



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
**COMPUTER ENGINEERING DEPARTMENT**

**OUTCOME/S**

O.1. The Research Program is adequately funded.



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
**COMPUTER ENGINEERING DEPARTMENT**



Republic of the Philippines  
**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES**  
Sta. Mesa, Manila

Communication Tracking System

**#2015933282**  
Tracking Number

August 12, 2015

*Parillo, Noh A  
08-27-15 9:01*

SPECIAL ORDER  
No. 2042, s. 2015

Pursuant to the provisions of Section 64 of P.D. No. 1445, the herein-named Lead Proponents/Disbursing Officers, this University, are hereby authorized to hold a cash advance amounting to **THREE HUNDRED SIXTY FOUR THOUSAND PESOS ONLY (P364,000.00)**, to defray expenses to be incurred in connection with the *Research Proposals, broken down as follows:*

Research Title	Lead Proponent & College	Approved Research Budget		
		MOOE	Honoraria	Total
1. Lung Disease Identification and Classification through Neural Networks	Engr. Orland D. Tubola College of Engineering	P196,000.00	P138,000.00	P334,000.00
2. Correlational Analysis on the PUPCET Scores and High School Academic Performance of Freshmen Students in the College of Social Sciences and Development	Asst. Prof. Norie L. Maniego College of Social Sciences and Development	P11,000.00	P19,000.00	P30,000.00
Total				P364,000.00

By the Authority of the Board of Regents:

*[Signature]*  
EMANUEL C. DE GUZMAN, PhD  
President

Copy furnished:

- Office of the President
- Executive Vice President
- Vice President for Administration
- Vice President for Finance
- Vice President for Academic Affairs
- Vice President for Student Services
- Vice President for Research, Extension, Planning and Development
- Vice President for Branches and Campuses
- COA Auditor
- Director, Internal Audit Office
- Director, Accounting Department
- Director, Fund Management Office
- Director, Budget Services Office

Polytechnic University of the Philippines  
INTERNAL AUDIT OFFICE

**FOR INSPECTION**

By: *[Signature]* Date: *8/12/15*



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
**COMPUTER ENGINEERING DEPARTMENT**

**CONTRACT FOR GRANTS-IN-AID**

KNOW ALL MEN BY THESE PRESENTS:

This Contract for Grants-in-Aid titled "**Lung Disease Identification and Classification through Neural Networks**" entered into this October 2015, 2015 at Sta. Mesa, Philippines by and among:

The **Polytechnic University of the Philippines**, a higher education institution with principal office at Mabini Campus, Sta. Mesa, Metro Manila represented herein by its President, **EMANUEL C. DE GUZMAN** and herein referred to as the "GRANTOR".

and

The **Project Team**, represented herein represented by its team leader **ORLAND D. TUBOLA**, and herein referred to as the "**IMPLEMENTING RESEARCH TEAM**".

WITNESSETH, that:

WHEREAS, no. 2 agenda of 8-point agenda of the Polytechnic University of the Philippines towards an epistemic community aims at strengthening research, publications and creative works;

WHEREAS, pursuant to this agenda the Polytechnic University of the Philippines through the Office of the Vice President for Research, Extension, Planning and Development appropriated funds for institutional researches;

WHEREAS, on the 21st day of July 2015, the University Research Evaluation Committee (UREC), made the initial approval of the research proposal.

WHEREAS, on the 3<sup>rd</sup> day of August, 2015, PUP through its Executive Committee (EXECOM), the final and executory body, approved the funding of the aforementioned institutional research.

NOW, THEREFORE, for and in consideration of the foregoing and the stipulations herein set forth, the parties hereby agree on the following:

**I. DURATION OF THE PROJECT**

The **IMPLEMENTING RESEARCH TEAM**, the composition of which is indicated in attached research proposal hereof, shall conduct a study entitled "**Lung Disease Identification and Classification through Neural Networks**" which the Implementing Institution shall satisfactorily complete for a period of **Twelve (12)** months commencing on the date the contract has been signed.

Notwithstanding the project duration stated herein, any renewal or continuation of the project must be approved by PUP thru its President upon the recommendation of the Vice President for Research, Extension, Planning and Development.

In case, it becomes evident to the **IMPLEMENTING RESEARCH TEAM** during the implementation of the study that an extension beyond the termination date set out is necessary to achieve the objectives of this study, the **IMPLEMENTING INSTITUTION** shall immediately inform in writing the **GRANTOR (PUP)** through its President. The President with recommendation from the Office of the Vice President for Research, Extension and Development (OVPREPD), shall immediately determine whether an

*Handwritten signatures and initials on the right side of the page, including a large signature that appears to be 'Regina' and another signature below it.*



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
**COMPUTER ENGINEERING DEPARTMENT**

extension is necessary under the conditions. Provided, however, that in the event that an extension shall be granted, no additional financial grant in excess of the approved project grant stated above shall be awarded to the IMPLEMENTING RESEARCH TEAM due to the extension of time allowed.

## II. RATIONALE AND OBJECTIVES OF THE STUDY

### Main Objective:

To design and construct a tripartite extension services and community involvement program of the academe, LGUs and the industry for community welfare and development.

### OBLIGATION OF THE GRANTOR

1. The GRANTOR shall provide the Implementing Research Team a grant-in-aid in the amount of *Three Hundred Thirty Four Thousand Pesos (P 334,000.00)*. The releases of which shall be based on the approved schedule of expected deliverables and fund releases indicated in the approved Work and Financial Plan (WFP) (Annex C and D)
2. The GRANTOR shall grant the regular faculty members who are not designees of the Implementing Research Team a reduction of twelve (12) units from the 15 units regular teaching load without prejudice to extra load (*Policy on University Research and Development Support, Funding, and Incentives, 42<sup>nd</sup> BOR Meeting, October 19, 2013*)
3. To facilitate and provide avenue where the research results could effectively and adequately be disseminated; and
4. To own and utilize the results of the study which is possible related to policy decisions or action of PUP subject to Intellectual Property Ownership.

The IMPLEMENTING RESEARCH TEAM hereby understands that the GRANTOR is not liable for any amount in excess of the approved grant. Thus, the IMPLEMENTING RESEARCH TEAM shall shoulder any and all expenses in excess of the Grant for furtherance of the project.

### III. OBLIGATION OF THE IMPLEMENTING RESEARCH TEAM

1. Undertake the Project strictly in accordance with the approved Work and Financial Plan (WFP) and Terms of Reference (TOR), a copy of which is hereto attached and made integral part of this Agreement as Annexes "A" "B" "C" and "D" respectively;
2. Ensure that the Project shall be fully completed to the satisfaction of the GRANTOR and in accordance with the approved WFP and TOR;
3. Provide, at its own expense, the counterpart support to fulfill the requirement of the project including but not limited to project staff, their salaries/fees/wages or such other remunerations, office space, research facilities/equipment and other support facilities and requirements during the conduct of the research project;
4. Ensure the strict project implementation in accordance with the approved WFP and TOR;
5. Present the project results in a forum for critiquing;



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
**COMPUTER ENGINEERING DEPARTMENT**

6. Submit a full final report in hard and soft/electronic files and surrender to PUP after the termination of the project all raw data, observations and findings;
7. Submit a financial report to the satisfaction of the GRANTOR not later than 60 days from the termination of the Project;
8. Return the total amount released once the project is not completed due to negligence of the Implementing Research Team.

**IV. PROJECT COST, SCHEDULE OF FUND RELEASES, AND LIQUIDATION OF FUNDS**

1. A total budget allocation in the amount *Three Hundred Thirty Four Thousand Pesos (P 334,000.00)* for the whole project will be given directly to the Implementing Research Team by the GRANTOR for the conduct of the study. The releases shall be based on the approved WFP, LIB, TOR and Schedule of Deliverables and Tranche Releases (Annex C) chargeable against the University Research Fund and subject to the accounting and auditing regulations, pertinent government policies and procedures.

The Implementing Research Team shall not be responsible for the delay of the project implementation if such delay is directly caused by the late releases of the funds.

**VII. RESEARCH PERSONNEL**

1. The Project Leader and staff shall be composed of the following:

<i>Project Leader:</i>	<i>Orland D. Tubola</i>	<i>Chief, CETR</i>
<i>Asst. Project Leader:</i>	<i>Kristian Carlo B. Victorio</i>	<i>Faculty, EE</i>
<i>Members:</i>	<i>Joshua Rodriguez</i>	<i>Faculty, CpE</i>
	<i>Herman Bascones</i>	<i>Faculty, CpE</i>
	<i>Guillermo Bernabe</i>	<i>Dean, CE</i>

The Project Leader, Assistant Leader and research team members are prohibited from accepting any research project, fellowship, scholarship or training grant or leave his station for any trip abroad for more than one (1) month during the course of the project without securing prior approval and authorization of the Vice President for Research, Extension, Planning and Development. In such case, the IMPLEMENTING RESEARCH TEAM should assign an Officer-in-Charge to lead the project (in the absence of the project leader). If the period of absence is more than three (3) months, a replacement should be made.

