical trainings conducted in the two clusters in Catanduanes as well as the trading of abaca fibers by Buenavista Farmers Producers Cooperative (BUFAPROCO) with Manila Hemp Trading Corporation (MHTC). Indicators of efficiency, flexibility and responsiveness of the model were likewise presented in the review.

Dr. Albert P. Aquino and Dr. Ernie O. Brown of the Socioeconomics Research Division (SERD) of PCARRD stressed the importance of the Business Support Group (BSG) in the success of the project and phase-out strategies should include resolution for the second generation challenges that may arise. They also want to know the strategic activities of Bicol University for the sustainability of the model after its termination.

Dr. Arnulfo M. Mascariñas presented the highlights of the interventions being conducted by the SCI-Abaca team in Catanduanes. He was accompanied by Dr. Viola L. Amano, Prof. Angelo P. Candelaria, Mr. Erwin E. Torres and Ms. Grace C. Torres.
Bicol University (BU) leads in the proposed collaborative research on supply chain management for pineapple in the Bicol region. BU researchers led by Dr. Arnulfo M. Mascariñas and representatives of Camarines Norte State College (CNSC) and Office of the Provincial Agriculturist of Camarines Norte (OPAG-CN) discussed issues on the proposed research during a meeting cum planning-workshop held on February 18, 2011 at CNSC.

The participants tackled the situation of the pineapple industry in the region and suggested researchable areas for future research and development undertakings. Prof. Manolo A. Carbonell and Prof. Sylvia D. Salvan presented the findings of the researches on pineapple production conducted by CNSC and highlighted gaps that the collaborative research can bridge.

Dr. Arnulfo M. Mascariñas proposed the evaluation of supply chain management for pineapple to be employed in the collaborative research to identify the research gaps and possible interventions for the pineapple industry in Camarines Norte. According to Dr. Mascariñas, this is more than the usual market chain studies since it also considers the interaction among the major players in the industry.

Dr. Amano presented BU’s recently conducted and PCARRD-funded research entitled “Supply Chain Improvement for the Abaca in Selected Areas in the Philippines, Phase 1: Evaluation Research”. The five supply chains of abaca fiber in the Bicol region including the flow of product, information and payment as well as logistic issues and external influences were discussed in detail by Dr. Mascariñas.

Dr. Helen B. Abordo of the OPAG-CN also presented the concept of value chain with special focus on value chain mapping.

The meeting ended with the planning for the R&D planning-workshop for the pineapple industry in Summer 2011 which will be attended by representatives from BU, CNSC and OPAG-CN. The tasks of the different agencies for the planning-workshop were also specified.

The participants in the meeting were Dr. Arnulfo M. Mascariñas (Director, BU Research and Development Center), Dr. Luis O. Amano, Dr. Viola L. Amano, Prof. Ida Francia H. Revale and Prof. Erwin E. Torres of Bicol University (BU); Dr. Ela N. Regondola (Vice-President for Administration, CNSC), Dr. Sonia S. Carbonell (Vice-President for Academic Affairs, CNSC), Prof. Sylvia B. Salvan (Research Director, CNSC), Prof. Manolo A. Carbonell (Campus Director, CNSC-Entienza Campus), Ms. Michelle S. Carbonell (Research Coordinator, CAS-CNSC), Ms. Eva L. Monte, Mr. Daniel S. Garino, Jr., Mrs. Jofhiline F. Dygico, Ms. Marychel Asther S. Rasco of Camarines Norte State College (CNSC); and Dr. Helen B. Abordo of Office of the Provincial Agriculturist-Camarines Norte (OPAG-CN). (Erwin E. Torres)
AFNR modules, ready for copyright

Ten AFNR modules on various agribusiness topics together with the corresponding teacher’s manuals were submitted to BURDC-IPRU for copyright.

Five main and integrating modules deal on the following topics: 1) Entrepreneurial Personality and Values, 2) New Enterprise Planning, 3) Entrepreneurial Marketing, 4) Simple Bookkeeping and Accounting, and 5) Financial Management. Main modules are intended for the AFNR graduates while the integrating modules are intended for the undergraduate students taking up AFNR courses. The teacher’s manuals are intended to guide the teachers how to use the modules.

The authors of the modules were faculty of the Department of Agribusiness of BUCAF. These were Jennie O. Buemia and Lester M. Narvaez (Module 1), Armando R. Octeza and Julieta V. Mojados (Module 2), Alma O. Satim-bre and Sylva Elena B. Payonga (Module 3), Daniel R. Sadia (Module 4) and Viola L. Amano and Luis O. Amano (Module 5). Prof. Nolan G. Belaro and Prof. Teresita Q. Galang were the content editors, while Prof. Rebecca Rosario O. Bercasio was the English editor.

The modules are part of the outputs of the regionwide AFNR project led by Bicol University and funded by PCCARD and DOST. (RROB)

PILI Coffee Table Book, for reprinting

The PILI coffee table book will be reprinted to respond to the demand of various sectors for the said book.

The PILI book was published by the Research and Development Center and was launched last December 14, 2010 at the BU Amphitheater. It was exhibited during the Magayon Festival in April 2011.

One hundred copies will be available by October 2011. A copy is sold at Php 1,500. Interested buyers may inquire at the BURDC, Legazpi City at telephone no. 820-6319 or 480-1325.
The BU technologies dubbed as “Bicol University Technology Expo 2011: Proudly Bicolano, Technology Utilization for Bicolano Entrepreneurship” were showcased during the Magayon Festival at the People’s Hall of the Albay Provincial Capitol on April 1-30, 2011.

