



RADIANCE

2016

*Journal of Social Orientation and Community Involvement of
Mapúa University*

INTRODUCTION



Consistent with its Mission and Vision, Mapúa Institute of Technology has created programs to address the needs of its adopted communities based on its program of expertise. Through the years, Mapua offered additional programs to cater to global demands. And through the years, more concerns and community needs were addressed.

The Extension Service Initiatives serve as the core which guides the Institute in implementing various programs which are beneficial to the community.

SOCIAL ORIENTATION AND COMMUNITY INVOLVEMENT INITIATIVES



Research-Based Extension Service

Guided by the Commission on Higher Education's triad on rendering quality education, the integration of research, instruction and extension will give relevance in addressing the needs of the community. The learning provided through instruction will brought about the use of research that brings output in terms of extension service.



Health and Environment

Global issues on health and environment has become alarming. Such issues and concerns shall be addressed through the technical capabilities and human resources of the Institute. Modes of prevention, assessments and solutions shall be done to create a healthy community and clean environment.



Livelihood and Cooperative Building

Livelihood programs shall be introduced to the community. Building a cooperative shall serve as venue to market and sustain the products of the community as a result of the livelihood programs introduced. It shall ensure that products of the community beat par with the market in terms of quality but at lower cost. The cooperative shall be an access to basic commodities to address basic needs.



Education

The Institute shall develop programs in education. The program for education shall empower the community to make intelligent decisions. It shall in its capacity, address the needs of out-of-school youth and adults. It shall foster teaching and learning by conducting trainings/seminar/workshops that are current in content especially for public school teachers and students.

SOCIAL ORIENTATION AND COMMUNITY INVOLVEMENT INITIATIVES



Values Formation, Sports, Recreation, Culture and the Arts Program

Programs on values formation, sports, recreation, culture and the arts shall help the community spend their time in more relevant activities.



Consultancy Program

Consultancy shall be used to address community needs either on regional or national level. The Institute's technical expertise shall be utilized on-site and off-site to assess and find recommendations and solutions for the community.



Outsourcing

Aside from the provisional budget allocated by the Institute for extension services, the school shall find ways to outsource fund and resources to achieve its extension service initiatives. Outsourcing includes funding, manpower, materials, skills and knowledge and technology transfer.



Aid and Infrastructure

The Institute's extension services shall be made available to quickly respond to calamity stricken areas and address real time community requests and needs. It shall in its capacity, mobilize and prepare its people and resources to respond and administer any aid that maybe delivered to the community.

The Institute shall help improve the conditions of the community through visible infrastructure related projects. Provisions for assessing structure's electrical wiring, structure rigidity and overall safety shall be done. Design of infrastructure for public use can be addressed by the faculty at the comforts of the four walls of a room. Direct contact with the community need not be observed for design and concept making shall be done using the Institute' s facilities.

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School of Architecture, Industrial Design and the Built Environment

Design of the Proposed Drug Rehabilitation Center (August – September 2016)

3

The School of Architecture, Industrial Design and the Built Environment conceptualized a design for the Proposed Drug Rehabilitation Center in line with the government's effort to eradicate illegal drugs in the Philippines.

The faculty involvement includes: 1) schematic designs; 2) design development; 3) production of architectural working drawing; 4) coordination with various engineering design.



PROPOSED HIDDEN PARADISE PAVILION

Design Concept and Rationale

Macabebe, Pampanga or "bordering the riverbanks." In english, is known for its fishing industry due to its near proximity to the Pampanga river.

the design concept of the proposed pavilion was based on one of Macabebe's primary livelihood, which is fishing. The roof eaves are inspired by the boat hull, while the wood slats and angled walls are inspired by the fins and gills of fishes.

The general concept was taken from the "Bahay na Bato" which is an important part of the Philippine culture and architecture. It was given a contemporary touch without completely departing from the original appearance.

Design Technology

The design technology which was incorporated to the proposed structure is the **rainwater collecting** system. Quite simply, rainwater harvesting is the practice of collecting and storing rainwater (typically from the roof of a home or building) for later use. The system are found in the multiple fountains placed on the site and underneath some parts of the landscaped area.

The rainwater collecting system is becoming a trend for sustainable and green design nowadays, and with the market demanding for a more aesthetically pleasing rainwater harvesting systems, designers have incorporated water features which not only provides beauty but also function.

Not only does rainwater harvesting help environmental and human infrastructure cope with large amounts of rain, but it also puts that water to good use. Stored rainwater can be used for both outdoor and indoor uses, including landscape irrigation, watering plants or gardens, toilet flushing, laundry, etc.



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Design of the Proposed Hidden Paradise Resort in Macabebe, Pampanga (January-March 2016)

The School of Architecture, Industrial Design and the Built Environment conceptualized several designs for the proposed Hidden Paradise Resort in Macabebe, Pampanga. The design projects include: 1) improvement of the façade of the existing gymnasium located near the TESDA school building; 2) the proposed pavilion that could accommodate 200-300 people; 3) several design schemes of the villas: rentable residential structures (4) the design of the proposed logo of the establishment "Hidden Paradise" Resort and; 5) Proposed Master Plan of the Hidden Paradise.

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DESIGN CONCEPT

THE CONCEPT OF THE PAVILION IS A SHIELD AND A BAHAY KUBO. THE SHIELD FORM AIMS TO SHOW THE STRUCTURES STABILITY, WHILE THE BAHAY KUBO AIMS TO PROVIDE THE FUNCTION OF THE OPEN AIR EXPERIENCE.

