**Accreditation First Edition**

ABET Accredits engineering programs

This first edition of the Engineering and Technology Department Bulletin is dedicated to the recent accreditation of the Civil and Electrical Engineering Programs by the Engineering Accreditation Commission of ABET. The accreditation efforts included the design and implementation of its program’s assessment and evaluation plans in 2011. These were needed activities of the process that helped us achieve this important goal. Finally, the statement of accreditation was issued to the University and was received on August, 2015. The accreditation of these programs will provide more opportunities to our students and graduates and motivates us to seek the continuous improvement of the programs.

Now all Administration, Faculty, Graduates, Students and Parents are celebrating a shared achievement, but aware that we have to continue working to innovate, assure quality and promote our programs. New projects, student contests, inedited capstone projects, high motivated associations and research are only some of the new initiatives dedicated to the growth of the department. Our future depends of the integration to develop and identify new opportunities and innovation. We hope this first edition of an engineering bulletin motivates all academic community in joint efforts in order to support and increase the number of activities.

**AEI in the Mega Viernes Civil**

Students were invited to such important activity

The Mega Viernes Civil is the top activity where local civil engineers attend to a marathon program that include seminars, awards, and activities its day during the engineers and surveyors week. Professional development activities support continuous education required by the law to the engineering professionals. Eng. Manuel Bermúdez, the past president of the Institute of Civil Engineers of the Colegio de Ingenieros y Agrimensores de Puerto Rico (CIAPR), invited the engineering student association (AEI), to the activity. There students learned various systems, applications, methods and innovative equipment in the engineering field. It was a great opportunity for students who participated and had the opportunity to enrich their knowledge in their preparation for the profession.

**Induction Engineering Students Association**

New directive of AEI

The Institute of Civil Engineers of Puerto Rico, shared information about the engineering profession with members of CU’s Association of Engineering Students during the installation of officers of this student organization. The Institute’s president, Eng. Manuel Bermúdez, gave an engaging message and congratulated the students for their commitment, and the faculty for their support. Also, Eng. Juan Vázquez Muñoz, who was Director the O.G.Pe Office in the Arecibo region, offered a seminar about techniques for the interpretation and filing of permits before the O.G.Pe.

**Structural Rigidity Center Conference**

Dr. Bernardo Deschapelles discusses Rigidity Center

The engineering student association in collaboration with the department of engineering was the host of the conference offered by Dr. Deschapelles, who is the president of the Earthquake Commission of CIAPR. In this seminar static, scientific and algebraic consideration were discussed, as well as, other important structural concepts.

**CU & CIAPR Second Meeting**

Connecting the academy and CIAPR to integrate and strengthen engineers of tomorrow

The Department of Engineering joins with the Bayamón chapter of the CIAPR in an initiative to integrate the academia with the engineering professionals. Students, faculty and engineers of the CIAPR attended this activity and the participated hours got credited as continuous education. The event included a plenary session with the discussion of the topic, “Theory and refocusing on nuclear energy” by the Eng. Iván Nicolau Nin. Different perspectives, about the present and future of energy sources, were discussed. During the activity, a Proclamation was read by a person representing the municipality of Bayamón.
Wood Bridge Design

The new initiative for programs’ continuous improvement is requiring that students present a design project in courses that include design as part of its components. Thus, students in the course Structural Analysis offered by Professor Luis Castillo, presented different alternatives of wood bridges. These models were successfully tested for deformation under 100 pounds of dead load. These projects were exhibited on November, 2014 during the site visit of the evaluating team for accreditation of ABET.

Field Trip Aguirre Power Plant

Students from the engineering associations at Ponce, with the support of the CU Administration, visited the Puerto Rico southern power plant. Students enjoyed observing the different plant’s systems and received an orientation about its functioning and they learned how the combined cycle looks in the field. Such activities enhance the student experience, since they complement their curriculum receiving information directly from industry. A tour through the facilities and explanations on the control’s room allow students to recognize the components and safety rules. Professors Felipe Minotta and Angie Córdoba accompanied and supported the students in these activities.

Student Associations Induction at Ponce

Activity at Casa Capitular del Colegio de Ingenieros

Students from the engineering associations celebrated an emotive induction ceremony, where students also recognized the faculty efforts in support of the associations. Dr. José García and Prof. Angie Córdoba received awards from the associations’ presidents, Kishelly Lugo (Electrical), Aurea Rivera (Civil), Elsania Vega (Industrial) and Joel Batiz (CIAPR). CIAPR borrowed its facilities at Ponce for this event, in which representatives from CIAPR, IEEE and CU Administration, participated.

Three Kings Day at Ponce

Three kings’ day activity

Student associations participated in the Three Kings’ Day celebration with the CIPAR at Ponce. Students served as kings in such a traditional activity to help bringing gifts to children. These actions showed the compromise of our incoming engineers with the community. All, professionals, students, children and parents enjoyed during the activity promoting our customs.

Charity breakfast for homeless

Associations share with the community of Juana Diaz

Some students from the engineering associations at Ponce share with the community in an integration activity. Students, children and parents share some food in a charitable activity to benefit homeless people. This kind of activities shows the commitment of our future engineers with community, which is aligned with the humanistic Vision of the Institution. Precisely in difficult times, actions like these gain importance and should be highlighted to motivate the community to help the disadvantaged.
Dominoes Tournament at CIAPR

Students of engineering participate in this charitable activity

In March, students of engineering at Ponce served to coordinate a tournament for the benefit of the child Mayrelis González. Associations were present at CIAPR Ponce in support of the health of Mayrelis. The students Aurea Rivera and Eli Samuel collaborated with the CIAPR Ponce Chapter serving as a contact to inform the community about this event. The activity was busy and warm for the enjoyment of participants.