2. The GRANTOR is in no way under obligation to grant pension or gratuity to research staff retiring or laid-off in the course of or after completion/termination of the project.
3. The service of the Project Leader and research/project staff shall be discontinued upon termination of the project or the specific work for which they were hired.
4. Research staff authorized under project Line Item Budget who shall be employed with items chargeable against the University Research Fund grant shall be engaged in by the project leader on contract/appointment basis, submitting to the GRANTOR in each case, a copy of the hiring paper together with the job description and qualification requirements.



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
 COLLEGE OF ENGINEERING  
**COMPUTER ENGINEERING DEPARTMENT**

- 5. Subcontracting of any part of the research shall require prior written approval from the Vice President for Research, Extension, Planning and Development. However, in the event that such sub-contracting is allowed, the IMPLEMENTING RESEARCH TEAM shall be liable or responsible for the outputs of the party subcontracted.

**VIII. OPTION TO TERMINATE or FAILURE TO COMPLETE THE PROJECT**

If the IMPLEMENTING RESEARCH TEAM is found by the OVPREPD unable, unwilling or otherwise impeded to perform its obligations and responsibilities under this Contract, the Implementing Institution hereby agrees and consents to the termination by the GRANTOR of this grant in prompt and orderly manner so as to minimize further expenditures on the part of the GRANTOR.

Should the IMPLEMENTING RESEARCH TEAM opt to terminate the project or a portion of the work as stated in the approved WFP within the project period or any extension granted thereof, the IMPLEMENTING RESEARCH TEAM agrees to reduce a portion of the Contract Price up to fifteen percent (15%) corresponding to the particular incomplete work due per the approved work schedule.

Failure by the IMPLEMENTING RESEARCH TEAM to satisfactorily complete the study within the period stated herein or any extension granted shall mean forfeiture or discontinuance of the Grant. The fund spent for the project will be returned to the university subject to salary deduction among members of the Implementing Research Team. The remaining balance of the study shall revert automatically to University Research Fund.

**IX. OWNERSHIP OF RESEARCH OUTPUTS**

The IMPLEMENTING RESEARCH TEAM and GRANTOR hereby agree and understand that intellectual property rights, ownership and enjoyment thereof arising from this study shall be governed by existing and future policies of the GRANTOR on Intellectual Property Rights such as but not limited to the following:

1. The RESEARCH outputs developed from the study shall be jointly owned by the GRANTOR and the IMPLEMENTING RESEARCH TEAM. Any publication arising from the activities undertaken by virtue of and pursuant to this Contract shall clearly establish and identify the Parties as the source of the output.
2. All reports arising from activities undertaken by virtue of and pursuant to this Contract shall be made in the name of the Parties. The names of the principal authors, researchers and/or Project Leaders shall be identified, recognized and included in the report.
3. The GRANTOR shall have the right to freely use all data and findings by virtue of and pursuant to this Contract for any of the purposes within its legal mandate. However, the IMPLEMENTING RESEARCH TEAM shall in writing request permission from the GRANTOR on the intent to use any of the data or information contained in the report and the purposes thereof.
4. Copyright, royalties and other economic rights arising from work produced or developed from the Project shall be owned by the GRANTOR and the IMPLEMENTING RESEARCH TEAM in accordance with the following proportion:

GRANTOR	-	60%
IMPLEMENTING RESEARCH TEAM	-	40%

*[Handwritten signatures and initials on the right margin]*



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
**COMPUTER ENGINEERING DEPARTMENT**

It is the obligation of the IMPLEMENTING RESEARCH TEAM to obtain or cause the assignment of the copyright and such other economic rights over the work under *this Project in favor of the GRANTOR, copy furnished the GRANTOR, and said documents shall form part of the Terminal Report* of the said IMPLEMENTING INSTITUTION and without which no acceptance of the said project output shall be issued by the GRANTOR.

**X. ASSIGNMENT OF RIGHTS**

The IMPLEMENTING RESEARCH TEAM shall not assign, sub-let or sub-contract any portion of the project covered by this Contract except upon prior written approval of the GRANTOR. Any such assignment, sub-lease or sub-contracting shall be governed by Section VII, item no. 6. Violation of this condition shall be a ground for the immediate termination of this Contract by the Commission.

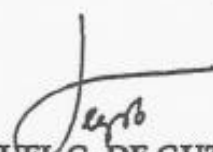
**XI. AMENDMENTS**

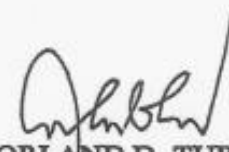
The parties to this Contract, may by mutual consent and for as long as the same is within the purview of law, accordingly reverse, modify, amend, and delete any word, phrase, sentence or article in this Contract.

**XII. EFFECTIVITY**

This Contract shall take effect upon the signing hereof by both parties and upon receipt of Notice to Proceed by the Implementing Institution and shall remain in force until the completion of the work required of the partner as indicated in the WFP. The parties hereto, may upon mutual consent, amend or modify this Contract by or through an Addendum or Supplementary Contract signed by all parties shall form an integral part hereof.

IN WITNESS WHEREOF, the parties hereto have signed this Contract this \_\_\_\_\_ day of \_\_\_\_\_ at Sta. Mesa, Manila.

  
**EMANUEL C. DE GUZMAN**  
President, Polytechnic University  
of the Philippines

  
**ORLAND D. TUBOLA**  
Project Leader  
Chief, CETR



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
**COMPUTER ENGINEERING DEPARTMENT**

Signed in the presence of:

**MANUEL M. MUHI**  
Vice President for Research,  
Extension, Planning and Development  
Polytechnic Univ. of the Philippines

**KRISTIAN CARLO B. VICTORIO**  
Faculty, CS

**RACIDON P. BERNARTE**  
Director, Research and Extension  
Management Department





POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
 COLLEGE OF ENGINEERING  
**COMPUTER ENGINEERING DEPARTMENT**

**ACKNOWLEDGMENT**

Republic of the Philippines)  
 Quezon City ) S.S.

Before me, a Notary Public for and in \_\_\_\_\_ on this \_\_\_\_\_  
 day of \_\_\_\_\_ personally appeared before me:

Name	Comm. Res. Cert. No.	Place/Date Issued
EMANUEL C. DE GUZMAN	<u>09976336</u>	<u>Manila 1-22-14</u>
MANUEL M. MUHI	<u>EC 1824731</u>	<u>Manila 8-7-19</u>
RACIDON P. BERNARTE	<u>327 0819</u>	<u>Manila 1/26/15</u>
ORLAND D. TUBOLA	<u>03302745</u>	<u>Manila 10/20/15</u>
KRISTIAN CARLO B. VICTORIO	_____	_____
GUILLERMO O. BERNABE	_____	_____

Known to me and to be known the same persons who executed the foregoing instrument consisting of seven (7) pages including this page on which the acknowledgement is written, has been signed on the right hand margin of each and every page sealed with my notary seal.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on the day, year and place above written.

NOTARY PUBLIC

Doc. No. \_\_\_\_\_  
 Page No. \_\_\_\_\_  
 Book No. \_\_\_\_\_  
 Series No. \_\_\_\_\_

*[Handwritten signatures and initials on the right margin]*



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES**  
**COLLEGE OF ENGINEERING**  
**COMPUTER ENGINEERING DEPARTMENT**

2017 EXTERNALLY FUNDED RESEARCHES

RESEARCH TITLE	TEAM MEMBERS	COLLEGE/ OFFICE	FUND SOURCE	APPROVED BUDGET
LAMP Detection Assays for Anthracnose, Stem-End Rot and Scab Disease Pathogens in Philippine 'Carabao' Mango ( <i>Mangifera indica</i> Linn.)	Lourdes V. Alvarez Carmelita P. Mapanao Arcibel B. Bautista Chester C. Deocariz	Science	DOST	3,715,649.00
Assessment on the Effectiveness of the Incident Command System (ICS) in Maintaining Unity of Command	Joseph Mercado Racidon P. Bernarte Lincoln A. Bautista Joseph Reylan B. Viray Jackie D. Urrutia Emejidio C. Gepila, Jr. Christine A. Del Rosario Iris Rowena A. Bernardo Peter John C. Galanido	OVPRED	Office of Civil Defense	400,000.00
Effectiveness of Contingency Planning in Typhoon-Affected Regions	Joseph Mercado Racidon P. Bernarte Lincoln A. Bautista Joseph Reylan B. Viray Jackie D. Urrutia Emejidio C. Gepila, Jr. Christine A. Del Rosario Iris Rowena A. Bernardo Peter John C. Galanido	OVPRED	Office of Civil Defense	400,000.00
Ethnomathematics of Indigenous Peoples of Luzon: Developing a Culture-Based Mathematics Pedagogy	Dr. Lincoln Bautista Joseph Reylan Viray Jackie Urrutia Raul Roland Sebastian Daizylyn Palillio Edcon Baccay	OVPRED	CHED-NCCA	1,000,000.00

FB 01



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

RESEARCH TITLE	TEAM MEMBERS	COLLEGE/ OFFICE	FUND SOURCE	APPROVED BUDGET
Bacterial Assemblages and Identity Library Online ( <b>BASILIO</b> ) Website: A Bacterial Database	Gary Antonio C. Lirio Armin S. Coronado Arcibel B. Bautista Racidon P. Bernarte Ryan V. Labana Iris Rowena A. Bernardo Theresita V. Atienza	Science	CHED	2,626,624.00
Algae as Functional Food Innovation Research (AFFIR)	Armin S. Coronado Christian Jay B. Cambiador Gretel B. Rocaberte Teresita R. Perez Gary Antonio C. Lirio Leineleen Jerah Mae Arocha Angelina E. Borican Perla B. Patriarca	Science	CHED	9,271,354.00
Molecular and Morphological Assessment of invasive and emerging fungal pathogens of selected Philippine fruits and the Structuring of PUP MycoBank	Lourdes V. Alvarez Chester C. Deocaris Carmelita P. Mapanao Ma. Eleanor C. Salvador Leilidyn C. Zurbano Ma. Esperanza H. Reyes	Science	CHED	14,972,075.60
Intervention of "WASH App Kids" to the links of soil-transmitted helminths infection, nutritional status, cognitive ability and academic performance of school children in the Philippines	Ryan V. Labana Julieta Z. Dungca Gary Antonio C. Lirio Kristel Joy S. Cada Analette M. Guinto	Science	CHED	2,363,020.00

**TOTAL = ₱ 34,748,722.60**

\*Note: There were no externally funded researches in 2016.