THE DESIGN IS CREATED TO ACCOMMODATE 200-300 PERSONS. THE STRUCTURE IS MADE OF WOOD IN MAJORITY TO PROMOTE THE TRADITIONAL ENVIRONMENT OF THE PHILIPPINES

Technological Innovation

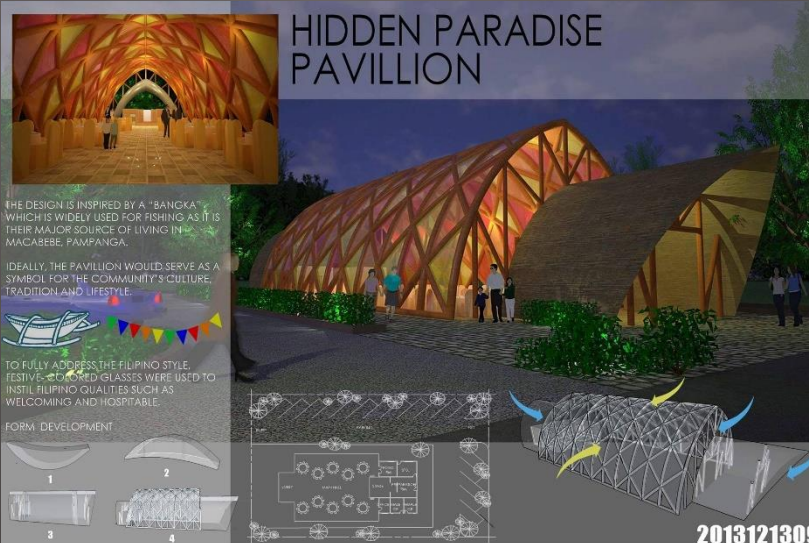
The Windbelt is a small-scale wind turbine that can generate 40 milliwatts in 10-mph wind velocity. The goal is to help and provide with a sustainable power their own to power lights cheaply and safely. A pair of magnet is fitted on a membrane to oscillate between two wire coils to generate electricity.



FLOOR PLAN SCALE 1:100M



SITE DEVELOPMENT PLAN



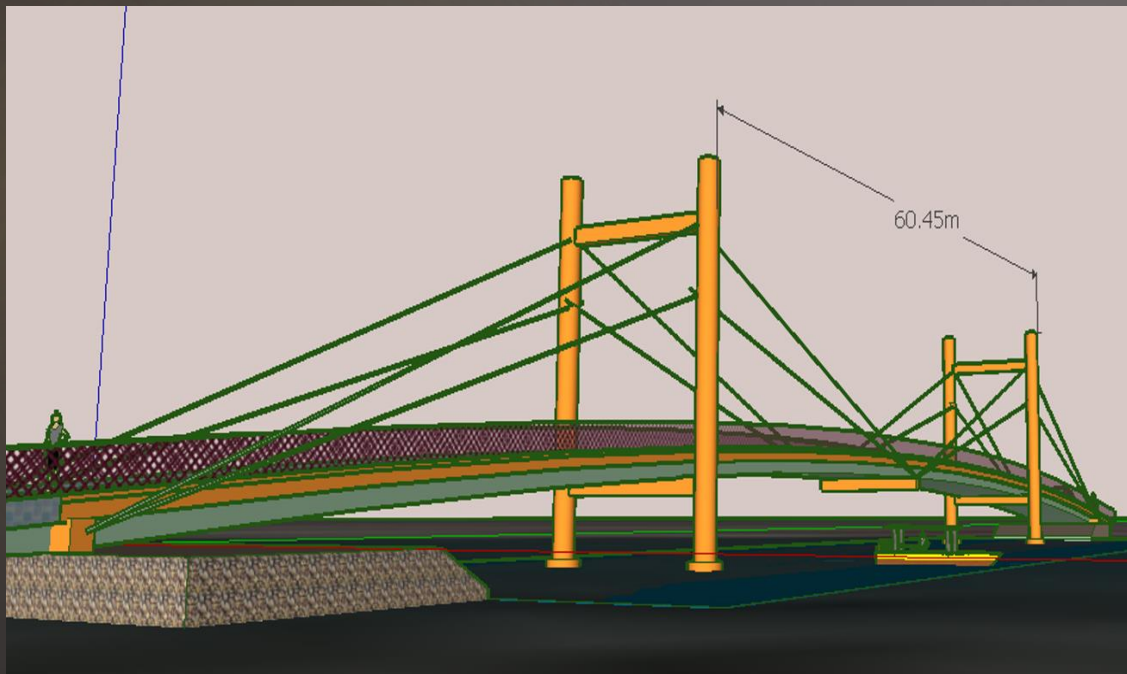
Design of the Proposed Macalelon Bridge (September - October 2016)

5

The School of Architecture, Industrial Design and the Built Environment created designs for the proposed Macalelelon Bridge which was requested by the province' mayor, Hon. Mayor Traje.

The proposed bridge design is intended to replace the existing defective foot bridge which provides alternative access to the residents. The bridge shall also provide access during emergency situations.

The proposed designs created by the faculty of the School of AR-ID-BE were sent to Mayor Nelson Traje for his review and comments.



School of Chemical Engineering and Chemistry



Perfume Making, Dishwashing Liquid Preparation and Papaya Soap Making Seminars

The faculty members and students of the School of Chemical Engineering and Chemistry conducted series of free Seminar Workshop on the Preparation of Papaya Soap and Perfume. The activities were held on February 22, 2016 and March 5, 2016.

Before the workshop, all facilitators of the activity underwent actual simulation trainings for the preparation of Papaya soap and perfume. This is in preparation for the possible questions that may be asked by the participants during the seminar.

The participants were able to learn proper techniques on how to prepare Papaya soap, dishwashing liquid and perfume including the precautions on how to handle different raw materials (chemicals). The possible suppliers of the chemicals were identified as well as the financial marketing aspects.



School of Civil, Environmental and Geological Engineering



Gawad Kalinga House Build Programs

The School of Civil, Environmental, and Geological Engineering participated in several house build projects of Gawad Kalinga in the different areas in Metro Manila. The activities were done on the months of February, May, August and September of 2016.

The activities aimed to harness the skills of the students and to apply the learnings of the students gained from the classroom to actual house construction.

The activities were participated by both faculty and students from the School of CEGE.



Water Sampling and Analysis in Pandacan, Manila

The School of Civil, Environmental, and Geological Engineering (SCEGE) through its part-time faculty member, Engr. Jesus Patrick E. Nuqui along with selected BS Environmental and Sanitary Engineering (BS EnSE) students from SCEGE took representative samples from Estero de Pandacan on May 3, 2016. The samples are to be considered as representative of the wastewater from the community of Barangay 847, Zone 92 of Pandacan, Manila.

The activity aimed to gathering of necessary information (parameter of wastewater) for the sizing or design of a wastewater treatment plant for both the Estero and the community near the area.

Some members of the community volunteered in the collection to the selected sampling points. After collection of three (3) grab samples from three (3) selected sites, two (2) of the samples were sent to ELARSI, INC., a DENR accredited environmental laboratory for the determination of BOD_5 and COD. The third sample was sent to Mapua Institute of Technology for the gravimetric determination of total solids and instrumental determination of total dissolved solids. The difference between the total solids (determined gravimetrically) and the total dissolved solids (determined instrumentally) is the total suspended solids.