New Equipment for the Department

Equipment for different laboratories

After an analysis of needs, the department of engineering solicited and received support to acquire and update equipment for materials, environmental, soils and electrical labs. With an investment of over 300k dollars, CU Administration promoted the development of the engineering programs. Students will have access to state of the art equipment for laboratories and research. The capital investment covers Bayamón and Ponce campuses.

Open House Engineering and Computers

Orientation activity for students and parents

The Department of Engineering, in support to CU’s marketing office, carried out an open house in order to orient high school students and parents about the engineering and computer programs. During the activity, CU faculty presented each program and answered questions from the community. With the activity, the department hopes to motivate new generations to study science and engineering programs. After orientation, the audience had the opportunity to take a tour through facilities, including the classrooms, laboratories and other service areas of the institution.

The Department Opens Facilities

CU Administration adequate facilities for Engineering

The Department of Engineering and Informatics Technology opens its new facilities at former MACU conference room, located at the Historical Building, Bayamón. The area was remodeled using a modular concept to house the offices of the Director and Program Coordinators, faculty, and an adequate space to service the students.

Bingo at CIAPR Ponce

Students participate of charitable activity

Students in collaboration with the CIAPR at Ponce conducted a bingo charitable activity. Engineers, students and the community supported this raising funds activity on behalf of Mayrelis González’s health. The associations assume commitment with the community through this kind of activity and collaborate with the CIAPR at Ponce.

SkillsUSA Awards 2015

CU support SkillsUSA and borrow the facilities for awards

For the last years CU supports the Skills USA initiative. This organization promotes vocational skills in high schools students and carries out technical contests in several areas. The industry, government and academia joint to this initiative. The departments of engineering borrow computers and plotter for the architectonic drawing contest and CU borrow an amphitheater for the awards ceremony. Moreover, CU offers a supplementary grant for the winner of the architectonic drawing contest to study at CU, which is one of the main prizes of the competition. This year, the director, Dr. Hermes Calderón and the Prof. Felix Vizcaya, technical leader of architectonic drawing, presented the awards to the first three winners.
Faculty opens offices at Ponce

New offices for engineering faculty in annex building

CU Administration invests in new facilities for service engineering students. A modular concept into an office trailer system provides a comfortable space for the faculty offices. This facility also includes a small conference room for faculty meetings. Such space support students’ experience at CU and facilitate faculty instruction. These facilities are located close to the Capstone rooms in an outbuilding.

Collaborative Agreement with UTP

Promoting opportunities for mutual benefit

Representatives from the Universidad Tecnológica de Panamá (UTP) and CU signed an agreement for the share of resources. This initiative will promote the exchange of students and faculty; allow the sharing of seminars and databases, as well as, research and innovation projects. The Department of engineering will be one of the beneficiaries, since technical programs at UTP, including engineering programs are the strength of the institution. UTP is a public university at Panama with over 21k students and various campuses in different regions.

Earthquakes, Magnetic Fields and Animals

Seismic Structural Energetic Study (EESE, Spanish)

The interest of Prof. Raymond Rosa on the relation between earthquakes and geomagnetic variations has motivated his research. Rosa studies variations in the geomagnetic fields as possible precursors of seismic events. Nevertheless, earthquake prediction has been always controversial, moreover if considering animal sensitivity as a method to predict earthquakes, for example. The EESE project suggests the relation between magnetic fields as a precursor and animal magnetic sensitivity as a prediction tool. Despite the skepticism, recently scientists from the USGS have shown openness to such idea. They state: “much research still needs to be done on this subject.” For additional information visit: http://earthquake.usgs.gov/learn/topics/animal_eqs.php.

Capstone Conferences, Bayamón and Ponce

Students present their projects to the academic community

In order to improve the students’ preparation, design projects from the Capstone courses are presented in a conference model. Faculty decided that all projects must be presented in the same activity. External representatives from industry and academics are invited as guest evaluators, forming a focus group for evaluation and feedback on the students’ projects. Each semester capstone conferences are alternated between Bayamón and Ponce campuses.

Students Support Aquatic Robots Project

Students with the Ponce’s Mayor, Maria “Mayita” Melendez

The students Rawdy Rivera, Jesmarie Santiago y Ricardo Pacheco have demonstrated an exceptional motivation to support aquatic robot projects. They donate part of their time to help high motivated committed students from the Colegio Ponceño. The team has won several prizes but also has gained the experience in such an exciting field and the opportunity to work toward improving their results. The enthusiasm of both high school and engineering students promises new successes in upcoming competitions and students’ development.

Capstone Labs at Bayamón and Ponce

24/7 Open labs for Capstone projects of engineering students

Students of engineering are required to enroll in two capstone courses in their two last semesters. These courses expose students through a major design experience that lets them integrate prior acquired knowledge and skills. Students in the first capstone evaluate the feasibility of a project taking into account realistic constrains. In the second course they implement a design. CU prepared two laboratories with the needed resources. These laboratories are open 24/7 for students’ benefit. Computers, tables, projectors and software are available for the development of students’ projects in a safe environment. Once students finish the semester they have to present their work in a conference model that is open for the entire academic community.