DISTRIBUTION OF STUDENTS

2019

	UPRRP	UPRM	UPRP
♀	4	4	1
♂	5	11	5

Total of 30 students enrolled

♀ 30% ♂ 70%

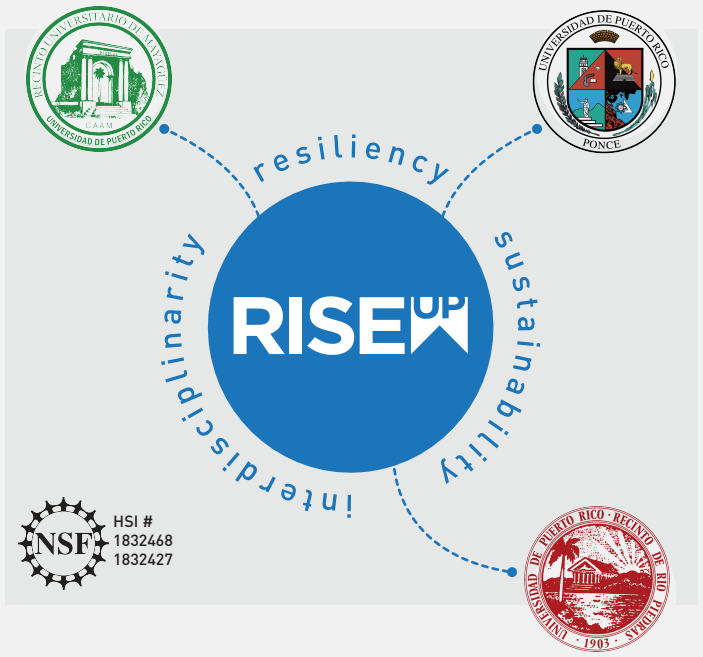
2020

	UPRRP	UPRM	UPRP
♀	9	5	4
♂	3	10	3

Total of 34 students enrolled

♀ 53% ♂ 47%

Compared to cohort #1, in cohort #2 the participation of female students has increased 73%.



What is RISE UP

After a natural disaster, multiple disciplines need to come together to rebuild the damaged infrastructure using new paradigms. Commonly, the academic preparation of scholars on infrastructure-related disciplines takes place in isolated professional domains, rarely tackling interdisciplinary problems or learning from the systematic research of previous experiences. In Puerto Rico, the aftermath of Hurricanes Irma and Maria has created awareness regarding the education on infrastructure-related disciplines to provide transdisciplinary solutions to pertinent complex challenges. In order to address this issue, the Resilient Infrastructure and Sustainability Education - Undergraduate Program (RISE-UP) is a collaborative platform among three campuses of the University of Puerto Rico System. Each of these campuses offers a different educational component relevant to this enriching educational initiative.

IMPACTS

- The project trains faculty members and students so that the frame-work developed as part of this research can be implemented in the curricular sequence of other courses and colleges. The modules developed will be used as a guide for designing, developing, and implementing other courses.
- RISE-UP has attracted students from Engineering and Architecture programs.
- The project serves as the foundation for creating additional cours-es that could be common to all three campuses. This project is the first step of a long-term vision to provide Resilient Infrastructure and Sustainability Education.
- The project serves as an example of the advantages of integrating information technology to allow students from different campuses to work together towards a common goal.
- The database will become a tool to be used by academics, profes-sionals and community members to learn from past experiences and use the cases as tools for better decision making in the planning and implementation of resilient/ sustainable solutions for infrastructure.
- The remote collaboration and practical nature of the courses greatly improves education related to resilient infrastructure in the disciplines of environmental design, engineering, surveying and construction.
- Students that graduate from the program will have an increase in awareness and knowledge of the problems associated with resiliency and sustainability in the context of Puerto Rico and other communities in the US and the world affected by extreme environ-mental conditions and the role of the interdisciplinary in the development of effective solutions.

GOALS

1. Development of a case study database

21 case studies have been developed by students enrolled in regular RISE-UP courses in years 1 & 2.

2. To collaborate to strengthen the relationship between Academia and Governmental Agencies

RISE-UP WEBSITE http://riseup.upr.edu/

FACULTY

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DISEMINATION

1. "Addressing the Challenges faced by STEM Students following Hurricane Maria in Puerto Rico", 13th HACU International Conference, San Juan, PR, May 2019 (panel)
2. "Developing a Collaborative Undergraduate STEM program in Resilient and Sustainable Infrastructure", American Society for Engineering Education (ASEE) Annual Conference, Tampa, FL, June 2019 (paper)
3. "Complexity Mapping for Resilient and Sustainable Infrastructure: The Doppler Radar in Puerto Rico Case Study", International Congress of Engineering, Sciences and Technology (IESTEC VII), Panama City, Panama, October 2019 (paper)
4. "Enhancing Student Success following Hurricane María: The Role of Academia in Puerto Rico", International Congress of Engineering, Sciences and Technology (IESTEC VII), Panama City, Panama, October 2019 (poster)
5. "Assessing and monitoring coastal erosion in western Puerto Rico following hurricane María: a case study", National meeting of remote sensing and geographic information systems of Puerto Rico (PRYSIG PR), Mayaguez, PR, October 2019 (presentation)
6. "Preserving stories after the disaster: A repository of stories for resilient infrastructure and sustainable education" NSF Hispanic-Serving Institutions Principal Investigators Meeting, Washington, DC, November 2019 (poster)
7. "Resilient Infrastructure and Sustainability Education - Undergraduate Program" NSF Hispanic-Serving Institutions Principal Investigators Meeting, Washington, DC, November 2019 (poster)
8. Four Student Presentations at Emerging Researchers National (ERN) Conference in STEM, Washington, DC, February 2020 (poster/ oral)
9. "Using Case Studies for Research and Teaching in Undergraduate Courses in Resilient and Sustainable Structure"3rd Annual RGV STEM Education Conference, McAllen, Texas, February 2020 (poster)
10. "Enhancing Student Preparedness through Experiential Learning: Lessons Learned from Assessing Building Structural Damages after Earthquakes", American Society for Engineering Education-Southeastern Section Annual Conference, Auburn, Alabama, March 2020 (poster)
11. "Design and Assessment of Architecture/ Engineering / Construction (AEC) Curricula for Resilient and Sustainable Infrastructure", American Society for Engineering Education (ASEE) Annual Conference, Virtual, June 2020 (paper)
12. "Enhancing Student Preparedness Through Experiential Learning: Lessons Learned from Assessing Building Structural Damages after the January-May 2020 Earthquakes in Puerto Rico" LACCEI International Conference, Virtual, July 2020 (paper)