The results of the sampling suggested that the water has high total dissolved solids content, which is justifiable since the samples were taken from the stream which is subjected to backflow from the saline waters of Manila de Bay. Other parameters such as the BOD_5 , COD, and TSS are near what is expected for municipal wastewater type of samples.

School of Electrical, Electronics and Computer Engineering



PC Troubleshooting for Selected Public High School Students

12

A selected public high school students from Victorino Mapa High School in Legarda, Manila participated in the seminar on PC Troubleshooting which was initiated by the School of Electrical, Electronics and Computer Engineering last January 30, 2016 and February 13, 2016.

The two-day activity covered topics on Computer Hardware Components; Motherboard, Hard Disk; Memory; Video Card; CD-ROM; Power Supply; Monitor; Operating System and Computer Booting.

The student attendees were also given hands-on training as part of the workshop.



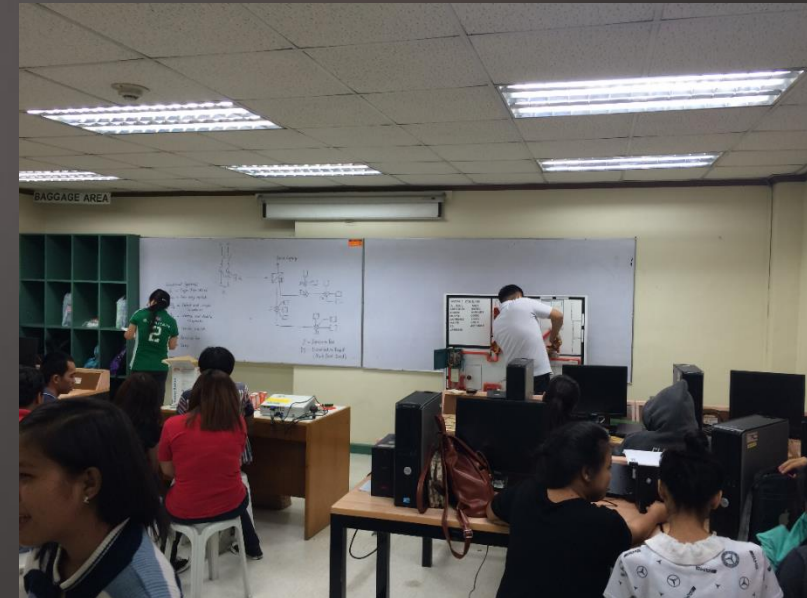


Seminar-Workshop on Branch Circuit Wiring for Selected Public High School Students

The School of Electrical, Electronics and Computer Engineering offered a free seminar on Branch Circuit Wiring last February 13, 2016. It was attended by some selected high school students from V. Mapa High School. The said series of activities were given to the students as part of its enhancement program in Science and Technology.

Topics of the workshop covered Wire Types; Wire Sizes; Resistance; Resistances in Series; Resistances in Parallel; Fuses and Circuit Breakers; Splicing; Conduits; Switches; Lighting Loads. Students were also given hands-on training in the afternoon which covered splicing and branch circuit wiring. activity is part of the