The BU exhibit highlighted Production and Processing Technologies, Technology Utilization Demo-Forum and Products Development and Packaging. The BU technologies featured included modified pipe bender, sand and gravel screener, paint mixer, AC machine rewinder, burglar alarm trainer, super kalan, friendly dishwashing table, logic gates for motor control, instructional mock-up for polarity testing for electric motor, JIG and fixture for electrical wiring and three-phase motor trainer.

The Technology Utilization Demo-Forum was designed for interaction between investors and technical partners for the purpose of setting up venture projects in the Region. The Techno-demo featured salabat production by the faculty of BU Polangui Campus on April 18, 2011 using the crystallizer and the multi-crop processing machine which was awarded 1st place during the DOST Tuklas Award 2009 Invention Category.

Also exhibited for the first time was the PILI Coffee Table Book, the first book published by Bicol University which presents the findings on pili researches conducted by BU faculty.

The ribbon-cutting ceremony was graced by Hon. Gov. Jose Maria Clemente S. Salceda and attended by provincial government officials and BU RDC personnel. The BU exhibit was organized by the Research and Development Center. (RROB & Fritzie L. Magdaong)
BUCENG students grabbed the 1st place in the three categories of the paper competition; namely, basic research, action research and evaluation research.

The winning papers are as follows: 1) “Bedini Monopole Mechanical Oscillator and Energizer Analysis and Modification” by Jayson A. Labrador, Earl Francis B. Marcos and Emmanuel L. Orticio, BS Electrical Engineering students; 2) Alternative Method of Pollution Reduction in Diesel Using Sodium Laurel Sulfate (SLS) by Ace Justine Erika B. Arispe, Jayson T. Bellen, Manuel R. Pestio, Jr., Maritess P. Robrigado and Jennevie C. Valenzuela, BS Chemical Engineering students; and 3) Evaluation of Energy Utilization of MP Building by Leonarda A. Sia, Jr. and Rojoe H. Amante, BS Electrical Engineering students.

Student researchers of each winning paper were given certificates of commendation and Php 2,000.00 cash prize.

Engr. Fernan Dematera was the adviser of both the winning papers for basic and developmental researches while Engr. Micah Sangil was the adviser of the paper for action research. (RROB)

BUCENG student researchers bag 3 best paper awards

The Bicol University College of Business, Economics and Management (BUCBEM) developed a computer-programmed Project Feasibility Study Model this summer of 2011 through the efforts of Dr. Eddie S. See.

The operation of the model was demonstrated last May 12, 2011 at the BUCBEM E-Hall to the University President, Dr. Fay Lea Patria Mata-Lauraya Dr. Liwayway R. Ables, CBEM Dean, Dr. Noemi L. Ibo, CSSP Dean, Prof. Reina O. Habalo, OP staff, Department Chairpersons, Coordinators, Faculty Association President, and Non-teaching personnel of CBEM and CSSP.

The program needs only the production and selling price value entries to automatically compute the income statements, cash flow statements, balance sheets, total project cost, computations for optimal financing, cash flow analysis, and the financial ratios. The process speeds up the preparation of the said documents compared to the traditional mode.

Steps are now being undertaken to copyright the program in the name of its authors, the Research Coordinator of the College of Business, Economics and Management, Dr. Eddie S. See, together with the Administrative Officer of the Office of the University President, Mrs. Mary Ann M. See, and the Data Encoder of the Management Department, Ms. Julie Ann M. Lustan, and the Bicol University. (Dr. Eddie S. See)
BU Joins National Basic Education Resources Survey Results Dissemination

Bicol University through the Research and Development Center joined the UP Engineering Research & Development Foundation, Inc. (UPERDF) in the Basic Education Resources Survey (BERS) National Results Dissemination on May 23, 2011 at Astoria Plaza, Pasig City.

BERS results were presented by project research consultants. Results consisted of four components such as Customer Satisfaction Survey presented by Prof. Nestor O. Rañeses and Prof. Gene lyn Ma. F. Sarte; Basic Education Resources Section and Basic Education Information System by Prof. Rafael R. Angangco, Prof. Josefina V. Almeda and Dr. Lisa Grace S. Bersales; Benchmarking with the Ministries of Education of Singapore and Malaysia by Dr. Evelina M. Vicencio; and Geographic Information System by Prof. Wilfredo M. Rada.

Present in the occasion were Atty. Alberto T. Muyot who delivered the message, Dr. Leopoldo V. Ablis, UPERDF President, Dir. Milagros T. Talinio, Director of the Internal audit of DepEd, project consultants, assistant project leader Prof. Ferdinand G. Manegdeg, project staff, site team leaders, field supervisors, and stakeholders from different sectors.

Dr. Arnulfo M. Mascariñas, RDC Director and BERS Site team leader for Bicol, presented the Survey Experiences for Region V. Prof. Ida Francis H. Revale, Dr. Rebecca Rosario O. Bercasio, Prof. Angelo Candelaria, Prof. Michael V. Montealegre and Prof. Yolanda Brugada, BURDC staff and field supervisors for BERS Region V, also attended the said activity. (RROB)

Counterclockwise: Bicol BERS field supervisors together with Dean Marissa S. Pantillas, Region 4A Site Team Leader; Atty. Alberto T. Muyot, delivering his message; and Dr. Arnulfo M. Mascariñas, Region 5 Site Team Leader with Bicol field supervisors.

BU faculty present papers in international, national conferences

Thirteen papers were presented by BU faculty in international and national conferences during the 1st and 2nd quarter of 2011.

During the 1st quarter, six papers were presented during the 4th International Conference and Scientific Meeting on Environmental Education at Central Bicol State University of Agriculture (CBSUA) at Pili, Camarines Sur on February 16-18, 2011. Moreover, three papers were presented during the 2011 Kabikolan Conference on Language and Education at Legazpi City.