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

PROPOSED REVISIONS ON THE  
IMPLEMENTING GUIDELINES FOR EXTERNALLY-FUNDED RESEARCHES

EXISTING	PROPOSED REVISION
<p><b>Section 1. Rationale and Purpose</b></p> <p>To justify implement the University Policy on Research and Development Support, Funding and Incentives as approved by the Board of Regents on October 18, 2013, this set of guidelines which contains specific and clear provisions pertaining to externally-funded researches is hereby outlined. This supplements the <i>specific Guidelines for implementing the BOR-Approved University policy on R &amp; D Funding, Support and Incentives</i> (Approved by the BOR in its 144<sup>th</sup> Regular Meeting held on March 26, 2014).</p>	
<p><b>Section 2. Definitions</b></p> <p>2.1 <i>Research Funding and Grant</i> refers to the financial assistance awarded to a research proposal from an eligible party as enumerated in Section 3. The grant may cover, wholly or partly, the cost and/ or other incidental expenses relating to the conduct of the proposed research. The grant also covers honoraria, operating expenses, costs of books and equipment.</p> <p>Other funding support given to either the lead proponent or co-proponent such as reduction of teaching load and/ or night service pay are chargeable to the external fund provider as per the existing accounting rules and regulations.</p> <p>2.2 <i>Externally-Funded Researches</i> refer to the research projects proposed by colleges, branches and research institutes/ centers which are sponsored by external stakeholder/s and/or external</p>	



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

<p>fund provider/s.</p> <p>2.3 <i>Research Proposal</i> refers to scholarly projects that are aligned with the University Research Agenda (URA) and are feasible to be implemented within a maximum of one (1) calendar year.</p>	
<p><b>Section 3. Eligibility</b></p> <p>3.1 Any of the following can be considered as lead project proponent:</p> <ul style="list-style-type: none"> <li>3.1.1 Regular faculty members of the University with or without administrative designation;</li> <li>3.1.2 Permanent administrative employees of the University; or</li> <li>3.1.3 Any capable employees of the University as pre-selected by the external fund provider/s.</li> </ul> <p>3.2 Those who disqualified as lead project proponent may otherwise qualify as co-proponent and/or research assistant/s as per approval of the external fund provider/s. Research assistant/s are limited to bona fide students and/ or administrative employee/s.</p>	
<p><b>Section 4. Disqualifications</b></p> <ul style="list-style-type: none"> <li>4.1 Any teaching and/or non-teaching employee who failed to complete research projects due to grounds such as negligence, inefficiency, etc.</li> <li>4.2 Any financially delinquent applicant as identified by the Accounting Department. However, the applicant may appeal to</li> </ul>	<p><b>Section 4. Disqualifications</b></p> <ul style="list-style-type: none"> <li>4.1 Any teaching and/ or non-teaching employee with previous incomplete research projects.</li> <li>4.2 Any financially delinquent applicant as identified by the Accounting Department. However, s/he may appeal to the University Research Evaluation Committee (UREC) as endorsed</li> </ul>



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

the University Research Evaluation Committee (UREC) as endorsed by the external fund provider/s for reconsideration.

by the external fund provider/s for reconsideration.

**Section 5. Limitations**

- 5.1 The number of project team members shall be subjected to the rules of the external funding agency.
- 5.2 The duration of the research project shall be based on the approved proposal of the funding agency.
- 5.3 The conduct/ implementation of the research project shall not be intermittent. Regular submission of reportorial requirement/s shall be monitored.
- 5.4 The project leader shall be responsible for the research project fund. Hence, s/he shall serve as the Cash Disbursing Officer (CDO), subject to the existing accounting rules and regulations.
- 5.5 The lump sum of the approved research project budget must be deposited in the University account and shall be disbursed to the CDO.
- 5.6 The policies and guidelines of the external fund provider/s shall be consistent with those of the University in terms of honoraria and other funding support.
- 5.7 The conduct of the research project shall be beyond the approved official time/ working hours of the researcher/ s in the University.
- 5.8 This set of guidelines is limited to research projects between the

**Section 5. Limitations**

- 5.1 The number of project team members shall be subjected to the rules of the external funding agency.
- 5.2 The duration of the research project shall be based on the approved proposal of the funding agency.
- 5.3 The conduct/ implementation of the research project shall not be intermittent. Regular submission of reportorial requirement/s shall be monitored.
- 5.4 The project leader shall be responsible for the research project fund. Hence, s/he shall serve as the Cash Disbursing Officer (CDO), subject to the existing accounting rules and regulations.
- 5.5 The lump sum of the approved research project budget must be deposited in the University account and shall be disbursed to the CDO.
- 5.6 The policies and guidelines of the external fund provider/s shall be consistent with those of the University in terms of honoraria and other funding support.
- 5.7 The conduct of the research project shall be beyond the approved official time/ working hours of the researcher/ s in the University.
- 5.8 The set of externally-funded research guidelines shall be legally



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

external fund provider and the University (colleges, centers, institutes, etc.) that are legally binding.

5.9 It does not include the research projects that are made on a personal capacity between any member/s of the University and the external fund provider/s.

5.10 This set of guidelines shall be followed, if the same is unavailable from the external fund provider.

binding between the external fund provider/s and the University (colleges, branches, campuses, centers, institutes, etc.).

5.9 It does not include the research projects that are made on a personal capacity between any member/s of the University and the external fund provider/s.

5.10 In the absence of the external fund provider/s guidelines, this set of externally-funded research guidelines shall be followed.

**Section 6. Basic Documentary Requirements**

6.1 Letter of intent from the head of the external fund provider/s.

6.2 Copy of the draft binding contract between PUP and the external fund provider/s.

6.3 Research project proposal which includes the following

6.3.1 The Proposal Summary should include the following: project title, research program area (based on URA), name of the proponent, name of co-proponents (if any), names of other researchers (if any), college/branch/office, project duration, total project cost, and cooperating agency/ies (if any).

6.3.2 Technical description of the proposal should include the following: rationale of the study, background of the study, objectives, hypothesis (if any), expected output, theoretical and

**Section 6. Basic Documentary Requirements**

6.1 Letter of intent from the head of the external fund provider/s.

6.2 Copy of the draft binding contract between PUP and the external fund provider/s.

6.3 Research project proposal (see attached Research, Evaluation, and Monitoring Center [RMEC] Form 1)

6.3.1 Title, proponent/s with college/branch affiliation, research program area (based on URA), project duration, total cost, and cooperating agency/ies (if any).

6.3.2 Technical description of the proposal should include the following: rationale of the study, background of the study, objectives, hypothesis (if any), expected output, theoretical and conceptual frameworks, definition of terms, review of literature, scope of the study, methodology, and references.

6.3.3 Plan of work including the step-by-step implementations



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

<p>conceptual framework, definition of terms, review of literature, scope of the study, methodology, and references.</p> <p>6.3.3 Plan of work including the step-by-step implementation plan, Line Item Budget (LIB) personnel requirements/team composition (with delineation of assignments, coordination/networking arrangements) and annexes. In the annexes, the biodata/profile of each of the project proponents and other researchers, emphasizing their qualifications relevant to the project are attached.</p>	<p>plan, Line Item Budget (LIB) personnel requirements/ team composition (with delineation of assignments, coordination/ networking arrangements) and annexes. In the annexes, the biodata/ profile of each of the project proponents and other researchers, emphasizing their qualifications relevant to the project are attached.</p>
<p><b>Section 7. Evaluation Procedure</b></p> <p>7.1 The external fund provider/s shall submit all documentary requirements to the Office of the Vice President for Research, Extension and Development (OVPRED).</p> <p>7.2 Upon receipt of the proposal, OVPRED shall endorse all documents to the Research Management Office (RMO) for technical evaluation. Technical evaluation involves the determination of whether there is compliance with the University's policies and guidelines on eligibility, technical standards, and formats.</p> <p>7.3 The OVPRED shall convene the members of the UREC to evaluate the paper according to nature, quality, substance and</p>	<p><b>Section 7. Evaluation Procedure</b></p> <p>7.1 The external fund provider/s shall submit all documentary requirements to the Office of the Vice President for Research, Extension and Development (OVPRED).</p> <p>7.2 Upon receipt of the proposal, OVPRED shall endorse all documents to the Research Management Office (RMO) for technical evaluation. Technical evaluation involves the determination of whether there is compliance with the University's policies and guidelines on eligibility, technical standards, and formats.</p> <p>7.3 The OVPRED shall convene the members of the UREC to evaluate the nature, quality, substance, and value of the</p>





**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

value.

