

Land Surveying Bachelor Program at the University of Puerto Rico:

A Vision for Success

Department of Civil Engineering and Surveying of the
University of Puerto Rico at Mayagüez (UPRM)
Instituto de Agrimensores del Colegio de Ingenieros y
Agrimensores de Puerto Rico (CIAPR)



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This presentation will be . . .

- About Puerto Rico
- About Our University
 - The College of Engineering
 - Department of Civil Engineering and Surveying
 - Land Surveying Curriculum
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- About the Colegio de Ingenieros y Agrimensores de Puerto Rico (CIAPR)
 - Instituto de Agrimensores del CIAPR
- Academic and Professional Partnership
- Challenges-Surveying Program

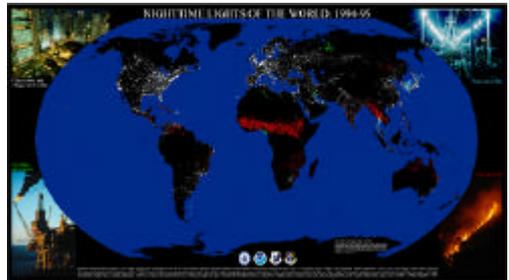
About Puerto Rico

- Puerto Rico is located in the western hemisphere in the Caribbean Sea; it was discovered on November 19, 1493 by Christopher Columbus, on his second voyage to the New World, bound for Hispaniola.
- As a result of the Spanish American War, Puerto Rico was ceded to the United States of America in 1898.
- The Jones Act of 1917 extended to the people of Puerto Rico United States citizenship and in 1952 Commonwealth Status was adopted called "Estado Libre Asociado de Puerto Rico."

Location of Puerto Rico

$f = 17^{\circ}\text{-}50'\text{N}$ to $18^{\circ}\text{-}30'\text{N}$

$? = 65^{\circ}\text{-}00'\text{W}$ to $67^{\circ}\text{-}30'\text{W}$



About Our University

- The University of Puerto Rico is a well established and a mature institution, with a total enrollment of over 69,000 students.
- The University consists of the Mayagüez Campus, the Medical Sciences Campus, and the Río Piedras Campus, which are dedicated to both undergraduate and graduate education.
- Colleges at Aguadilla, Arecibo, Bayamón, Carolina, Cayey, Humacao, Ponce, and Utuado which provide undergraduate education.
- Each autonomous institutional unit has a Chancellor as chief administrator and academic officer.

The University of Puerto Rico at Mayagüez
is located in the city of Mayagüez on the
western side of Puerto Rico



95th Anniversary of the UPRM on Sept. 23, 2006



95th Anniversary of the UPRM



95th Anniversary of the UPRM

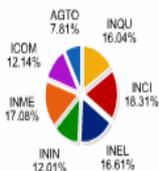


Tarzán y Jane

The College of Engineering

- The College of Engineering was founded in 1942 (although the University of Puerto Rico at Mayagüez has been offering engineering degrees since 1913) and comprises six academic departments. The undergraduate population of the College of Engineering is approximately 4,899 for the 2005-2006 academic year. It is the largest undergraduate of the four colleges at Mayagüez Campus of the University of Puerto Rico. Of these, 35% are women.
- This makes the College one of the schools of engineering with the highest enrollment of women in the United State of America. The College of Engineering has around 371 graduate students, 32% of which are women. The College of Engineering consists of 185 full time faculty members and 125 staff employees.

The College of Engineering



Civil Engineering and Surveying Department . . .

- **Faculty:** 45 (36 T/TT; 5 NT pursuing PhD; 1 NT-FT contract; 3 NT-PT contract); 83% T/TT PhD; 76% PE/EIT T/TT)
- **Administrative Staff:**
 - 1 Director, 3 Associate Directors (1 vacant), 1 Director's Assistant
 - 2 Counselors; 2 Admin. Assts., 2 Secretaries (1 vacant)
 - 7 Technicians (1 vacant), 6 Clerical Personnel
 - 6 Non-tenure Personnel
- **Facilities:** Three-story building, 52,463 sq. ft.
 - 10 classrooms, 1 study room, 1 auditorium, 1 meeting room,
 - 3 computer centers, 9 laboratories, 1 infrastructure research center,
 - 1 technology transfer center, 1 student organizations office
 - 1 strong motion network(100 stations),1 meteorological network(10 stations)

Civil Engineering and Surveying Department . . .