During the 2nd quarter, three papers were presented in different international conferences while one paper was presented in a national conference. Dr. Victor Soliman (BUTC) presented his research entitled “Population Dynamics of the Noble Scallop Chlamsy Nobilis” during the 18th International Pectinids Workshop at Halqing Hotel, Qingdao, China.

Dr. Angela E. Lorenzana (BUCE) presented the paper entitled “A Semantic Analysis of Six Key Filipino Cultural Concepts during the 6th Nakem International Conference Banaue Hotel, Ifugao on May 23-25, 2011.

Dr. Jonathan Arroco (BUCIT) presented the paper on the Impact Assessment of Waste Management Programs of Selected HEIs in Bicol Region, Philippines during the 19th and 1st International Conference on Global Response to Sustainability through Research in Manila on May 25-27, 2011.

Finally, Dr. Arnulfo M. Mascariñas (RDC) presented the paper on the Status of Research in HEIs in the Bicol Region during the 2011 National Conference on the State-of-Research in the Philippines at De la Salle University, Manila on June 16-17, 2011. (RROB)
Striving to improve the services for the researchers, the Research and Development Center (RDC) crafted three proposals for presentation in Administrative Council Meeting in July, 2011.

RDC, to present proposals to Administrative Council

Said proposals deal on the insurance for the BU researchers, authorship of papers for presentation and publication, and implementing rules and regulations for the BU IP Policy.

The proposal on the insurance aims to protect the researchers consisting both of the active GSIS members and the non-GSIS members, specifically the research assistants who are employed on job order basis, as they implement the various activities of their approved research projects.

The proposed Implementing Rules and Regulations (IRR) aims to facilitate the implementation of the BU IP Policy and Guidelines which was approved per BOR Resolution No. 053 s 2007. The proposal shall govern and apply to: 1) The management of IP’s of faculty, personnel and students whether it is university funded, outside funded or self-funded researches; 2) The registration of IP’s such as inventions, utility models, industrial designs, plant variety, trademarks and copyrights of Bicol University and its faculty, employees and students; 3) Corresponding fees and related monetary concern on the IPRU services; and 4) The distribution of royalties.

Lastly, the proposal on authorship of papers for presentation and publication seeks to establish a clear and sound framework for managing the University’s authorship policy, and give key information on issues surrounding authorship and on how to proceed when deciding who is an author and in what order authors should be listed. Said proposal presents clear guidelines on authorship to strengthen the provisions of Section 3 (Determination of Authorship in Cases of Collaborative Efforts Among Authors) of Article V of the BU IP Policy and Guidelines. *(RROB)*

from p.1

**BUCAF receives 7.5M ...**

The first research project entitled Integrated Management Systems in the Rice Production Areas of Albay under Changing Rainfall Pattern has three study components dealing on organic revitalization of upland soils in Albay, control management strategies of rice black bug, and adaptation strategies for food self-sufficiency, respectively.

The project sites are Camalig, Guinobatan, Jovellar, Oas and Polangui, Albay. Prof. Vigilia G. Armendi is the project leader and Prof. Genean L. Galicia and Ms. Rosalinda B. Beludo of OPAg-Albay are the study leaders.

The second research project entitled Establishment of Indigenous Breeding and Dairy Production Facilities in BUCAF aims to preserve the indigenous breeds of carabao for draft in Albay and upgrade the breed for dairy production. Prof. Ligaya O. Vargas, BUCAF Assistant Dean, is the project leader.

The duration of the project on rice production is three years while that on breeding and dairy production facilities runs for four years.

The memorandum of agreement for the implementation of the said research projects was signed by Dr. Lea Patria M. Lauraya, BU President, and Dir. Nicomedes P. Eleazer, Director, Department of Agriculture on March 31, 2011. *(RROB)*
To have an in-depth discussion on the accomplishments of the program/project based on the approved work and financial plan, and the program/project objectives and financial status, the BURDC held the 2nd Program/Project Leaders’ Meeting at the BURDC Conference Room on April 5, 6, 7, 8, 11 and 14, 2011.

A total of 21 researches were presented during the meeting. Each program/project leader was given 15 minutes to present of his/her status report and another 15 minutes to respond to the queries of the panel of evaluators. Solutions to the issues and concerns of the research projects/programs were identified/suggested based on existing policies of the university.

The panel of evaluators were composed of BURDC staff; namely, (a) Dr. Luis L. Amano, Technology Development and Promotion Unit (TDPU) and Technical In-House Review Committee (TIHRCom); (b) Prof. Ida Francis H. Revale, Technology Development and Promotion Unit (TDPU) and Technical In-House Review Committee (TIHRCom); (c) Prof. Yolanda Julieta B. Brugada, Program and Monitoring and Data Banking Unit (PMDU); (d) Prof. Czarina V. Caputan, Program and Monitoring and Data Banking Unit (PMDU); (e) Prof. Angelo P. Candelaria, Socio-Economic and Policy Unit (SEPRU) & Publication and Editorial Committee (PEC); (f) Prof. Michael Montealegre, Technical Staff, BU-CHED ZRC; (g) Prof. Ronnel R. Dioneda, Sr., Assistant Director, BURDC; and (h) Prof. Erwin E. Torres, Staff, Socio-Economic and Policy Unit (SEPRU). (YJBBRUGADA)

Technical staff offer solutions to problems met in the implementation of researches.

The BU Research and Development Center conducted series of meetings to prepare for the University Strategic Planning for Research.

Said activities aim to prepare the R&D roadmap for Bicol University. The R&D roadmap is expected to increase the percentage of faculty actively involved in research, thus strengthen the research mandate of the University.

It also intends to make a SWOT Analysis of the BU R&D in order to plan for more responsive policies and enhanced R&D agenda.