- 7.4 If the final evaluation of the UREC is favorable, the packet of application documents together with the Evaluation Report signed by all the members of the UREC shall be forwarded by the RMO to the Executive Committee (EXECOM) for approval and confirmation of the Board of Regents (BOR).
- 7.5 Upon confirmation of the BOR, the external fund provider/s and the proponent/s shall enter into a contract with the University stipulating therein the terms and conditions of the grant.
- 7.6 Upon signing of the contract, the RMO, through the Research Evaluation and Monitoring Center (REMC), shall issue a Notice to Proceed (NTP) to the proponent/s which will determine the commencement of the project.

**Section 8. Criteria for Assessment**

- 8.1 *The quality of the proposal.* The quality of the proposal shall be evaluated through a double blind, peer-review process using an approved point system, with 70% as passing rate.
- 8.2 The alignment of the research proposal must be within the proponent's field of specialization.
- 8.3 *Impact or commercialization.* The impact or commercialization of the prospective outcome or results of the study to the institution, community, country, and the world.

proposal.

- 7.4 Upon the approval of UREC, RMO shall forward the he proposal with documentary requirements, including the evaluation report, to the Executive Committee (EXECOM) for approval and Board of Regents (BOR) for confirmation.
- 7.5 Upon confirmation of the BOR, the external fund provider/s and the proponent/s shall enter into a contract with the University stipulating therein the terms and conditions of the grant.
- 7.6 Upon signing of the contract, the RMO, through the Research Evaluation and Monitoring Center (REMC), shall issue a Notice to Proceed (NTP) to the proponent/s which will determine the commencement of the project.

**Section 8. Criteria for Assessment**

- 8.1 *The quality of the proposal.* The quality of the proposal shall be evaluated through a double blind, peer-review process using an approved point system, with 70% as passing rate.
- 8.2 *Alignment with the proponents' specialization.* The proposal's topic must be aligned with at least one of the proponents' fields of specialization.
- 8.3 *Impact or commercialization.* The impact or commercialization of the prospective outcome or results of the study to the institution, community, country, and the world.



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

<p><b>Section 9. Fees</b></p> <p>For all types of externally-funded projects, at least ten percent (10%) of total project cost shall go to the University funds to cover administrative costs.</p>	
<p><b>Section 10. Reportorial Requirements</b></p> <p>10.1 The RMO, through REMC, shall periodically monitor the ongoing research projects in accordance with the submitted plan of activities as evidenced by:</p> <p>10.1.1 Progress reports;</p> <p>10.1.2 Liquidation reports; and</p> <p>10.1.3 Other supporting documents.</p>	
<p><b>Section 11. Authorship Agreement</b></p> <p>In all externally-funded research publication conducted in the university by any member thereof shall acknowledge the organization/s as the external funder/s and the University as the institutional affiliation. In case the research work is published by PUP, the University shall be the corporate author and copyright holder.</p>	<p><b>Section 11. Acknowledgement of External Funder/s and the University in cases of Publication</b></p> <p>In all externally-funded research publication conducted in the university by any member thereof shall acknowledge the organization/s as the external funder/s and the University as the institutional affiliation. In case the research work is published by PUP, the University shall be the corporate author and copyright holder.</p>
<p><b>Section 12. Submission of Terminal Requirements</b></p> <p>12.1 The proponents must submit terminal report, financial report, five (5) copies of the completed research project including the executive summary in both hard and soft copies, five (5) copies</p>	<p><b>Section 12. Submission of Terminal Requirements</b></p> <p>12.1 The proponents shall submit five (5) copies in hard and soft copies of terminal and financial reports, including a copy of the raw data and the transcript of the interview/s (if any), co-</p>



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

<p>of the completed research project in publishable format in both hard and soft copies, and copy of the raw data including the transcript of the interview (if any) in both hard and soft copies.</p> <p>12.2 In the case of collaborative research or multiple authorships, the project lead proponent or the author shall have the right to apply for other financial assistance. However, if the lead proponent/author will not avail the other financial assistance, his co-author or any one among his coauthors may apply for the grant. This arrangement must be agreed upon in writing among the authors.</p> <p>12.3 Co-authorship agreement between and among the authors that includes PUP and the external fund provider as co-authors, must be submitted along with the other basic documentary requirements and terminal requirements. The agreement must be subscribed and sworn to in the presence of a notary public.</p>	<p>authorship agreement, and the procedure of submission of the publishable format of the completed project in CHED-recognized /Scopus/ISI-indexed publication.</p> <p>12.2 In the case of collaborative research works, the project lead proponent shall have the right to apply for other financial assistance. However, if the proponent/ author will not avail the other financial assistance, his co-author or any one among his co-author may apply for the grant. This arrangement must be agreed upon in writing among the authors.</p>
	<p><b>Section 13. Claim of Honoraria</b></p> <p>13.1 The applicant must submit the following requirements:</p> <p>13.1.1 Attestation that the project was done beyond the official time;</p> <p>13.1.2 REMC's certificate of project completion; and</p> <p>13.1.3 RMO's certificate of documentary compliance.</p> <p>13.2 S/he must request for a claim of honoraria not later than one month after the submission of the terminal requirements; and</p> <p>13.3 S/he must submit other requirements in accordance to COA Circular no. 2012- 001 dated June 14, 2012.</p>
<p><b>Section 13. Ownership and Dissemination of Results</b></p> <p>13.1 The policy of the external fund provider/s on ownership and dissemination of results must be strictly followed. In the absence of external funder's policy on this matter, the University's</p>	<p><b>Section 14. Ownership and Dissemination of Results</b></p> <p>14.1 The policy of the external fund provider/s on ownership and dissemination of results must be strictly followed. In the absence of external funder's policy on this matter, the University's</p>



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

guideline must be followed.

13.1.1 In cases of pure research and publication, Section 11 of this guideline shall take effect.

13.1.2 In cases of applied research works which are viable for commercialization, the copyright, royalties, and other economic rights shall be determined by the External Fund Provider, University and the Implementing Research Team in accordance with the following proportion:

University	35%
External Fund Provider	35%
Implementing Research Team	30%

13.1.3 The results of the research project must be presented in various modes, published in any reputable, refereed and indexed publication and/or commercialized for the benefit of the University and/or its stakeholders within three (3) years immediately after the completion of the project. However, the research proponent/s shall seek the approval of the University and the external fund provider prior to any mode of dissemination of results.

**Section 14. Sanction**

14.1 The approving authority has the right to withhold benefits and incentives in case of failure of the proponent/s to submit progress reports without due cause.

guideline must be followed.

14.1.1 In cases of pure research and publication, Section 11 of this guideline shall take effect.

14.1.2 In cases of applied research works which are viable for commercialization, the copyright, royalties, and other economic rights shall be determined by the External Fund Provider, University and the Implementing Research Team in accordance with the following proportion:

University	35%
External Fund Provider	35%
Implementing Research Team	30%

14.1.3 The results of the pure research project must be presented and/or published in CHED-recognized/ Scopus/ ISI-indexed conferences and publication within three (3) years after the project completion. For applied research projects which are viable for commercialization, a patent/utility model application from IPOPhil through IPMO must be secured for intellectual property protection of the owners and for the benefit of the University and/or the stakeholders immediately after the completion of the project. However, the research proponent/s shall seek the approval of the University and the external fund provider/s prior to any mode of dissemination of results.

**Section 15. Sanction**

15.1 The approving authority has the right to withhold benefits and incentives in case of failure of the proponent/s to submit progress reports without due cause.



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

<p>14.2 Proponent/s who fail/s to comply with the terms of the grant, and those whose grants are terminated for cause during the project period shall reimburse the external fund provider the full amount received. Furthermore, they shall be disqualified from any University grant and other funding support.</p>	<p>15.2 Proponent/s who fail/s to comply with the terms of the grants shall reimburse the full amount received to the external fund provider/s. Furthermore, they shall be disqualified from any University grant and other funding support.</p>
<p><b>Section 15. Repealing Clause</b></p> <p>This set of guidelines repeals all circulars and memoranda that are not consistent herewith.</p>	<p><b>Section 16. Repealing Clause</b></p> <p>This set of guidelines repeals all circulars and memoranda that are not consistent herewith.</p>

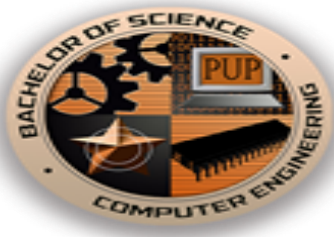


**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

For effective action research works, matrix, which is a medium or structure, is used as support to the research works. It also allows the design and delivery activities to be conducted successfully. The information below state the matrix of externally funded research works and completed and on-going research works.