Academic Programs:

- **BSCE (5 yrs.): 828 students, 184 admitted**
 - (Environm., Const. Manag., Geotech., Structures, Transp.)
- **BSSST (4 Yrs.): 386 students, 105 admitted**
 - (Surveying & Topography)
- **MSCE & MECE: 69 students, 60 admitted**
 - (Environmental, Geotechnical, Structures, Transportation, Construction Management)
- **PhD: 31 students, 8 admitted**
 - Active (Structures; Environmental)
 - Inactive (Constr. Management; Geotechnical; Transportation)

Civil Engineering and Surveying Department . . .

- **Transfer Admissions: Avg. 200 apply; Avg. 100 admitted; most complete successfully degrees**
- **Student Associations: 8 (ASCE, ITE, PRWEA, CEIIC, CEIA, AGC, EERI, GS)**



Capítulo Estudiantil del Instituto de Agrimensores - CEIA

Students' Experiences – 100%

- **Summer Internships**
 - ERDC – 31
 - Universities/ Nat Labs – 37
- **Work Experiences (COOP/practice)**
 - Summer/semester professional practice
 - Plan COOP
- **Exchange programs**
 - USA/Spain/Mexico
 - Pending to expand to Europe/Latin America/Africa/Asia/Australia
- **Undergraduate research**
- **Community services**

Students National Presence

- ACI Concrete Cylinder-Density Target: First Place
- ASCE Student Chapter -Acknowledged twice by ASCE
- ASCE Regional Competitions – T Shirt: First Place
- ACSM-NSPS Competitions – Third Place Orlando, Florida 2006

Over 40 students and four professor participated in the regional competitions with the Concrete Canoe, steel bridge, and others.

Student Profile

- Is a young person ages of 17 to 22
- He or She enter directly from high school
- Many have entered with the idea to change to another program
- The average time for graduation is 5 years



Research at the Land Surveying Program



Success Stories



Carlos J Rodriguez Jose Rivera Cacho

Acela Martinez

About the Colegio de Ingenieros y Agrimensores de Puerto Rico (CIAPR)



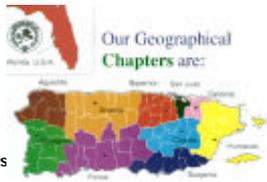
CIAPR - MEMBERSHIP

The CIAPR is made up by the following seven Institutes:

- 483 Land Surveyors
- 4,431 Civil Engineers
- 165 Computer Engineers
- 2,538 Electrical Engineers
- 909 Industrial Engineers
- 2,088 Mechanical Engineers
- 891 Chemical Engineers

For a total of 11,505 members divided in eleven (11) geographical chapters

10 in the Island + 1 in Florida, USA



Instituto de Agrimensores del CIAPR

- In Puerto Rico, although many works constructed during the time of the Spanish Empire required the intervention of surveying, the stage of this as profession defined at local level begins there for the 1846. 1st of January of 1846 Don Rafael de Aristegui, "Conde de Marisol", Governor and Commander in chief of Puerto Rico approved the "Regulation for the Corps of Land Surveyors", regulating its practice, including the renewal as far as suitability and collection of fees.

Commemoration Mark of the 160 years of Surveying 1846-2006



Instituto de Agrimensores del CIAPR

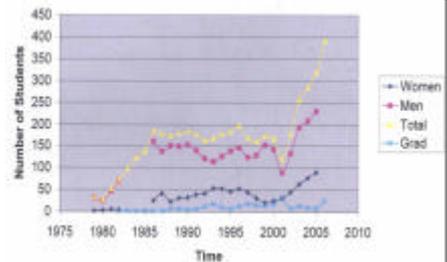
General Assembly of May 2006



Academic and Professional Partnership

- Since the year 2000 the “Instituto de Agrimensores del Colegio de Ingenieros y Agrimensores de Puerto Rico” started a partnership with the Land Surveying and Topography Program of the University of Puerto Rico with the purpose of increasing the enrollment of the program.

Land Surveying and Topography Program 1979 to 2006



Academic and Professional Partnership



Activities at the Finca Montaña - Aguadilla

Academic and Professional Partnership



Challenges-Surveying Program

- Surveying Engineering
- ABET Accreditation
- Professional Presence/Leadership
- Student Recruitment – Best and Brightest
- Graduate Program
- New Faculty
- Research/Development
- Strengthen Ponce/Bayamón/Arecibo
- Strengthen Program

**Thank
You ...**