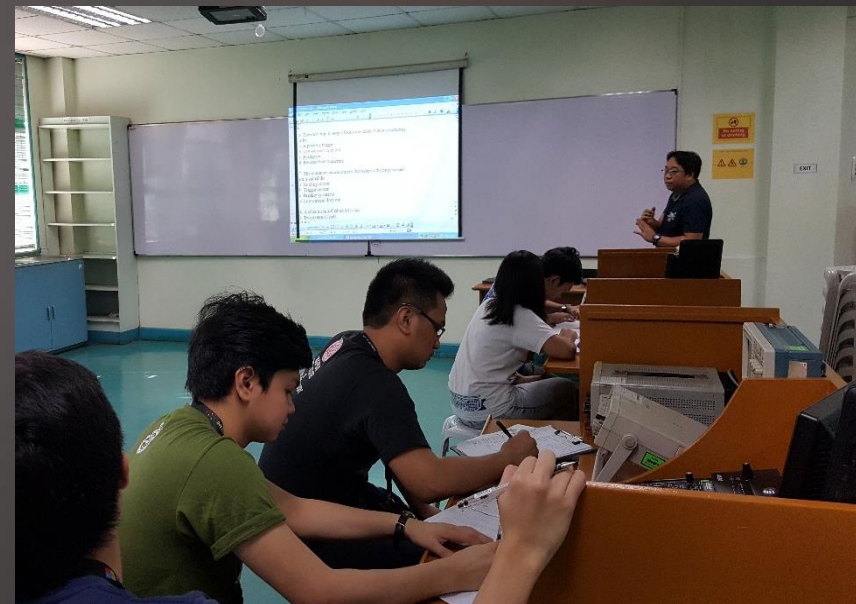
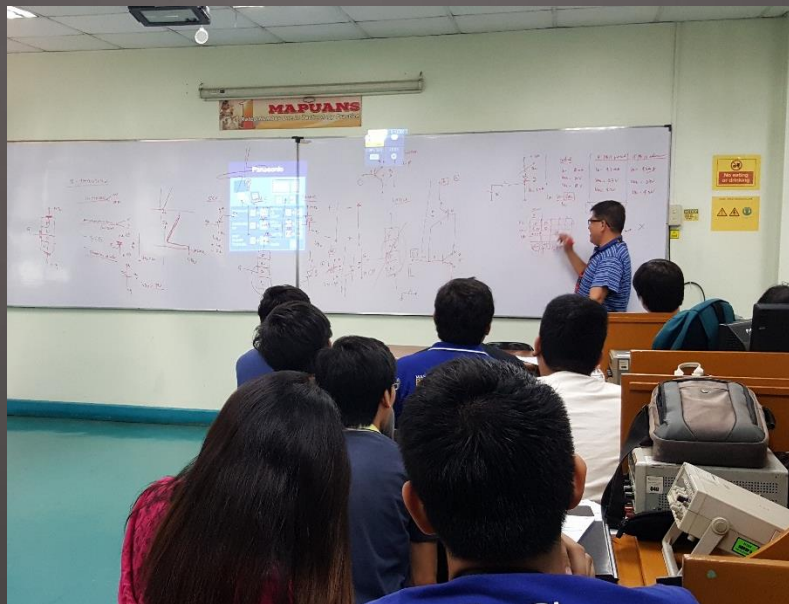
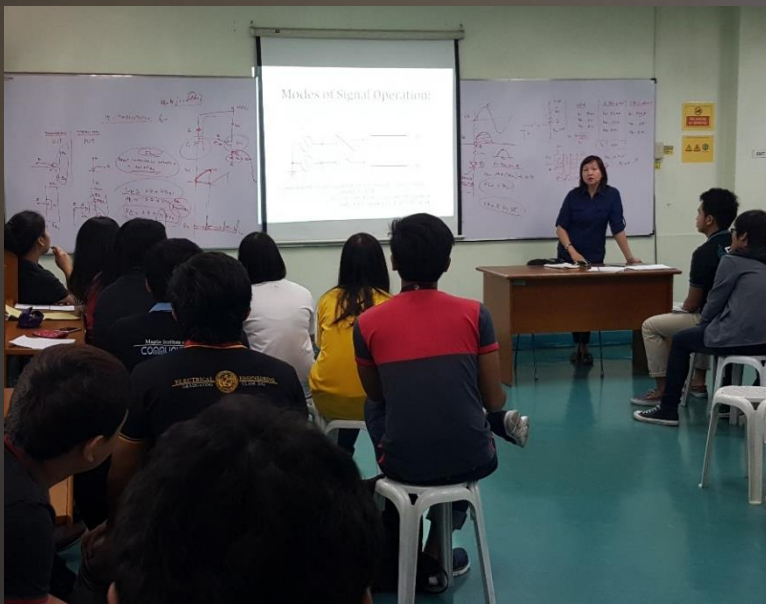
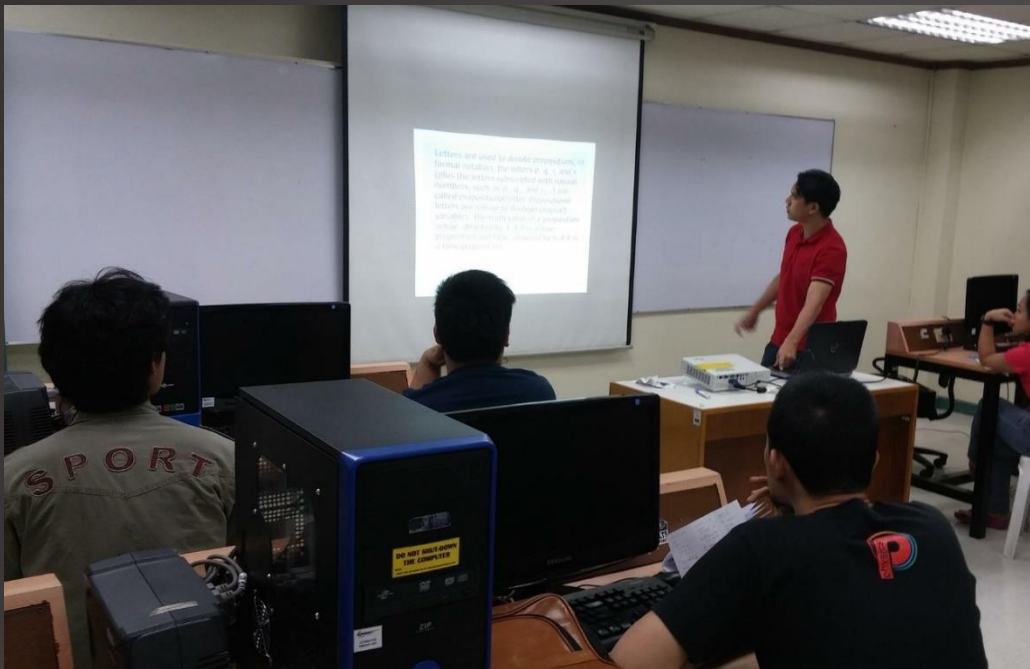
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Exit Exam Review Programs for Mapuans

The School of Electrical, Electronics and Computer Engineering conducted a series of Exit Exam Review sessions for EECE students to increase the rate of students passing the Exit Exams.

Courses covered were Communications, Microprocessor and Electronics. The review programs were done on the following dates: June 7-8, 2016; July 12-13, 2016; August 3, 2016; October 19, 2016; December 1, 2016.



School of Industrial Engineering and Engineering Management



Proposed Database Management System for Kahilum Health Center, Brgy. 830, Zone 95, Pandacan, Manila

16

The School of Industrial Engineering and Engineering Management conducted a research project that shall address the concern of the Kahilum Health Center regarding the manual processing of the patient's information, medical history, drug record prescription and their medical inventory records file.

The aim of the proposed database management system is not only to address the initial concerns of the Health Center but also to manage the storage of the medicines to avoid under stacking or over stacking of medicine supplies.

Students of IE-EMG collaborated with the students of School of IT to manage the program.





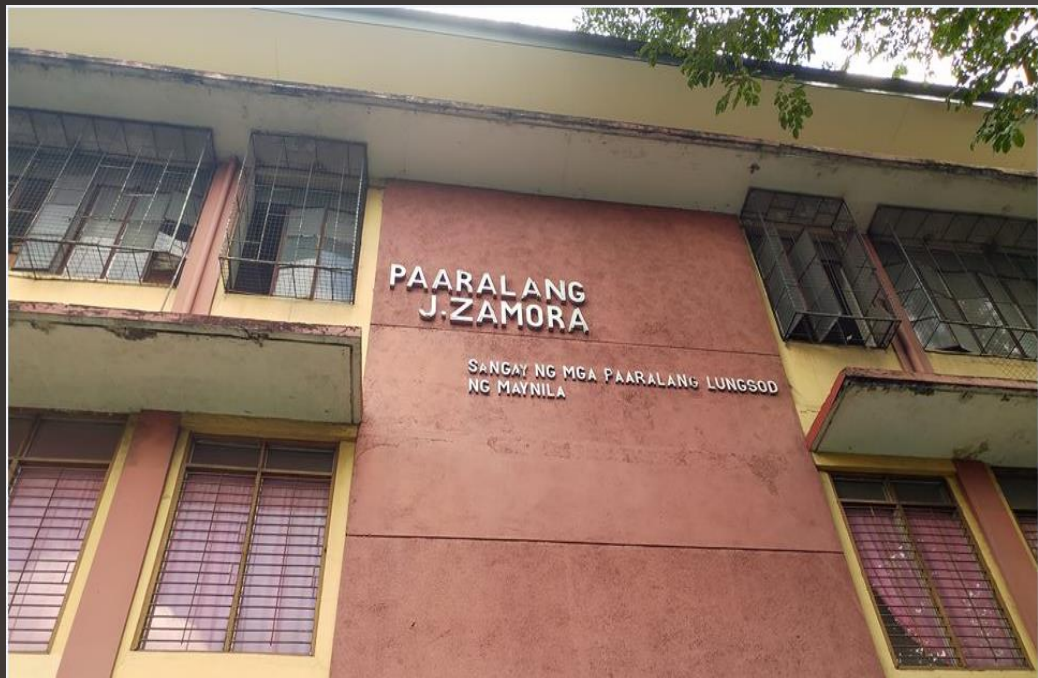
Continuous Improvement Project for DepEd Cordillera Region

17

A faculty member from the School of Industrial Engineering and Engineering Management was tapped by the Department of Education to be part of the organization's Continuous Improvement Program for the Division Office of the Cordillera Region.