**MATRIX OF EXTERNALLY FUNDED RESEARCH WORKS**

Research Title	Funding Source	Status
Novel Material as Anode and Cathode Electrodes for Power Generator Al-air Reactor	DOST-PCIEERD	On-going
Simulation of an Electric Behavior of the CDI System	Japanese Government	Completed
A Capacitive Deionization System with High Energy Recovery and Effective Re-use	Japanese Government	Completed
Capacitive Deionization (CDI): An Environmentally Friendly Water Purification Technique	Japanese Government	Completed
Effects of Current Density on Capacitive Deionization Process Using Activated Carbon as an Electrode	Japanese Government	Completed
Challenges of a HPLC-UV Analysis of Methomyl, Carbofuran, and Carbaryl in Soil and Fresh Water for Degradation Studies	Japanese Government	Completed
Development of an Ion Removal Technique Based on Capacitive Deionization for Treatment of Rinse Water from Incineration Ash	Japanese Government	Completed
Development of a Methane Gas Quantifier for the Analysis of Methane Production of an Organic Material ( <i>Zea mays var. indetata</i> ) in a Small Scale Reactor	Japanese Government	Completed
Utilization of Vertical-Axis Wind Turbine (VAWT) and Solar Energy to Power Street Light Equipped with Earthquake Alarm System	Japanese Government	Completed
Low Cost Geophysical Resistivity Instrument	Japanese Government	Completed



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

Republic of the Philippines  
DEPARTMENT OF SCIENCE AND TECHNOLOGY  
PHILIPPINE COUNCIL FOR INDUSTRY, ENERGY AND EMERGING  
TECHNOLOGY RESEARCH AND DEVELOPMENT  
4th and 5th Levels, Science Heritage Building, Bicutan, Taguig City

**MEMORANDUM OF AGREEMENT**

**Project Title:** *Novel Material as Anode Cathode Electrode for Power Generator Al-Air Reactor*

**PCIEERD Project No.:** 07319

**KNOWN ALL MEN BY THESE PRESENTS:**

This MEMORANDUM OF AGREEMENT ("Agreement") is made and entered into by and between:

The **PHILIPPINE COUNCIL FOR INDUSTRY, ENERGY AND EMERGING TECHNOLOGY RESEARCH AND DEVELOPMENT (PCIEERD)**, a government agency under the Department of Science and Technology (DOST) created pursuant to the approved rationalization plan in accordance with the provision of Executive Order No. 366, hereinafter referred to as "**DOST-PCIEERD**", the Funding/Monitoring Agency, with principal office at 4th and 5th Levels, Science Heritage Building, Bicutan, Taguig City, Metro Manila, Philippines represented in this Agreement by its Executive Director, **DR. ENRICO C. PARINGIT**;

-and-

The **POLYTECHNIC UNIVERSITY OF THE PHILIPPINES**, a state university governed by the Board of Regent in accordance with provision of Presidential Decree No. 1341, hereinafter referred to as **UNIVERSITY** with main address at A. Mabini Campus, Anonas Street, Sta. Mesa Manila represented in this Agreement by its President, **DR. EMANUEL C. DE GUZMAN**, herein referred to as the Implementing Agency.

WITNESSETH:

*WHEREAS*, the above-mentioned research and development (R&D) project hereinafter referred to as the Novel Material as Anode and Cathode Electrode for Power Generator Al-Air Reactor has been thoroughly evaluated by **DOST-PCIEERD** and was duly approved by the **PCIEERD Governing Council** in its 93<sup>rd</sup> meeting on 08 April 2019 through GC Resolution No. 27, series of 2019;

*NOW THEREFORE*, for and in consideration of the foregoing premises, the **PARTIES** hereby agree to the following terms and conditions:



#### I. OBJECTIVES OF THE PROJECT

1. To develop a novel material as anode electrode for Aluminum-air-based battery
2. To characterize the developed electrode physical and electrochemical property
3. To design and fabricate a working prototype Al-air-based battery pack utilizing the developed anode electrode so as to evaluate its energy generation performance.
4. To test the developed Al-air-based battery pack for actual utilization as battery for electric bicycle, smart phone charger and battery for DC lighting system

#### II. OPERATION OF THE PROJECT

The Project shall be undertaken by the UNIVERSITY in accordance with the approved project proposal (made part hereof as Annex "A") and the Revised DOST-GIA Guidelines (A.O. 009 S. of 2017).

#### III. FUNDING ASSISTANCE

The DOST-PCIEERD shall provide grant in the amount of Ten Million Three Hundred Twenty Nine Thousand Six Hundred Forty Six Pesos (Php 10,329,646.00) for two (2) years with an initial Year 1 grant of Seven Million Four Hundred Ninety Seven Thousand Three Hundred Twenty Three Pesos (Php 7,497,323.00) to be expended based on the scheduled release of funds and as allocated in the approved Project Line-Item Budget (made part hereof as Annex "B"). Guidelines on the Grants-in-Aid Program as may be determined by the DOST-PCIEERD shall govern the implementation of the Project.

The activities, operation of books of accounts and records of the projects shall be subject to reasonable inspection by authorized representatives of DOST-PCIEERD. The DOST-PCIEERD reserves the right to discontinue the projects or its assistance at any time for cause as determined by the DOST-PCIEERD, to include but not be limited to, violation of the Grant Agreements, fraud or falsity in the UNIVERSITY's warranties and representation as provided by the proponent or upon determining that the results which were obtained or reasonably expected do not justify further activity.

All income/interest derived from the program/projects, if any, and all unexpended balance shall be reported immediately and remitted to DOST-PCIEERD by the UNIVERSITY after the termination of the program/projects.

#### IV. PROJECT DURATION

The Project shall be completed within a period of twenty four months with the Year 1 implementation covering the period **01 June 2019 to 31 May 2020**. Parties shall agree on the starting date of implementation, which shall not be later than the date of receipt of funds by the UNIVERSITY.





**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

**V. FUND RELEASE AND UTILIZATION**

The financial grant shall be released by the **DOST-PCIEERD** to the **UNIVERSITY**, subject to applicable rules and regulations and availability of funds.

The **UNIVERSITY** shall abide by the applicable rules and regulations on disbursement and utilization as mandated by the **DOST-PCIEERD** and existing government accounting and auditing rules and regulations, to include in particular but not be limited to, rules on direct and indirect costs.

**VI. PROJECT PROPERTIES**

*Project References:* Mention of above-stated project in any and all publication, literature and information material in whatever media form shall state reference to the **DOST-PCIEERD** as project Funding/Monitoring Agency, and **UNIVERSITY** as the Implementing Agency. Failure on the part of any party to comply with this provision shall be ground for written documented protest; further, repeated non-compliance with this provision by one party shall allow the aggrieved party to inform affected third parties in writing and require proper attribution through publication, with cost charged against the offending party.

*Intellectual Property (IP):* Ownership and utilization of IPs and Intellectual Property Rights (IPRs) resulting from the project shall be governed by the Philippine Technology Transfer Act of 2009. The **UNIVERSITY** and the Project Leader acknowledge that they have read, understood and hereby agree to be bound by the provisions of the said Act. In case of conflict with other laws, rules or regulations, the said Act shall prevail.

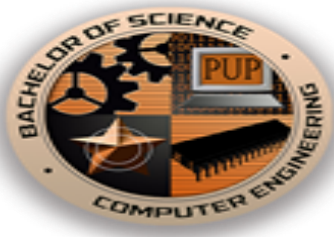
*Records of Equipment:* The Property Officer/s of the **DOST-PCIEERD** and **UNIVERSITY** shall maintain a complete and updated record of all equipment purchased out of the grant funds. Inventory of equipment shall be conducted by the **DOST-PCIEERD** during the implementation of the project.

*Ownership of Equipment:* The **DOST-PCIEERD** shall initially own all equipment, including but not limited to the fabricated equipment, under its account until it may deem fit to transfer the same to other projects or implementing institutions, subject to existing government accounting and auditing rules. The **UNIVERSITY** shall be accountable for the equipment duly receipted until the physical transfer/donation or disposition of ownership, as determined by the **DOST-PCIEERD**.

Upon request, the ownership of equipment may be transferred subject to the approval from **DOST-PCIEERD**. The **DOST-PCIEERD** reserves the right to transfer ownership of such government equipment subject to existing government accounting and auditing laws, rules and regulations.

**VII. ACCOMPLISHMENT AND FINANCIAL REPORTS**

The **UNIVERSITY** shall submit to the **DOST-PCIEERD** all technical and financial reports as mandated by the **DOST-PCIEERD**, pursuant to applicable rules and regulations. The



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

UNIVERSITY shall likewise acknowledge the assistance of the DOST-PCIEERD in relevant project-related activities.

**VIII. GENERAL PROVISIONS**

*Amendment:* This Agreement may only be amended in writing and by mutual consent of both parties.