The activity is tentatively scheduled during the first semester of school year 2011-2012. Preparations are underway to ensure the smooth conduct of the said activity. RDC director, staff and research coordinators are involved in the preparation. (RROB)
RDC revises targets for the Key Results Areas

To continue its efforts toward excellence in research, the BURDC revised its targets based on the comments and suggestions of the ISO internal auditors.

Dr. Arnulfo M. Mascariñas led the RDC staff in revising the targets in the different key results areas. Mr. Erwin E. Torres, technical staff of Socio-economics and Policy Research Unit and RDC ISO officer, is the key personnel in charge in the preparation of the ISO documents such as the KRAs.

Below is the matrix that shows the performance indicators and revised targets in the four key results areas. (RROR)

<table>
<thead>
<tr>
<th>KEY RESULT AREA</th>
<th>PERFORMANCE INDICATOR</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research output publication</td>
<td>1.1. Number of research outputs published in refereed international journals per year.</td>
<td>1 research output</td>
</tr>
<tr>
<td></td>
<td>1.2. Number of research outputs published in refereed national/ regional/ local/ institutional journals per year.</td>
<td>1 research output</td>
</tr>
<tr>
<td>Research output dissemination and commercialization</td>
<td>2.1. No. of research outputs disseminated or presented in international fora/ conference per year.</td>
<td>5 research outputs</td>
</tr>
<tr>
<td></td>
<td>2.2. No. of research outputs disseminated or presented in national/ regional/ local/ institutional fora/ conference per semi-annual.</td>
<td>10 research outputs from January to June, 2011</td>
</tr>
<tr>
<td></td>
<td>2.3. No. information, education and communication (IEC) materials produced per semi-annual.</td>
<td>4 IEC materials</td>
</tr>
<tr>
<td></td>
<td>2.4. No. of inventions patented/ petty patent (Utility Model) applied per year.</td>
<td>1 UM application</td>
</tr>
<tr>
<td></td>
<td>2.5. No. of copyrights registered per semi-annual.</td>
<td>1 copyright registered</td>
</tr>
<tr>
<td></td>
<td>2.6. No. of other intellectual property rights such as (a) trademarks and in service marks or trade names; (b) geographic indicators; (c) layout designs (topographies) of integrated circuits; and (d) protection of undisclosed information per year.</td>
<td>1 application</td>
</tr>
<tr>
<td>Faculty-researcher development</td>
<td>3.1. No. of faculty members with ongoing official research per quarter</td>
<td>80 faculty members</td>
</tr>
<tr>
<td></td>
<td>3.2. No. of faculty members with reviewed research proposals per year.</td>
<td>30 faculty members</td>
</tr>
<tr>
<td></td>
<td>3.3. No. of faculty members trained/ retooled per semi-annual.</td>
<td>60 faculty members</td>
</tr>
<tr>
<td>Research grants and awards</td>
<td>4.1. No. of on-going externally-funded research projects per quarter</td>
<td>10 research projects</td>
</tr>
<tr>
<td></td>
<td>4.2. No. of national/ regional research awards earned by BU per year.</td>
<td>5 research awards</td>
</tr>
</tbody>
</table>

To thresh out issues and concerns relative to the implementation of R&D initiatives of the University, the Program Monitoring and Data-banking Unit (PMDU) together with the Technical In-House Review Committee of the BU Research and Development Center (BURDC), conducted series of consultation meetings with researchers of the different colleges.

The visit to BUTC on January 22, 2011 focused on the budgetary constraints concerning the two researches by Dr. Plutomeo M. Nieves. In attendance were Prof. Raul Bradecina and Prof. Nelson Olfindo from Partido State University and Camarines Norte State College, respectively, who are collaborators in the said research. Fund support from the two other SUCs was also explored.

Issues on R&D budget and status of the on-going researches were discussed during the monitoring in BUCAF on February 21-22, 2011. The concerns taken up during the visit BUCENG on March 24, 2011 were college fund counterpart for the approved research program, submission of the revised proposals by Engineer Medel Aligan, and crediting of research during summer time.

Other issues discussed were the prompt submission of the terminal reports of completed researches; request for appointments of the researchers; crediting of researches; preparation of Line Item Budget; and the budget allocation.

During the monitoring, researchers were encouraged to visit the Center to discuss their concerns for appropriate actions or recommendations. Feedback from the researchers is considered vital by the Center to improve the quality of its ser-
The BU Research and Development Center sponsored the 7th BU Student R&D Forum on March 11-12 at the BUCS Auditorium and BU Amphitheatre for the undergraduate level, and on March 19, 2011 at the BU Multi-purpose Building for the graduate level.

In the undergraduate R&D Forum, nine papers were adjudged as winning papers in the four categories; namely, basic, evaluation, action and developmental research, and 3 posters emerged as winners. The forum featured paper presentation of best theses from the different colleges and the first Intellectual Property (IP) orientation for Students. Dr. Fay Lea Patria M. Lauraya, BU President, graced the opening program who emphasized knowledge-driven economy.

The evaluators for the paper presentation were Engr. Alexis Jacinto Elegado (DOST), Engr. Manuel Sn.B. Lucena (DOST), Mrs. Josie Aguilar (DTI) for basic research; Dr. Bernadette G. Gumba (ADNU), Dr. Pilita O. Lucena (DOST), Dr. Jean Paulette M. Salalima (CHED) for action research; Dr. Ma. Teresa G. de Alban (CHED), Dr. Fe B. Perlas (CBSUA), Prof. Flor A. Jenkin (BU) for development research; and Ms. Luz R. Marcelino (DAROV), Dr. Georgina J. Bordado (CBSUA) and Mr. Efren Oprecio, Jr. (DENR) for evaluation research.