Mr. Elisier Fantillo headed the training and coaching for the division heads of DepEd to apply the CI methodology in the operations of the organization.





Research Project on the Compilation and Retrieval of Form 137 of J. Zamora Elementary School

18

The School of Industrial Engineering and Engineering Management conducted a research project for the process on the compilation and retrieval of Form 137 of J. Zamora Elementary School in Pandacan, Manila. The research was conducted from October – December 2016.

The study aimed to achieve the following objectives: 1) to assess the current process of preparing and compiling the grades for Form 137, as well its retrieval operation; 2) identify issues and problems relating to these activities; and 3) to propose solutions that will help the school improve their activities.





Ergonomic Assessment of Classrooms in Jacinto Zamora Elementary School

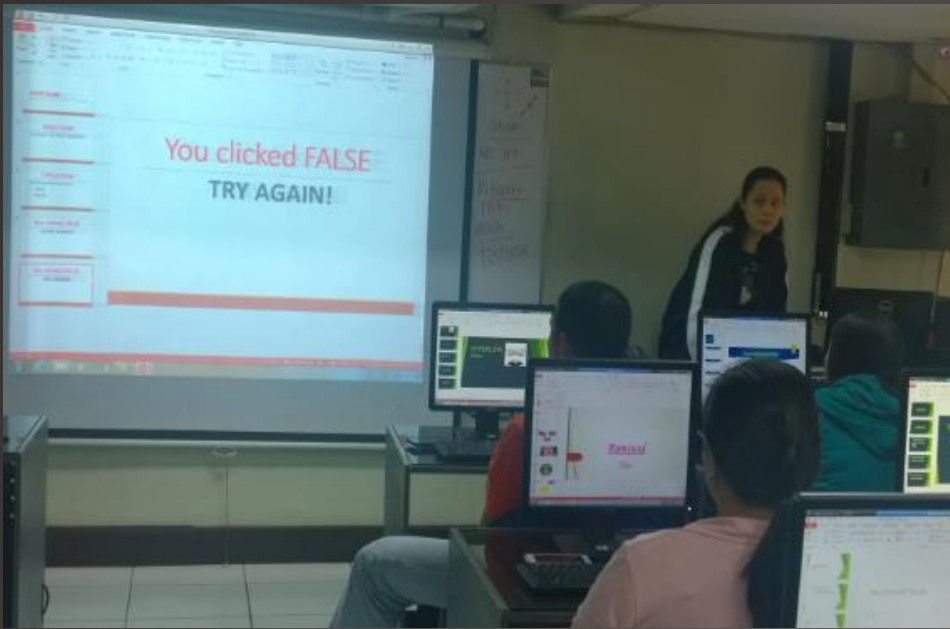
19

The School of Industrial Engineering and Engineering Management conducted a research project to assess the ergonomics of the classrooms of Jacinto Zamora Elementary School in Pandacan, Manila. The activity was done from October – December 2016.

The research specifically focused on the following: design of tables and chairs, lighting used, noise and temperature level and the overall capacity of the workplace. Physical work environment, Antropometry and BioMechanics were used in the assessment.



School of Information Technology



Computer Literacy Program for the Barangay Officials of Macabebe, Pampanga

21

Barangay Officials from the Municipality of Macabebe, Pampanga attended a free seminar on the use of basic Microsoft Office in Mapua-Makati Campus last March 5, 12, and 19, 2016.

The 3-day program aimed to teach the participants the basic functions and use of Microsoft Word, Excel and PowerPoint. Each week, a whole day activity was allotted for each Microsoft program to enable the participants to understand clearly the lectures of the facilitators. After the day, an assessment exam was given to gauge the knowledge of the participants.

All lecturers started the training with the topics of navigation, familiarity in the MS Office environment, giving shortcut keys in keyboard and tips on how to use the basic application.





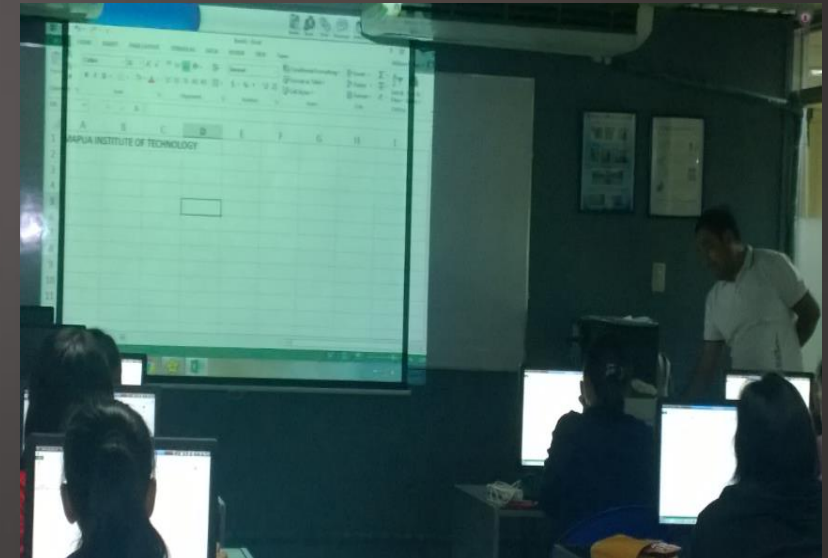
Computer Literacy Program for the Teachers of Baras, Rizal

22

The School of Information Technology conducted a 3-day seminar as part of its Computer Fundamentals Short Term Course for the selected teachers of Baras, Rizal. The activity was held on August 20, 27, 2016 and September 3, 2016.