*Authority to Sign:* Each person signing this agreement represents and warrants that he/she is duly authorized to sign this agreement. In the unlikely event that the person signing for the other party is not authorized to do so, the latter agrees to hold the other party/ies harmless for any cause or consequence of the absence/lack of authority to sign.

*Arbitration:* All disputes arising between and among the parties as to interpretation, operation or effect of any clause in the Agreement or any other difference between the parties shall first be resolved amicably. In case of failure, the Rules on Alternative Dispute Resolution (ADR) between national government agencies under Republic Act No. 9285 shall apply.

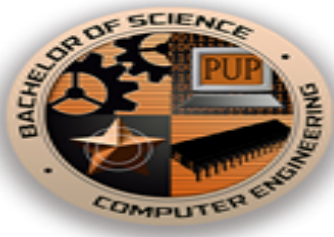
*Indemnification:* Each party shall indemnify, hold free and harmless, and defend at its own expense the other party/ies from and against all suits, claims, demands, and liabilities of any nature or kind, arising out of acts or omissions of the former, in the performance of any activity in connection with the program/project, including those that may be initiated by its employees, workers, agents, subcontractors, or by any other entity or persons against said party by reason of or in connection to the program/project.

*Venue:* The parties further agree that in case of legal action requiring court litigations that may arise in the enforcement of this Agreement, the venue of court litigation shall be in the Court of Competent Jurisdiction sitting in Taguig City only.

*Separability Clause:* If any part or provision of this Agreement is held invalid or unconstitutional, the other provisions not affected thereby shall remain in force and in effect.

**IX. COMPLIANCE WITH LAWS AND POLICIES**

The UNIVERSITY shall comply with the provisions of the Philippine Technology Transfer Act of 2009 (Republic Act No. 10055) and its Implementing Rules and Regulations (Joint DOST-IPO Administrative Order No. 02-2010), Guidelines on Intellectual Property Valuation, Commercialization and Information Sharing (Joint DOST-DTI-IPOPHL A.O. No. 001 s. 2012), DOST Intellectual Property Policy (DOST A.O. No. 004 s. 2015), Technology Transfer Protocol (DOST A.O. No. 009 s. 2015), Intellectual Property Management Protocol (DOST A.O. No. 004 s of 2016), Guidelines on the Constitution of the Fairness Opinion Board (FOB) and the Issuance of Fairness Opinion Report (FOR) under R. A. No. 10055 (DOST Memorandum Circular No. 003 s. of 2015), Guidelines on the Fast-Tracked Issuance of FOR under R. A. No. 10055 (DOST M. C. No. 007, s. of 2016), Adoption of the DOST Data Sharing Policy (DOST A. O. No. 003 s. of 2015) and its Implementing Guidelines, the DOST Administrative Order No. 009 Series of 2017 (Revised DOST-GIA Guidelines) and other government laws, rules and policies as applicable.



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

IN CONSIDERATION of the mutual covenant set forth above, witness our signatures  
this \_\_\_\_\_ day of \_\_\_\_\_, 2019, at \_\_\_\_\_, Philippines.

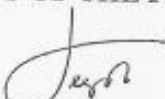
**Funding/Monitoring Agency:**

**PHILIPPINE COUNCIL FOR INDUSTRY, ENERGY, AND EMERGING  
TECHNOLOGY RESEARCH AND DEVELOPMENT COUNCIL**

  
**DR. ENRICO C. PARINGIT**  
Executive Director, DOST-PCIEERD  


**Implementing Agency:**

**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES – STA. MESA**

  
**DR. EMANUEL C. DE GUZMAN**  
President, PUP- Sta. Mesa

**WITNESS:**

  
**DR. GINNO L. ANDRES**  
Project Leader, PUP – Sta. Mesa

  
**NONILO A. PEÑA**  
Chief SRS, DOST-PCIEERD

**Certified Funds Available:**

  
**MARISSA G. DALAY**  
Chief Accountant, DOST-PCIEERD



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

**ACKNOWLEDGEMENT**

REPUBLIC OF THE PHILIPPINES}  
CITY OF TAGUIG}S.S.

BEFORE ME, A Notary Public for and in the City of TAGUIG CITY this 02 JUL 2019  
of \_\_\_\_\_ personally appeared;

	Government Issued Identification	Date/Place Issued
ENRICO C. PARINGIT	Passport #: SO014341A	18 March 2019/DFA Manila
EMANUEL C. DE GUZMAN	Passport #: <i>PUP # 91064</i>	<i>MANILA 9/19/12</i>
GINNO L. ADDRESS	Passport #: P7987580A	18 JULY 2018/DFA Manila

Known to me as the same persons who executed the foregoing Memorandum of Agreement and they acknowledged to me that the same is their free and voluntary act and deed and that of the entities they respectively represent.

This instrument, consisting of six (6) pages, including this page whereon this Acknowledgment is written, are signed by the parties together with their instrumental witnesses one each every page thereof

TO THE TRUTH OF FOREGOING, witness now my hand and seal on the date and place first above written.

Doc. No. 158  
Page No. 33  
Book No. X  
Series of 2019

*RACHEL GINAY*  
RACHEL GINAY W. COPANUT-PANGWI  
NOTARY PUBLIC UNTIL DEC. 31, 2019  
Notarial Commission Appt. No. 19 (2018-2019)  
#22 Gen. Santos Ave., Lower Bicutan, Taguig City  
PTR NO. A-4248764/1-3-19, Taguig City  
IBP O.R. No. 056215/12-06-18, RSM  
MCLE Comp. No. VI-0019686/3-1-2019  
ROLL NO. 61627



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

B 0 1

**CONTRACT FOR GRANTS-IN-AID**

KNOW ALL MEN BY THESE PRESENTS:

This Contract for Grants-in-Aid titled "Analysis of Mechanical Properties of Asphalt Mix Using Crumb Rubber Tire and Bottom Ash as Replacement for Fine Aggregates" entered into this June 17, 2016 at Sta. Mesa, Philippines by and among:

The Polytechnic University of the Philippines, a higher education institution with principal office at Mabini Campus, Sta. Mesa, Metro Manila represented herein by its President, EMANUEL C. DE GUZMAN and herein referred to as the "GRANTOR".

and

The Project Team, represented herein represented by its team leader MANUEL M. MUHI, and herein referred to as the "IMPLEMENTING RESEARCH TEAM".

WITNESSETH, that:

WHEREAS, number 2 agenda of the university in achieving its ultimate vision is to embed a culture of research;

WHEREAS, in pursuant with this agenda, the Polytechnic University of the Philippines through its Board of Regents appropriated funds for institutional researches;

WHEREAS, the above-entitled research underwent a series of evaluation and rigid screening process as required by the Implementing Rules and regulations setforth for institutional research funding;

WHEREAS, the University Research Evaluation Committee (UREC) approved the research proposal and subsequently endorsed it to the Executive Committee, which the latter approved for funding on 5<sup>th</sup> of June 2016; and

WHEREAS, the Board of Regents (BOR) confirmed the approval to grant the funding to the Implementing Research Team on the 25<sup>th</sup> of June 2016

NOW, THEREFORE, for and in consideration of the foregoing and the stipulations herein set forth, the parties hereby, agree on the following:

**I. DURATION OF THE PROJECT**

The IMPLEMENTING RESEARCH TEAM, the composition of which is indicated in attached research proposal hereof, shall conduct a study "Analysis of Mechanical Properties of Asphalt Mix Using Crumb Rubber Tire and Bottom Ash as Replacement for Fine Aggregates" which the IMPLEMENTING RESEARCH TEAM shall satisfactorily complete for a period of Twelve (12) months commencing on the date the contract has been signed.

Notwithstanding the project duration stated herein, any renewal or continuation of the project must be approved by PUP thru its President upon the recommendation of the Vice President for Research, Extension, Planning and Development.

In case, it becomes evident to the IMPLEMENTING RESEARCH TEAM during the implementation of the study that an extension beyond the termination date set out is necessary to achieve the objectives of this study, the IMPLEMENTING RESEARCH



TEAM shall immediately inform in writing the GRANTOR (PUP) through its President. The President with recommendation from the Office of the Vice President for Research, Extension and Development (OVPREPD), shall immediately determine whether an extension is necessary under the conditions. Provided, however, that in the event that an extension is allowed, no additional financial grant in excess of the approved project grant stated above shall be awarded to the IMPLEMENTING RESEARCH TEAM.

## II. OBLIGATION OF THE GRANTOR

1. The GRANTOR shall provide the Implementing Research Team a grant-in-aid in the amount of *Three Hundred Forty Thousand Pesos (P 340,000.00)*. The releases of which shall be based on the approved schedule of expected deliverables and fund releases indicated in the approved Work and Financial Plan (WFP) (Annex C and D)
2. The GRANTOR shall grant the regular faculty members who are not designees of the Implementing Research Team a reduction of twelve (12) units from the 15 units regular teaching load without prejudice to extra load (*Policy on University Research and Development Support, Funding, and Incentives, 42<sup>nd</sup> BOR Meeting, October 19, 2013*)
3. To facilitate and provide avenue where the research results could effectively and adequately be disseminated; and
4. To co-own and utilize the results of the study, subject to Intellectual Property Law and other relevant laws and regulations.