In the graduate level, three master’s theses and five dissertations were adjudged as winning papers. The evaluators for the paper presentation were Dr. Oscar L. Landagan, Dr. Milagros Esparrago and Dr. Purita Balean for the doctoral level, and Dr. Amparo Binamira, Dr. Ma. Teresa G. de Alban and Ms. Aida Naz for the master’s level. (RROB)

The Student R&D Forum is a much-awaited occasion by BU students. It serves as a venue for the discussion and dissemination of research results to various stakeholders.
Below is the official list of winners.

<table>
<thead>
<tr>
<th>Category</th>
<th>Rank</th>
<th>Title</th>
<th>Authors</th>
<th>Adviser/s</th>
<th>College</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>1st</td>
<td>Bedini Monopole Mechanical Oscillator and Energizer Analysis and Modification</td>
<td>Jayson A. Labrador, Earl Francis B. Marcos, Emmanuel L. Orticio</td>
<td>Engr. Fernan Dematera</td>
<td>BUCENG</td>
</tr>
<tr>
<td></td>
<td>2nd</td>
<td>BUPC Information Map Kiosk</td>
<td>Oliver D. Priolo, David B. Bacho Jr., Orlando S. Florida, Regie B. Villanueva</td>
<td>Prof. Michelle Jeanky Rellon and Prof. Guillermo Red</td>
<td>BUPC</td>
</tr>
<tr>
<td></td>
<td>2nd</td>
<td>Supply and Inventory Monitoring System for Sunwest Resources and Aggregates</td>
<td>Ma. Daisy Lleno, Roland Marbella</td>
<td>Prof. Christian Sy and Prof. Noli Lucila</td>
<td>BUCS</td>
</tr>
<tr>
<td></td>
<td>3rd</td>
<td>PCB Printer with Etching Machine</td>
<td>Von Lemuel S. Llanza, Ronald C. Fernandez, Gerald M. Almayda</td>
<td>Prof. Joel N. Sales</td>
<td>BUCIT</td>
</tr>
<tr>
<td>(Applied) Development</td>
<td>1st</td>
<td>Hypoglycemic Effect of Psdium Guajava Guava Alcohol and Aqueous Extract in Male Albino Mice</td>
<td>Frenzes P. Samonte, Paolo Stephen O. Alvarez, Jessica A. Deocariza</td>
<td>Prof. Phil V. Morano</td>
<td>BUCN</td>
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<td></td>
<td>3rd</td>
<td>High Risk Behavior of Students of MORMS, Ligao National High School and Polangui General Comprehensive High School</td>
<td>Lynne Richelle A. Abitria, Mary Rose M. Moratalla, Jerick M. Nolasco</td>
<td>Dr. Janet O. Recierdo</td>
<td>BUCN</td>
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</tbody>
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### Poster

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<thead>
<tr>
<th>Rank</th>
<th>Title</th>
<th>Author/s</th>
<th>Adviser</th>
<th>College</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Indigenous Healing Modalities of Oyango Cultural Community in Mt. Asog, Iriga City: Basic Ethanonursing Intervention</td>
<td>Christian John N. Morales Cyndi Mae M. Paje Harris P. Serrano Paul Vincent Silo</td>
<td>Dr. Baby Boy Benjamin Nebres III</td>
<td>BUPC</td>
</tr>
<tr>
<td>2nd</td>
<td>Instant Messaging with Embedded Artificial Intelligence Secretary (BOT)</td>
<td>Tom Jordan Secundo Stephen Lorilla</td>
<td>Prof. Chirstian Sy</td>
<td>BUCS</td>
</tr>
</tbody>
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### Master’s Level

<table>
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<th>Rank</th>
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<th>Author/s</th>
<th>Adviser</th>
<th>College</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Effectiveness of SIM Enhanced Constructivist-oriented Instruction in Developing Graping skills</td>
<td>Michael John S. Rañada</td>
<td>Dr. Nora L. Licup</td>
<td>BUGS</td>
</tr>
<tr>
<td>2nd</td>
<td>Problem-based Learning Remediation Lesson in Stoichiometry</td>
<td>Mark Anthony H. Rupa</td>
<td>Dr. Lorna M. Miña</td>
<td>BUGS</td>
</tr>
<tr>
<td>3rd</td>
<td>Secondary Language Speech Arts of Selected Secondary Public School Teachers</td>
<td>Aries S. Perez</td>
<td>Dr. Corazon M. Don</td>
<td>BUGS</td>
</tr>
</tbody>
</table>

### Dissertation

<table>
<thead>
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<th>Author/s</th>
<th>Adviser</th>
<th>College</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Humanism in Selected Works of Leo Buscaglia as Educational Tool for Personal Growth</td>
<td>Jean Paulette M. Salalima</td>
<td>Dr. Letecia Mata</td>
<td>BUGS</td>
</tr>
<tr>
<td>2nd</td>
<td>The Teaching Competences of Pre-service Teachers in Bicol University College of Education: Bases for Proposed Assessment Tools</td>
<td>Eduardo B. Ardales</td>
<td>Dr. Federico O. Raguindin, Jr.</td>
<td>BUGS</td>
</tr>
<tr>
<td>2nd</td>
<td>Experiences of Education Students in Field Study Courses: Basis for an Implementation Model</td>
<td>Glenda A. Abejuela</td>
<td>Dr. Nora L. Licup</td>
<td>BUGS</td>
</tr>
<tr>
<td>3rd</td>
<td>Kahandaan ng mga Guro sa Paggamit ng Makabagong Teknolohiya sa Pagtuturo ng Filipino sa Antas ng Tersarya</td>
<td>Mary Jane Reduta</td>
<td>Dr. Leticia M. Lopez</td>
<td>BUGS</td>
</tr>
<tr>
<td>3rd</td>
<td>Mga Akdang Pamaniitian bilang Kagamitan sa Pagtuturo sa Pagliniang ng mga Pagpapahalaga sa Antas ng Sekundarya</td>
<td>Lorna N. Namora</td>
<td>Dr. Leticia M. Lopez</td>
<td>BUGS</td>
</tr>
</tbody>
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**Engr. Christopher O. Pacardo, Assistant Professor III of BU Polangui Campus, is the new head of Intellectual Property Right Unit (IPRU) of the BU Research and Development Center. He is also the manager of the Innovation and Technology Support Office (ITSO) which is being implemented by BU in collaboration with DOST and IPO.