A whole day activity was allotted every week for each Microsoft program to familiarize the teachers on the functions and use of Microsoft Office. The seminar covered lectures and hands-on application on Word, Excel and PowerPoint. After the day, an assessment exam was given to gauge the knowledge of the participants.

All lecturers started the training with the topics of navigation, familiarity in the MS Office environment, giving shortcut keys in keyboard and tips on how to use the basic application.





Computer Literacy Program for the High School Students of Claro M. Recto High School

23

A 3-Saturday seminar was conducted by the School of Information Technology as part of its Computer Fundamentals Short Term Course for the selected high school students of Claro M. Recto High School. The activity was held on November 12, 19, and 26, 2016 at Room 105 of Mapua-Makati Campus.

Each week, participants were able to learn a specific Microsoft Office program. Lecturers focused on the functions and use of Microsoft Word, Excel and PowerPoint. After the day, an assessment exam was given to gauge the knowledge of the participants.



School of Mechanical and Manufacturing Engineering



Basic Welding Seminar-Workshop

25

The School of Mechanical and Manufacturing Engineering conducted a free seminar-workshop on Basic Welding for the residents of Pandacan, Manila. The activity was held on March 5, and 6, 2016 in Mapua Institute of Technology, Intramuros, Manila.

The activity taught the participants an introductory course on welding process and safety practices. The two-day seminar-workshop was facilitated by the faculty members of the School of MME.

A hands-on application was given to all participants on the 2nd day of workshop to enable them to experience how the actual welding works.



*E.T. Yuchengco School of
Business Management*



Feeding and Wellness Program for Barangay

27

The E.T. Yuchengco School of Business Management conducted a feeding and wellness activity for the children of Barangay 842, Zone 92 in Pandacan, Manila. It was held on March 31, 2016.

The activities include writing of letters and coloring activities for children 3-6 years old. To include more fun in the kids learning activities, the school also prepared games like calamansi relay and paper dance.

Each kid who participated was given a loot bag after the activity.



*School of Languages, Humanities
and Social Sciences*



Alternative Learning Equivalency and Accreditation Program for Out-of-School Youths

29

The School of Languages, Humanities and Social Sciences continued to conduct its learning sessions for the learners of the Alternative Learning Equivalency and Accreditation Program (ALEAP) for the Out-of-School Youths. The sessions were conducted on January, February, March, October, and December 2016.

The topics covered lectures on Science, English, and Filipino. The program aimed to help the learners pass the national examination of the Department of Education in order for them to enter the college level.





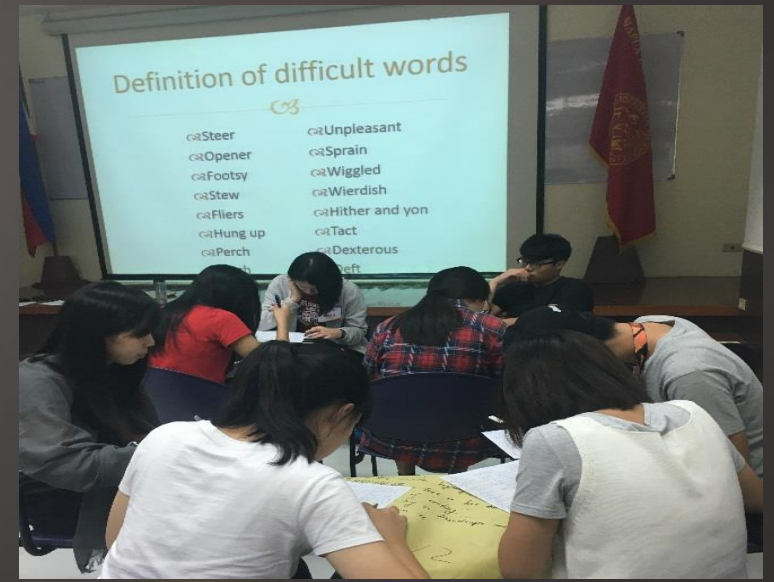
English Camp for Students of Chung Yuan Christian University

30

The aim of the CYCU English Camp was to increase the participating students' English proficiency by allowing them to attend lectures and activities that were geared towards the development of language skills.

English classes were designed to target all four macro skills, namely listening, speaking, reading and writing. The level of English lessons ranged from easy to average. To demonstrate the skills and competencies the students had learned, students were required to take part in major tasks in the form of workshops, presentations, and competitions, oftentimes done at the end of the week.

The activity was conducted last August 1-26, 2016.