## III. OBLIGATION OF THE IMPLEMENTING RESEARCH TEAM

1. Undertake the Project strictly in accordance with the approved Work and Financial Plan (WFP) and Terms of Reference (TOR), a copy of which is hereto attached and made integral part of this Agreement as Annexes "A" "B" "C" and "D" respectively;
2. Ensure that the Project shall be fully completed to the satisfaction of the GRANTOR and in accordance with the approved WFP and TOR;
3. Ensure the strict project implementation in accordance with the approved WFP and TOR;
4. Present the project results in a forum for critiquing;
5. Submit a full final report in hard and soft/electronic files and surrender to PUP after the termination of the project all raw data, observations and findings;
6. Submit a financial report to the satisfaction of the GRANTOR not later than 60 days from the termination of the Project;
7. Return the total amount released once the project is not completed due to negligent and/or deliberate act;
8. Return the grant amount in case of a palpable violation of this agreement; and
9. The IMPLEMENTING RESEARCH TEAM hereby understands that the GRANTOR is not liable for any amount in excess of the approved grant. Thus,



the IMPLEMENTING RESEARCH TEAM shall shoulder any and all expenses in excess of the Grant for furtherance of the project.

IV. PROJECT COST, SCHEDULE OF FUND RELEASES, AND LIQUIDATION OF FUNDS

A total budget allocation in the amount *Three Hundred Forty Thousand Pesos (P 340,000.00)* for the whole project will be given directly to the IMPLEMENTING RESEARCH TEAM by the GRANTOR for the conduct of the study. The releases shall be based on the approved WFP, LIB, TOR and Schedule of Deliverables and Tranche Releases (Annex C) chargeable against the University Research Fund and subject to the accounting and auditing regulations or pertinent government policies and procedures.

The Implementing Research Team shall not be responsible for the delay of the project implementation if such delay is directly caused by the late releases of the funds.

V. RESEARCH PERSONNEL

1. The Project Leader and staff shall be composed of the following:

*Project Leader:* Manuel M. Muhi VPAA/Faculty, CE  
*Asst. Project Leader:* Kenneth Bryan M. Tana Faculty, CE

*Team Members:*

The Project Leader, Assistant Leader and research team members are prohibited from accepting any research project, fellowship, scholarship or training grant or leave his station for any trip abroad for more than one (1) month during the course of the project without securing prior approval and authorization of the Vice President for Research, Extension, Planning and Development. In such case, the IMPLEMENTING RESEARCH TEAM should assign an Officer-in-Charge to lead the project (in the absence of the project leader). If the period of absence is more than three (3) months, a replacement should be made.

2. The GRANTOR is in no way under obligation to grant pension or gratuity to research staff retiring or laid-off in the course of or after completion/termination of the project.
3. The service of the Project Leader and research/project staff shall be discontinued upon termination of the project or the specific work for which they were hired.
4. Research staff authorized under project Line Item Budget who shall be employed with items chargeable against the University Research Fund grant shall be engaged in by the project leader on contract/appointment basis, submitting to the GRANTOR in each case, a copy of the hiring paper together with the job description and qualification requirements.
5. Subcontracting of any part of the research shall require prior written approval from the Vice President for Research, Extension, Planning and Development. However, in the event that such sub-contracting is allowed, the IMPLEMENTING RESEARCH TEAM shall be liable or responsible for the outputs of the party subcontracted.



VI. OPTION TO TERMINATE or FAILURE TO COMPLETE THE PROJECT

If the IMPLEMENTING RESEARCH TEAM is found by the OVPREPD unable, unwilling or otherwise impeded to perform its obligations and responsibilities under this Contract, the IMPLEMENTING RESEARCH TEAM hereby agrees and consents to the termination by the GRANTOR of this grant in prompt and orderly manner so as to minimize further expenditures on the part of the latter.

Should the IMPLEMENTING RESEARCH TEAM opt to terminate the project or a portion of the work as stated in the approved WFP within the project period or any extension granted thereof, the IMPLEMENTING RESEARCH TEAM agrees to reduce a portion of the Contract Price up to fifteen percent (15%) corresponding to the particular incomplete work due per the approved work schedule.

Failure by the IMPLEMENTING RESEARCH TEAM to satisfactorily complete the study within the period stated herein or any extension granted shall mean forfeiture or discontinuance of the Grant. The fund spent for the project will be returned to the university subject to salary deduction among members of the Implementing Research Team. The remaining balance of the study shall revert automatically to University Research Fund.

VII. OWNERSHIP OF RESEARCH OUTPUTS

The IMPLEMENTING RESEARCH TEAM and GRANTOR hereby agree and understand that intellectual property rights, ownership and enjoyment thereof arising from this study shall be governed by existing and future policies of the GRANTOR on Intellectual Property Rights such as but not limited to the following:

1. The RESEARCH outputs developed from the study shall be jointly owned by the GRANTOR and the IMPLEMENTING RESEARCH TEAM. Any publication arising from the activities undertaken by virtue of and pursuant to this Contract shall clearly establish and identify the Parties as the source of the output.
2. All reports arising from activities undertaken by virtue of and pursuant to this Contract shall be made in the name of the Parties. The names of the principal authors, researchers and/or Project Leaders shall be identified, recognized and included in the report.
3. The GRANTOR shall have the right to freely use all data and findings by virtue of and pursuant to this Contract for any of the purposes within its legal mandate. However, the IMPLEMENTING RESEARCH TEAM shall in writing request permission from the GRANTOR on the intent to use any of the data or information contained in the report and the purposes thereof.
4. Copyright, royalties and other economic rights arising from work produced or developed from the Project shall be owned by the GRANTOR and the IMPLEMENTING RESEARCH TEAM in accordance with the following proportion:

GRANTOR	60%
IMPLEMENTING RESEARCH TEAM	40%

It is the obligation of the IMPLEMENTING RESEARCH TEAM to obtain or cause the assignment of the copyright and such other economic rights over the work under this Project in favor of the GRANTOR, copy furnished the GRANTOR, and said documents shall form part of the Terminal Report of the said IMPLEMENTING RESEARCH TEAM and without which no acceptance of the said project output shall be issued by the GRANTOR.





**VIII. CERTIFICATE OF COMPLETION**

The GRANTOR shall issue a Certificate of Completion upon submission of the final research paper coupled with a terminal report. Likewise, no Certificate of Completion shall be issued without proof/s of compliance of financial reports, liquidation, etc. as may be required by the GRANTOR pursuant to government regulations and grants.

**IX. ASSIGNMENT OF RIGHTS**

The IMPLEMENTING RESEARCH TEAM shall not assign, sub-let or sub-contract any portion of the project covered by this Contract except upon prior written approval of the GRANTOR.

**X. AMENDMENTS**

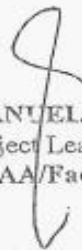
The parties to this Contract, may by mutual consent and for as long as the same is within the purview of law, accordingly reverse, modify, amend, and delete any word, phrase, sentence or article in this Contract.

**XI. EFFECTIVITY**

This Contract shall take effect upon the signing hereof by both parties and upon receipt of Notice to Proceed by the IMPLEMENTING RESEARCH TEAM and shall remain in force until the completion of the work required of the partner as indicated in the WFP. The parties hereto, may upon mutual consent, amend or modify this Contract by or through an Addendum or Supplementary Contract signed by all parties shall form an integral part hereof.

IN WITNESS WHEREOF, the parties hereto have signed this Contract this \_\_\_\_\_ day of \_\_\_\_\_ at Sta. Mesa, Manila.


  
EMANUEL C. DE GUZMAN  
President  
Polytechnic University of the Philippines

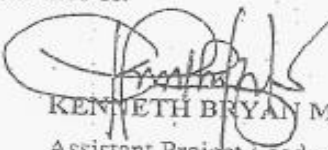
  
MANUEL M. MUHI  
Project Leader  
VPAA/Faculty, CE




POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT

Signed in the presence of:

  
JOSEPH MERCADO  
Vice President for Research, Extension,  
Planning and Development  
Polytechnic University of the Philippines

  
KENNETH BRYAN M. TANA  
Assistant Project Leader  
Faculty, College of Engineering

  
RACIDON P. BERNARTE  
Director  
Research and Extension Management  
Department

  
GUILLERMO O. BERNABE  
Dean  
College of Engineering

ACKNOWLEDGMENT

Republic of the Philippines)  
Manila City ) S.S.

Before me, a Notary Public for and in Manila on this  
day of 19 OCT 2016 personally appeared before me:

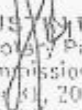
Name	Comm. Res. Cert. No.	Place/Date Issued
EMANUEL C. DE GUZMAN	_____	_____
MANUEL M. MUHI	_____	_____

Known to me and to be known the same persons who executed the foregoing instrument consisting of seven (7) pages including this page on which the acknowledgement is written; has been signed on the right hand margin of each and every page sealed with my notary seal.

IN WITNESS HEREOF, I have hereunto set my hand and seal on the day, year and place above written.