Engr. Pacardo’s responsibilities include supervision, guidance and provision of technical assistance on the operation of the IPRU-ITSO, ensuring ITSO’s compliance with the standards and guidelines of IPO-Philippines, and initiating trainings on the different aspects of intellectual property. His deployment to RDC is effective first semester school year 2011-2012. He is the 2nd head of IPRU, and is the replacement of the deceased Prof. Nestor W. Duliesco. (RROB)**

---

**BU Student Researchers awarded in University Recognition Day**

For the first time, students researchers with winning papers during the 7th BU Best Undergraduate Thesis were given recognition during the 2011 University Recognition Day Program on March 25, 2011.

A total of 10 groups of student-researchers consisted of 32 students from College of Engineering, Polangui Campus, College of Science, College of Industrial Technology, College of Nursing and College of Arts and Letters were recognized. BU College of Engineering had the most number of awardees.

The awardees were given certificate of commendation and cash prizes of Php 2,000, Php 1,500 and Php 1,000 for the first, second, and third prizes, respectively.

University Recognition Day Program was sponsored by the Office of Student Services together with the college coordinators of student affairs. (CV Caputan)

---

**BUCN Conducts Student Research Forum**

To provide the venue to stimulate interest and appreciation for research among students and faculty members, the College of Nursing conducted a Research and Development Forum for students at Bicol University College of Nursing, Legazpi City on February 24, 2011.

The activity aims to a) showcase student researchers according to research category; b) review, evaluate and identify outstanding research and development output and c) identify student researches for further research, promotion/dissemination or commercialization.

Six researches were presented under applied research category and five (5) under basic researches. Among the researches presented for the two categories, the evaluators selected one research from each category which will compete in the University level. The panel of evaluators were Dr. Teresa de Alban of CHED, Region V, Prof. Angelo P. Candelaria and Prof. Corazon V. Caputan of BURDC, Ms. Joan Nace and Prof. Michael V. Montealegre of BUCS, and Prof. Gerard M. Protacio of BUCE.

The student research forum was organized by Dr. Maria Janet O. Recierdo, BUCN research coordinator. (CV Caputan)
CHED-BU Zonal Research Center (ZRC) may continue its operation until December 2011 based on a decision of the Commission during its 372nd Meeting on May 23, 2011 subject to availability of ZRC local funds and at no additional cost to CHED.

The Supplementary Agreement for the CHED BU ZRC dated August 2010 ended in June 2011. The memorandum on the extension of the ZRC operation from Director Jean C. Tayag of Office of Policy, Planning, Research and Information (OPPRI) was issued on June 29, 2011.

The CHED-BU ZRC was created by virtue of a memorandum of agreement signed by Dr. Emmanuel Y. Angeles, CHED Chairman and Dr. Fay Lea Patria M. Lauraya, BU President.

The current CHED-BU ZRC belongs to the 3rd batch of ZRCs which was approved per Commission en banc (CEB) Resolution No. 578 s. 2008, CEB Resolution No. 390 s. 2008. It is one of the 13 ZRCs in the country, and one of the six ZRCs with Program Cluster Implementer (PCI) based at Ateneo de Naga University.

CHED-BU ZRC has the mandate to periodically assess research capacity and productivity of HEIs in the zone, formulate and implement a Zonal Research Program (ZRP), monitor implementation of the ZRP components, evaluate recommend/support research output dissemination activities relevant to the thrust of the zone, and submit required reports to CHED. (RROB)

36 faculty researchers attend writeshop

Thirty-six faculty researchers from the 17 different Higher Education Institutions (HEIs) under the jurisdiction of the CHED-BU Zonal Research Center attended the Research Proposal Preparation Writeshop on January 26-28, 2011 at BU College of Nursing Function Hall.

The objective of the writeshop is to enhance the research competence of the faculty from HEIs and to encourage them to submit fundable researches focusing on education and socio-economics to be endorsed to the Commission on Higher Education.

The topics discussed together with resource persons are as follows: 1) BU-CHED Zonal Research Program Themes and Guide for Technical Evaluation of Research Proposal by Prof. Michael V. Montealegre; 2) Overview of the Research Process, Research Design and Making the Theoretical and Conceptual Framework by Dr. Arnulfo M. Mascariñas; 3) Preparing Introduction/Rationale, Statement of the Problem, Objectives, Expected Outputs, and Significance of the Proposal by Prof. Ida H. Revale; 4) Sampling Techniques and Procedures and Data Analysis by Dr. Luis O. Amano; and 5) Measurement and Instrumentation by Prof. Flor A. Jenkin.

Ms. Mary Joy V. Chapman and Ms. Zaira H. Gonzales were the seminar facilitators. (Mary Joy Chapman)
Mandated to enhance the research capability and productivity of higher educational institutions (HEIs) in the Bicol Region, CHED-BU Zonal Research Center conducted a Training-Course on Qualitative Research Method last March 16-18, 2011 at Bicol University College of Science Auditorium.

Thirty-eight researchers from 17 SUCs and private HEIs participated in the training. Workshops required the participants to prepare assessment of the research culture of their HEI, R&D agenda, and a research concept paper.