Department of Mathematics



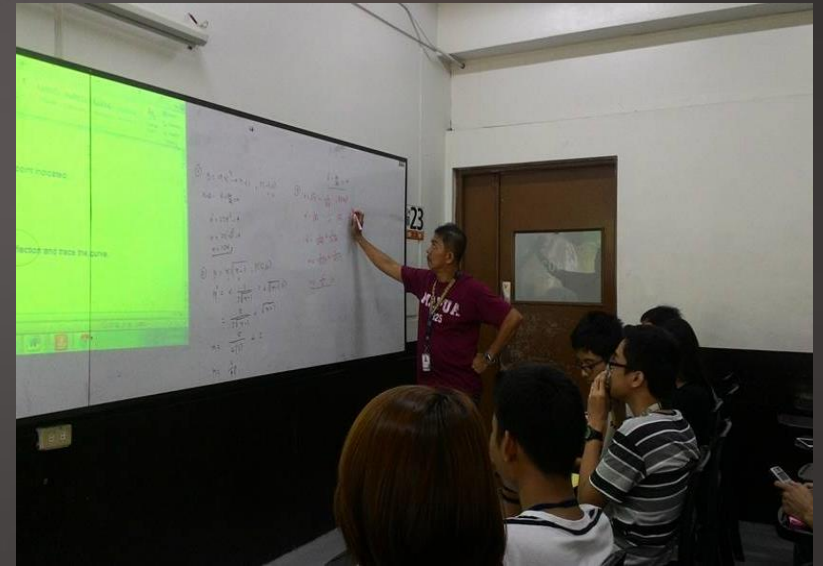
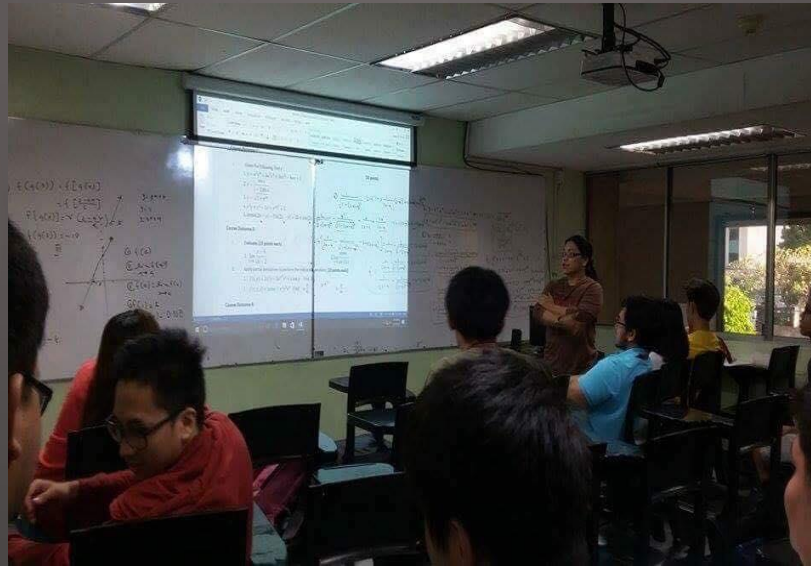
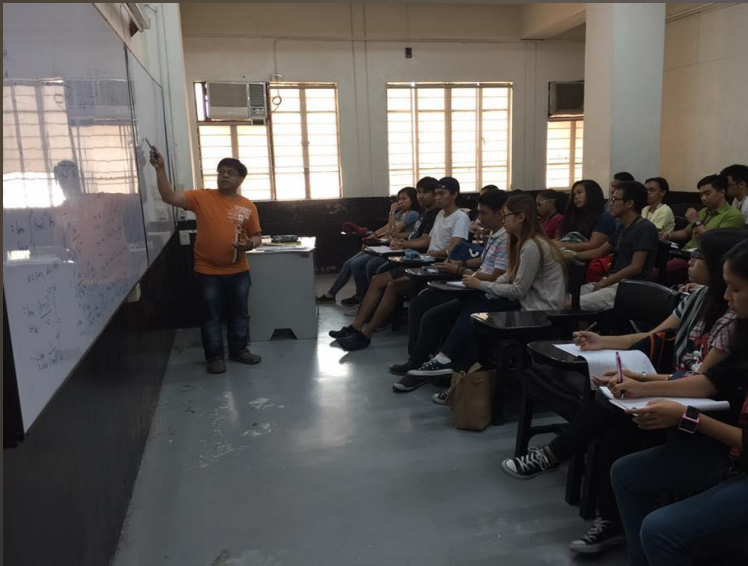
Exit Exam Review Program for Mapuans

32

The Department of Mathematics offered free review sessions for Mapua students who are going to take up Exit Exam on Mathematics courses. The purpose of the review was to help the students prepare for the exam by improving their skills in solving Math equations and applied Math problems.

The review covered the different Math courses such as Algebra, Trigonometry, Analytic Geometry, Solid Mensuration, and Calculus.

The activity was conducted on selected dates covering January – November 2016.





Alternative Learning Equivalency and Accreditation Program for Out-of-School Youths

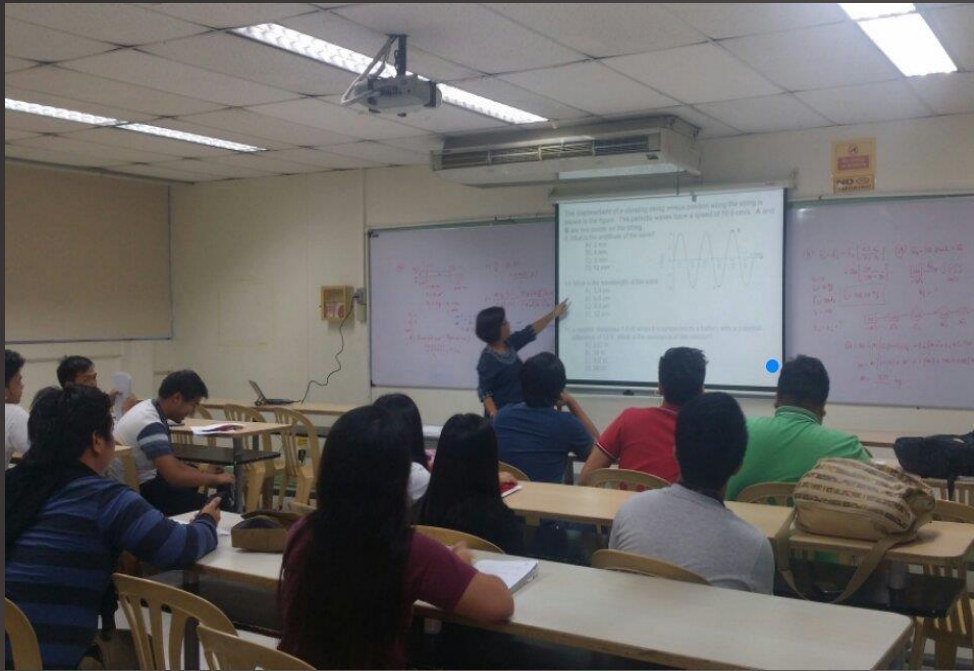
33

The Department of Mathematics continued to conduct its learning sessions for the learners of the Alternative Learning Equivalency and Accreditation Program (ALEAP) for the Out-of-School Youths. The sessions were conducted on selected dates of May, June, July and December 2016.

The lectures covered selected topics in Mathematics. The program aimed to prepare the ALEAP learners for the national examination of the Department of Education.