NOTARY PUBLIC

Doc. No. 354  
Page No. 23  
Book No. 3  
Series No. 2016

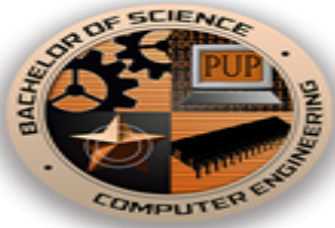
  
ATTY. AGUSTIN B. CABREDO  
Notary Public  
Notarial Commission No. 2015-109  
Until Expiration of, 2016 Roll No. 26047  
PTR No. 0866571 / 1-4-16 / Manila  
ORL (Official) Member 05097



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
COMPUTER ENGINEERING DEPARTMENT**

**List of Faculty who have conducted and/or are conducting research/es relevant to the Program**

Name of Faculty	Title of Research	Duration of Implementation	Funding Source	Status (On-Going/Completed)
Cansino, Julius . De La Cruz, Arvin R. Tenerife Jr., Pedrito M.	Impact Assessment of the Computer Engineering Learning Management System Evaluation	2019 - 2020	Personal	On-Going
Ado, Remedios G. Cansino, Julius .S. Mahaguay, Rolito L. Tenerife, Pedrito Jr. M.	Industry Perception on the Computer Engineering Graduates of the Polytechnic University of the Philippines	2019 - 2020	Personal	On-Going
De La Cruz, Arvin R. Tenerife Jr., Pedrito M.	Design and Development of Banana Fiber Decorticator with Wringer	2018 – 2019	Personal	Completed
De La Cruz, Arvin R.	Optical Character Reader of a Braille Unicode System for the Blind	2018 – 2019	Personal	Completed
De La Cruz, Arvin R.	E-Teaching Assistance Management System (ETAMS) with Educator Stress Determination for K*12, Tertiary, Graduate School and Distance Education	2018 – 2019	Personal	Completed
De La Cruz, Arvin R.	Optical Character Reader for the Blind	2018 – 2019	Personal	Completed
De La Cruz, Arvin R. Tenerife Jr., Pedrito M.	Image-Based Microalgae Cell Identifier and Counter	2018 – 2019	Personal	Completed
Ado, Remedios G. Mahaguay, Rolito L.	Development of e-Bag Wireless Charger for Gadgets	2017 – 2018	Personal	Completed
De La Cruz, Arvin R. Tenerife Jr., Pedrito M.	Design and Development of a Hybrid Photobioreactor for Biomass Production of Spirulina Platensis Species	2017 – 2018	Personal	Completed
Tenerife Jr., Pedrito M. Tubola, Orland D.	The Development of a Hybrid Renewable Energy: Powered Light Bouy System Harnessing Sea Energy Potentials	2017 – 2018	Personal	Completed
Cansino, Julius S. Tenerife Jr., Pedrito M. Fernando, Ronald D. Mahaguay, Rolito L.	College of Engineering Online Class Record	2017 – 2018	Personal	Completed



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
 COLLEGE OF ENGINEERING  
**COMPUTER ENGINEERING DEPARTMENT**

Natividad, Ferdinand O. Oquindo, Florinda H.				
Dela Cruz, John R.	Design of a Fuzzy-based Automated Organic Irrigation system for Smart Farm	2016 – 2017	Personal	Completed
Dela Cruz, John R.	Fuzzy-based Decision Support for Smart Farm Water Tank Monitoring	2016 – 2017	Personal	Completed
<b>Tubola, Orland D.</b>	<b>Lung Disease Identification and Classification through Neural Networks</b>	<b>2015 – 2016</b>	<b>Grant in Aid (PUP)</b>	<b>Completed</b>
Remedios G. Ado	Evaluation of SMART Wireless Engineering Education Program (SWEEP): Basis for a Proposed Integrated Model of Collaboration Between Industry and Academe	2014 – 2015	Personal	Completed
Ferdinand O. Natividad	Computer Engineering Laboratory Equipment Reservation and Monitoring System with Mobile Application	2014 – 2015	Personal	Completed
Remedios G. Ado	Engineering Academe Industry Partnership Towards Learning Exploration	2014 – 2015	Personal	Completed
Remedios G. Ado	Mobile Emergency Response Application Using Geolocation for Command Center	2013 - 2014	Personal	Completed
Natividad, Ferdinand O.	Enhanced Voiced Based Cane For The Blind With Anti-Lost Feature For The Resources Of The Blind Inc.	2012-2013	Personal	Completed
Oquimdo, Florinda H.	Groundwater Treatment using Bio-sand Filter in Sitio Centro Brgy. Cogunan Nasugbu, Batangas	2012-2013	Personal	Completed

Prepared by

Pedrito M. Tenerife Jr.



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
**COMPUTER ENGINEERING DEPARTMENT**



Republic of the Philippines  
**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES**  
Sta. Mesa, Manila

#2010110257  
Tracking Number

**PUP - Central Records Section**  
October 15, 2018  
Received By: [Signature]  
10-23-18 Date: 10/15/18 Witness: [Signature]

SPECIAL ORDER  
No. 4219, s. 2018

In the interest of the service, ENGR. PEDRITO M. TENERIFE, JR., *Faculty Member, College of Engineering*, this University, was authorized to attend on official time the 2<sup>nd</sup> International Conference on Innovative Research in Science, Technology and Management (ICIRSTM-18) to present his research paper entitled "*Design and Development of a Hybrid Photo Bioreactor for Biomass Production of Spirulina Platensis Species*" at *National University of Singapore* on September 29 – 30, 2018.

Engr. Tenerife shall be given financial assistance amounting to SEVENTY FIVE THOUSAND PESOS ONLY (P75,000.00), pursuant to Memorandum Order No. 19, series of 2018 dated June 26, 2018, *Revised Implementing Guidelines on Paper Presentation Financial Assistance*, subject to the usual accounting and auditing rules and regulations.

He is required to submit his certificate as *paper presenter* and a report on the proceedings to the Human Resource Management Department in thirty (30) working days from receipt of this order.

[Signature]  
EMANUEL C. DE GUZMAN, PhD  
President

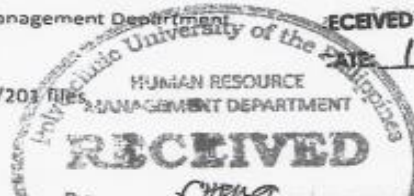
Copy furnished:

- Office of the President
- Executive Vice-President
- Vice-President for Academic Affairs
- Vice-President for Administration
- Vice-President for Finance
- Vice-President for Student Affairs and Services
- Vice-President for Research, Extension and Development
- Vice-President for Branches and Campuses
- COA Auditor
- Director, Internal Audit Office
- Director, Accounting Department
- Director, Fund Management Office
- Director, Budget Services
- Director, Human Resource Management Department
- Dean, College of Engineering
- Chief, Payroll Section
- Acting Chief, Records Section/201 files
- Engr. Pedrito M. Tenerife, Jr.

RESEARCH MANAGEMENT OFFICE  
**RECEIVED**  
By: [Signature]  
Date: 11-06-18 Time: \_\_\_\_\_

POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
**ACCOUNTING DEPARTMENT**

RECEIVED BY: [Signature]  
DATE: 11/6/18 TIME: \_\_\_\_\_



/ldg



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES  
COLLEGE OF ENGINEERING  
**COMPUTER ENGINEERING DEPARTMENT**



Republic of the Philippines  
**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES**  
Sta. Mesa, Manila

PUP Communication Tracking System

**#2015933282**

Tracking Number

August 12, 2015

*Paulino, Bobbi*  
*08-27-15 9:00*

**SPECIAL ORDER**  
No. 2042, s. 2015

Pursuant to the provisions of Section 64 of P.D. No. 1445, the herein-named Lead Proponents/Disbursing Officers, this University, are hereby authorized to hold a cash advance amounting to **THREE HUNDRED SIXTY FOUR THOUSAND PESOS ONLY (P364,000.00)**, to defray expenses to be incurred in connection with the *Research Proposals, broken down as follows:*

Research Title	Lead Proponent & College	Approved Research Budget		
		MOOE	Honoraria	Total
1. Lung Disease Identification and Classification through Neural Networks	Engr. Orland D. Tubola College of Engineering	P196,000.00	P138,000.00	P334,000.00
2. Correlational Analysis on the PUPCET Scores and High School Academic Performance of Freshmen Students in the College of Social Sciences and Development	Asst. Prof. Norie L. Maniego College of Social Sciences and Development	P11,000.00	P19,000.00	P30,000.00
Total				P364,000.00

By the Authority of the Board of Regents:

EMANUEL C. DE GUZMAN, PhD

President

Copy furnished:

- Office of the President
- Executive Vice President
- Vice President for Administration
- Vice President for Finance
- Vice President for Academic Affairs
- Vice President for Student Services
- Vice President for Research, Extension, Planning and Development
- Vice President for Branches and Campuses
- COA Auditor
- Director, Internal Audit Office
- Director, Accounting Department
- Director, Fund Management Office
- Director, Budget Services Office

Polytechnic University of the Philippines  
INTERNAL AUDIT OFFICE

**FOR INSPECTION**

By: *[Signature]* Date: *8/16/15*