Topics include organizational and institutional factors in R&D management, developing research culture in the university, formulating R&D agenda, R&D priority setting, preparing R&D program, research proposal preparation and evaluation, strategies in managing R&D system, motivating knowledge workers, R&D typologies, and skills, tools and concepts for research leader managers. Topics on the intellectual property rights were discussed by Engr. Christopher O. Pacardo, the head of the BURDC IPR Unit.

During the opening program, Dr. Fay Lea Patria M. Lauraya, BU President, highlighted her message with the discussion of the CHED typology of HEIs. Dr. Arnulfo M. Mascariñas presented the status of research in HEIs in the Bicol Region. Said presentation was based on the data generated from the RMIS (Research Management Information System) forms submitted by the thirty HEIs under the jurisdiction of the Center.

Dr. Rebecca Rosario O. Bercasio was the lady of ceremony. Prof. Michael V. Montealegre, Ms. Mary Joy V. Chapman, Ms. Zaira H. Gonzales, Prof. Angelo P. Candelaria and Prof. Carlos V. Cortez, Jr. were the training facilitators. (RROB)

A total of 22 research directors, research coordinators and researchers representing 19 HEIs attended the training. Workshops required the participants to prepare assessment of the research culture of their HEI, R&D agenda, and a research concept paper.

Topics include organizational and institutional factors in R&D management, developing research culture in the university, formulating R&D agenda, R&D priority setting, preparing R&D program, research proposal preparation and evaluation, strategies in managing R&D system, motivating knowledge workers, R&D typologies, and skills, tools and concepts for research leader managers. Topics on the intellectual property rights were discussed by Engr. Christopher O. Pacardo, the head of the BURDC IPR Unit.

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The completed GIA-funded researches of Aquinas University of Legazpi (AUL) and Divine Word College of Legazpi (DWCL) were evaluated by CHED-BU ZRC Director, Dr. Arnulfo M. Mascariñas, together with technical staff, Dr. Rebecca Rosario O. Bercasio and Prof. Michael Montealegre in May and June 2011.

The first evaluation was held on May 14 and May 16, 2011, respectively at the respective host HEI. The second evaluation of the two researches was held on June 4, 2011 at DWCL Training Room, Legazpi City.

Both researches on solid waste management were funded by the Commission on Higher Education. The research of DWCL which was led by Dr. Anabel L. Medalla deals on “Solid Waste Management and Utilization of Sitio Putting Daga, Legazpi City”. The regionwide research of AUL conducted by Dr. Shiela I. Arocco and colleagues is about the “Assessment of Waste Management Initiatives of Selected HEIs in the Bicol Region.”

The research grant awarded to AUL was Php 204,277.50 while Php 187,950.00 was awarded to DWCL.

Dr. Medalla and Dr. Arroco and their co-researchers were assisted by their mentors who were Engr. Maribet L. Fruto, Provincial Head, Sorsogon Provincial Ecology Center, and Engr. Nannette A. Tidon, Chief, SWM Section, DENR-EMB, respectively.

A panel of evaluators recommended by the concerned researchers and approved by the Center assisted the ZRC Director and technical staff in the evaluation of the papers. (RROB)

**Ethnography** (from the Greek words *ethnos* = nation, and *graphein* = writing) refers to the qualitative research method of describing human social phenomena, based on data obtained primarily from fieldwork. The goal is a complete, accurate description of the culture being studied, on its own terms. Ethnography should not be confused with ethnology, which is the comparative study of cultures. Although ethnographic studies inevitably involve some comparisons with other cultures, their primary purpose is not comparison.

The roots of ethnographic studies are found in the reports of travelers and historians dating back to the Greek writer Heroditus, and more recently, of traders and colonial administrators. The inherent difficulty of ethnographic studies is immediately apparent in these reports, as the writers often misinterpreted for various reasons the activities they witnessed in foreign cultures.

In order to collect valid data, ethnographers engage in participant observation—spending significant amounts of time with the people they study. They use observational methods, interviews with open-ended questions, audio and video recordings of behavior, and collect all other data relevant to the culture studied. Ethnographers engage in social events, rituals and customs, in order to understand the point of view of a person of that particular group. That “native’s point of view” is called an emic perspective, as opposed to the etic perspective, or outsider’s point of view. The ethnographer’s goal is to achieve the emic perspective by acquiring data that are free of the observer’s own concepts and assumptions.

Employing a holistic research method, ethnography is based on the idea that a system’s properties cannot be accurately understood as the sum of its individual elements. Therefore, the ethnographer not only observes every individual aspect of the society, but also strives for complete immersion in order to experience the entire social context.

Source: [http://www.newworldencyclopedia.org/entry/Ethnography](http://www.newworldencyclopedia.org/entry/Ethnography)

Credits:
Prof. Nicanor Balbin, Prof. Joey de Leon, Dr. Eddie Sec., Prof. Corazon V. Caputana, Engr. Christopher O. Pacardo, Prof. Yolanda Julieta B. Brugada, Prof. Angelo P. Candeleria, Ms. Maria Aurea C. Borromeo, Ms. Fritzie L. Magdaong, Mr. Oween C. Samson, Ms. Mary Joy V. Chapman, Ms. Zaira H. Gonzales, Leonardo A. Sia, Jr., Rojoe H. Amante, Dr. Luis O. Amano, Mr. Erwin E. Torres, Prof. Ida Francisca H. Revale, Engr. Fe DL. Ataiza
en.wikipedia.org/wiki/Pineapple
http://images.search.yahoo.com/search/images;_ylt=A2KJkIdVmT90OmwUAPxOJzkF7p-camote&fr=spf&ei=uf&fswt=Search
The Philippines, due to its geographical location and physical environment is highly vulnerable to typhoons, floods and droughts. On average, the country faces about 20 typhoons annually. These events trigger landslides, flashfloods, mudslides, widespread flooding and together with the associated high winds, cause destruction and damage to homes, community buildings, communication, Infrastructure, roads, bridges, agricultural crops and fishing farms.