Department of Physics

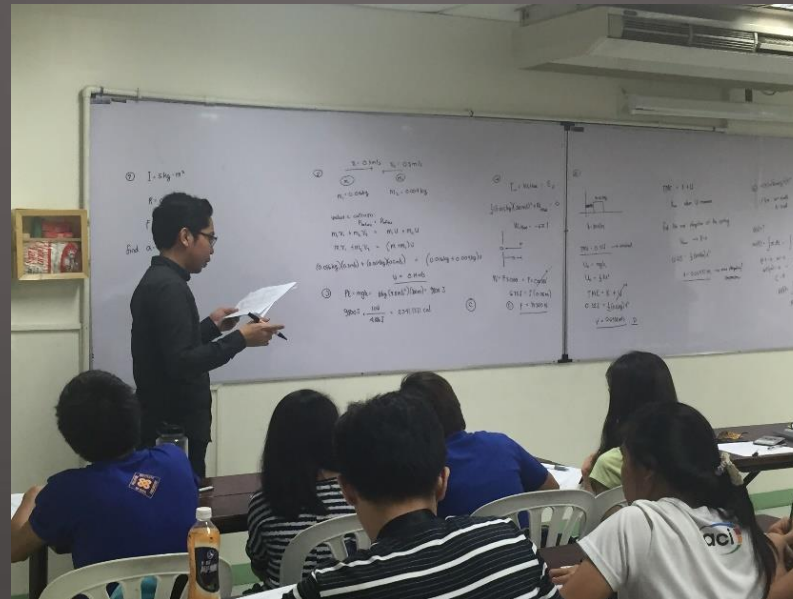
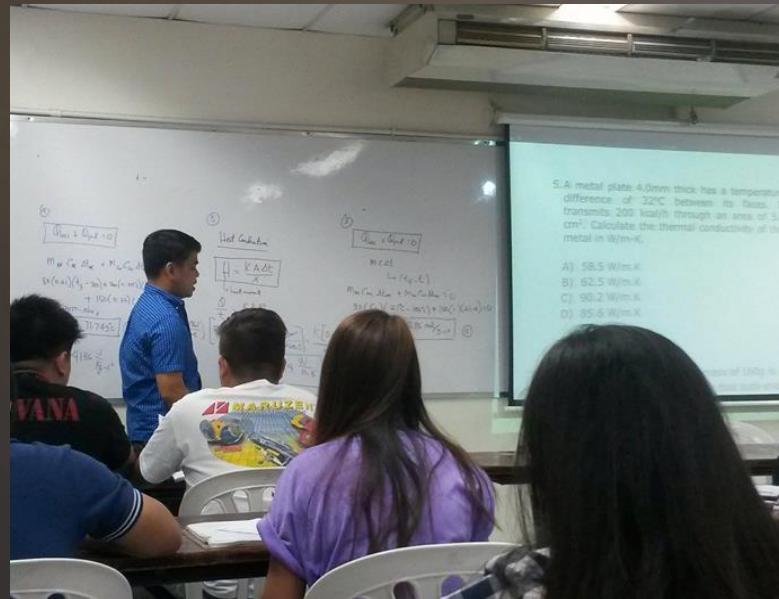


Review Program on Physics Courses for Mapuans

35

The Department of Physics offered free review classes for Mapuans who will be taking Physics Exit Exam. The sessions were conducted on selected covering 4th Quarter 2015-2016 to 3rd Quarter 2016-2017.

The purpose of the review was to help the students on the different Physics concepts and improve their understanding by applying the concepts in solving problems.



Department of Physical Education



Self-Defense Training for Crews of Air Asia Airlines

37

A self-defense training was offered for free to the crews of Air Asia Airlines last October 10, 2016. The activity was done in the training office of Air Asia.

The activity which was attended by the flight attendants of the airline taught the participants basic hand combats such as knife disarming and grabbing assault.



Institutional Activities



Bloodletting Activities

39

The Mapua Institute of Technology collaborated with Jose Reyes Memorial Medical Center (JRRMMC) for the yearly bloodletting activities of the Institute. The activities were held on July 14, December 1 and December 5, 2016.

The activity was participated by the students, non-teaching personnel and faculty members of Mapua. The blood bags collected were stored in JRRMMC's blood bank which can be availed for free by people who are in urgent need of blood supply.



Continuing Education in Science and Technology

40

The Mapua Institute of Technology offered its yearly conduct of seminars for partner high schools to promote the Institute's several program offerings. The purpose also of the seminars was to assist its partner high schools in improving the skills of the teachers through continuing education on key areas of Science and Technology.

The seminars were held on May 13, and July 8, 2016 in Mapua Institute of Technology-Makati campus.





Medical Assistance to Brgy. 872, Pandacan, Manila

41

As part of Mapua's extension service initiative on Health and Environment, the SOCIP Office assisted Barangay 872 in Pandacan, Manila in its endeavor to help its constituents avail free medicines.

The distribution of medicines was done on January and October of 2016. Assorted medicines were given like Paracetamol, Mefenamic Acid, Antibiotic, Multivitamins for kids and adults, Ascorbic Acid, Carbocisteine, Phenylpropanolamine, Ketoconazole, Herbal medicine such as Sambong, Allupurinol and others.



Feeding Program for the Day Care Students in Pandacan, Manila

A Feeding Project was initiated by Mapua Institute of Technology as part of its extension service initiative on Health and Environment. The activity was purposely given to the Day Care students of Brgy. 836 and Brgy. 859 in Pandacan, Manila.

The month-long activity ran on August 2016. It was participated by the non-teaching of Mapua Institute of Technology who served as “nanay” and “tatay” for the children. The weekly menu was prepared by the organizers of the two Day Care Centers who were in-charge of the activity.





Casili Bridge Suspension Bridge Project

43

The Foundation of Outstanding Mapuans, Inc. (FOMI) and National Association of Mapua Alumni, Inc. (NAMA) collaborated for the construction of the Casili Bridge which is located in Sitio Casili, Rodriguez, Rizal.

The bridge was inaugurated last October 22, 2016 and was attended by the officials of the Municipality of Rodriguez, Rizal, school representatives of Casili Elementary School, barangay officials of Brgy. San Rafael, and the officers of NAMA and FOMI of Mapua Institute of Technology.



Student Activities



Outreach Activity on Leadership

45

The Mapua Institute of Technology Student Catholic Action initiated an outreach program for the residents of Brgy. 836 Zone 91, Pandacan, Manila. The activity aimed to teach leadership and spread gospel teachings to people aged 10-20 years old.

The MITSCA members prepared a lot of activities for the attendees to be able to interact with them and share experiences regarding life and God's teachings.





PCB Workshop and Seminar

46

The students of IECEP-MIT aimed to teach and share their knowledge about the concepts regarding Printed Circuit Boards (PCB). The objectives are: (1) how PCBs are made; (2) how to print a circuit to the circuit board; (3) some common materials used in a simple circuit; and (4) how to test the sample circuit.

The activity was held on November 20, 2016 in Barangay 872, Zone 95, Pandacan, Manila and was attended by people aged 13 years old and above.



RADIANCE 2016 Staff

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