PAEPI Seminar-Workshop Proposal:

Introducing Geographic Information Systems (GIS) Technology as a Tool in Enhancing Instruction, Research and Extension Services in HEIs

Why this seminar-workshop for HEI Faculty and Researchers

The purpose of this introductory seminar-workshop is to introduce GIS technologies to HEI faculty , extensionist and researchers. The intention is to equip faculty and researchers with the basic skills in GIS to improve instruction and add value to research. The ultimate goal is to enhance two major institutional areas of HEIs: campus management and academic capability.

GIS is an information system that manages spatial and non-spatial data. Spatial data takes advantage of the unique location of people, places, things, and events on Earth to produce information to help in making informed, intelligent decisions. A GIS-applied instruction challenges students to deeper exploration and discovery of the subject matter thus helping to build their analytical and critical thinking skills. A GIS-engaged research not only presents a more understandable output through visualization but a deeper analysis involving spatial relationships.

GIS has seen exponential use in many disciplines – from agriculture to local governance to natural resource management, as well as in institutional workplaces and industries worldwide. It is by this premise that HEI faculty and researchers ought to take the initiative and be empowered with GIS. As the primary human resource of HEIs, the faculty is tasked to produce marketable skilled manpower and stimulate applied research as well as to integrate emergent technologies, such as GIS, in administrative and academic functions and in curricular programs. The sooner HEI faculty and researchers adapt GIS, the greater the opportunities and benefits that can be derived.

There are several other advantages that GIS can bring to faculty and researchers. For example, a GIS-engaged faculty and researchers would have better leverage than others in capturing project funding support and collaborations. Using GIS, research activities could amplify and their quality is raised to a higher scholastic level. Another is better student recruitment strategies brought about by GIS-based decision criteria that can in turn result to higher-quality student population and graduates. Furthermore, the application of GIS can increase the management efficiency of the campus' physical and natural resources. GIS techniques can also be used improve alumni fund-raising management resulting in cost reductions and in attracting funds.

As a consequence and given these potential benefits, a GIS-skilled faculty and researchers can translate into a better managed and more stable financial position for the university.

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Event date Four days in **March 26-29, 2012**

Intensive Hands-on GIS Training-Workshop
(Duration: 4 days)

MAIN OBJECTIVE:
To introduce GIS technology as a tool for enhancing instruction and research of HEI faculty and researchers

TARGET PARTICIPANTS:
Administrators, Office Heads, Faculty, Staff, Graduate Students, and Researchers

PARTICIPANT QUALIFICATIONS:
Average computer literate; enthusiastic to learn and apply GIS

NUMBER OF PARTICIPANTS:
20

SOFTWARE TO USE (All are gratis)
MapWindow GIS, Quantum GIS, OpenOffice, Google Earth, ArcGIS Explorer Desktop, and 7-Zip.

WORKSHOP COVERAGE:
Teaching participants GIS skills to include the following:

1. Fundamentals of GIS
2. Basic hands-on skills how to use a common GIS and visualization software to process and display data
3. How to plan, implement, and report a GIS project.

WHAT TO BRING:

1. Laptop (at least 2-gig memory; installed with Windows XP, Vista, or 7)
2. Maps and datasets of HEI faculty and researchers, government agencies (e.g. CHED, TESDA, NAMRIA, DepEd, etc.), and other sources (including digital maps, GIS datasets if any, paper maps, and tabulated data)
3. Thumb/flash drive

TO BE ACCOMPLISHED BY EACH PARTICIPANT:

1. All workshop exercises
2. Individual simple GIS project
3. Presentation of GIS project
4. Packaged project digital output (includes project report, presentation, datasets used and produced, and related files - all in single folder) to be submitted to Dr Baylon.

VENUE REQUIREMENT:
Adequate Internet connectivity

DAY 1

AM

- Registration (including participant's name, email address, office address, supervisor and email)
- Opening Introductions
- Introduction to Geographic Information Systems
- File Management
- Software Download and Installation
- Fundamentals and Demonstration of MapWindow GIS

PM

- Exercise 1: Creating a Simple Map
- Exercise 2: Creating Complex Maps with Several Layers; Labeling and Using the Coloring Scheme

DAY 2

AM

- Using Google Earth and ArcGIS Explorer
- Exercise 3: Digitizing Features (Creating Points, Lines, and Polygons) in MapWindow, Google Earth, and ArcGIS Explorer, including conversion between KML or KMZ and GIS files

PM

- Making a Simple GIS Project (includes title, summary of your project, background and significance, beneficiaries and implications, objective, data, procedure, results and analysis, conclusion, and future work)
- Exercise 4: Editing Attribute Tables, including using OpenOffice Calc (or Excel) to Populate Tables

DAY 3

AM

- Exercise 5: Geoprocessing
- Exercise 6: GPS, Projections, and Geographic Referencing
- Project Assignment
- [Work on Project]

PM

- [Work on Project]

DAY 4

AM

- [Work on Project]
- Participant Project Presentation (15 minutes each)

PM

- Participant Project Presentation -- Continued
- Feedback from Participant Audience
- Submission of Packaged Output (in single digital folder) to Dr Baylon
- Awarding of Certificates and Closing Remarks