In 2006, in a span of ten weeks (25 Sept to 1 Dec), Philippines was hit by 3 extremely destructive typhoons. Typhoon Reming on November 30 was the most destructive, severely affecting all the 6 provinces of Bicol region (Albay, Cat, CamSur, CamNorte, Sorsogon & Masbate). It brought 466mm of rainfall, the highest in 40 years. It damaged 18,786 hectares planted to rice at varying stages of growth and the damage to investment losses in terms of input costs such as seeds, fertilizers and labor was valued at Php 153.8 million.

In February 2007, the DA presented a request to the FAO UN for technical and financial support to undertake an overall needs assessment and design a rehabilitation plan. The assessment revealed that the provinces of Albay, CamSur and Sorsogon, were the most highly affected and proposed a rehabilitation plan costing USD 10 million for the most affected livelihood groups in the region.

The NDCC, whose mandate is to respond and provide relief during emergencies and disasters, realized the need to shift its strategy from response and recovery to a more pro-active and holistic approach of prevention, mitigation and community preparedness within the context of risk management. The NDCC has developed an Action Plan for Disaster Preparedness. The government has requested FAO to assist the DA and PAGASA in operationalizing the concept of more preventive, pro-active risk management in the Bicol Region. The proposed assistance will improve the early warning system, build the capacity of local government to implement community-based disaster risk management plan and introduce improved cropping systems, fishing practices and water management measures for climate risk mitigation. Good practices and lessons learned will be documented, and training modules will be produced for replication in other disaster prone areas of the country.

While focusing on improved DRM, this project will outline ways and practical options to link current DRM practices and approaches with the need for adaptation to future impacts of climate change. It builds on the fact that strong DRM Systems will constitute a key pillar for countries and communities to cope with the expected impacts of climate change, which according to the Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (IPCC) 4th assessment report are very likely to include the increase of climate variability and extreme events.

(FAO TCP/PHI/3203, 2009; Project Brief, 2009)
(Arnulfo M. Mascariñas, Luis O. Amano, Viola L. Amano and Angelo P. Candelaria)
The BU MP Building may cut its power consumption significantly by reducing energy wastage.

BU may cut MP Building power consumption, says students’ research

Based on the study by Leonardo A. Sia, Jr. and Rojoe H. Amante, the estimated energy losses per year in the MP Building amounts to Php 276,076 which is equivalent to 30,675.17 kilowatt-hours at Php 9 per kilowatt-hour.

Particularly, the MP Building classrooms has an estimated energy loss of 11,850.26 kw-hrs in a year, which amounts to Php 106,652.34. In the offices, the estimated energy losses is 12,732.34 kw-hrs which is equivalent to Php 114,591.06. Finally, the University Library had an estimated energy loss of 6,092.57 kw-hrs with a value of Php 54,833.16.

Researchers recommend energy efficiency measures such as switching off the lights, and shutting down or hibernating the computers during the one hour lunch break in offices which can save Php 14,094.00/year and Php 12,960.00/year, respectively. Moreover, turning off the ACU’s 30 minutes before leaving the offices can save energy amounting to Php 85,012.20.

Finally, it is recommended to replace existing lighting fixtures with energy efficient and energy saving lamps like T-5 E-lamp and CFL. If existing fixtures will be replaced, BU may have an annual saving of Php 218,832.30 with a payback period of 9 months.

Sia and Amante’s thesis entitled “Evaluation of the Energy Utilization in Bicol University Multi-Purpose Building” was adjudged as the best paper for the evaluation category during the 7th BU Student R&D Forum. Sia and Amante worked on their research under the guidance of Engr. Fernan Dematera. (RROB)

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Investment Cost</th>
<th>Annual Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacing the existing fixture in classrooms with T-5 E-lamp</td>
<td>P 74,238.75</td>
<td>P 41,156.10</td>
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<tr>
<td>Replacing the existing fixtures in the offices with T-5 E-lamp</td>
<td>P 40,913.80</td>
<td>P 54,000.00</td>
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<tr>
<td>Replacing the existing fixtures in the library with T-5 E-lamp</td>
<td>P 23,096.50</td>
<td>P 11,226.60</td>
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<tr>
<td>Replacing the existing fixtures in hallways and stairways with CFL 3U26W</td>
<td>P 10,076.40</td>
<td>P 84,801.60</td>
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<tr>
<td>Replacing the existing fixtures Special Purpose Rooms with CFL 3&amp;26W</td>
<td>P 15,394.50</td>
<td>P 27,648.00</td>
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<td><strong>TOTAL</strong></td>
<td><strong>P 163,719.95</strong></td>
<td><strong>P 218,832.30</strong></td>
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</tbody>
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**PAYBACK PERIOD (Year): 0.748**

Cost analysis benefit if recommendations are implemented.

Built in 1982, BU Multi-Purpose Building is the building with the largest floor area in the University.

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About the Paper

BU R&D Update is the official newsletter published by the Bicol University Research and Development Center (BURDC). It features the professional output of BU researchers thus provides the community opportunity to know, respond to and build on the recent issues, findings and trends of research and development.

Its slogan “Making the best of science and technology work” emphasizes the value of knowledge-generation through scientific investigation and using this knowledge to create technological systems and processes that will support, improve and enhance the lives of people.

Research-based or research-related articles may be submitted to BURDC through e-mail address bu_rdc@yahoo.com.