DISTRIBUTION OF STUDENTS

<table>
<thead>
<tr>
<th>Year</th>
<th>UPRR</th>
<th>UPRM</th>
<th>UPRP</th>
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<tr>
<td>2019</td>
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<tr>
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<td>5</td>
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<tr>
<td>Total of 30 students enrolled</td>
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<td>5</td>
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<td></td>
<td>3</td>
<td>10</td>
<td>3</td>
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<tr>
<td>Total of 34 students enrolled</td>
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<tr>
<td>2021</td>
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<tr>
<td>Total of 32 students enrolled</td>
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IMPACTS
- The project trains faculty members and students so that the framework 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 courses 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, professionals, 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 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 environmental conditions and the role of the interdisciplinarity in the development of effective solutions.

GOALS
1. Development of a case study database
2. To collaborate to strengthen the relationship between Academia and Governmental Agencies

DISSEMINATION
Selected Publications
- "Completing a Collaborative Undergraduate STEM program in Resilience and Sustainable Infrastructure". American Society for Engineering Education (ASEE) Annual Conference, Tampa, FL, June 2019 (paper)
- "Design and Assessment of Architecture/Engineering/Construction (AEC) Databases for Resilient and Sustainable Infrastructure". ASEE Annual Conference, Panama City, Panama, October 2017 (paper)
- "Enhancing Student Preparedness Through Experimental Learning: Lessons Learned from Assessing Building Structural Damages after the January-May 2020 Earthquakes in Puerto Rico". ASEE Annual Conference, June 2021 (paper)
- "RISE-UP: An Interdisciplinary Learning Tool to Generate bespoke infrastructure Resilience". ASEE Annual Conference, Virtual, January 2021 (paper)
- "Championing Hispanic Student Success Following Natural Disaster in Puerto Rico". ASEE Annual Conference, Virtual, July 2021 (paper)
- "Developing Case Studies for Research in Resilience Infrastructure and Sustainability Education Following a Natural Disaster". ASEE Annual Conference, Virtual, July 2021 (paper)
- "Lessons Learned from Participating in a Virtual Undergraduate Research Program During the COVID-19 Pandemic". ASEE Annual Conference, Virtual, July 2021 (paper)

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, after the aftermath of Hurricanes Irma and Maria, there has been an awakening regarding the education on infrastructure-related disciplines to provide interdisciplinary solutions to pertinent complex challenges. 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.

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

FACTOR
- Carta López del Puerto, Civil Engineering, P.I. UPRM
- Humberto Cavallin, Environmental Design, P.I. UPRP
- Drianet Vázquez, Engineering, P.I. UPRP
- Jonathan Muñoz-Barreto, Co-P.I. UPRM
- José Perdomo, Co-P.I. UPRM
- Marcelo Suárez, Co-P.I. UPRM
- Fabio Andrade, Senior Personnel UPRM
- Ismael Pagán, Senior Personnel UPRP
- Luis Suárez, Senior Personnel UPRM
- Luis Daza, Senior Personnel UPRM
- Luis Montoya, Senior Personnel UPRM
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