

University of Puerto Rico
Mayagüez Campus



2022-2023

ANNUAL REPORT



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Chancellor

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UNIVERSITY OF PUERTO RICO AT MAYAGUEZ CAMPUS MISSION AND VISION

Vision

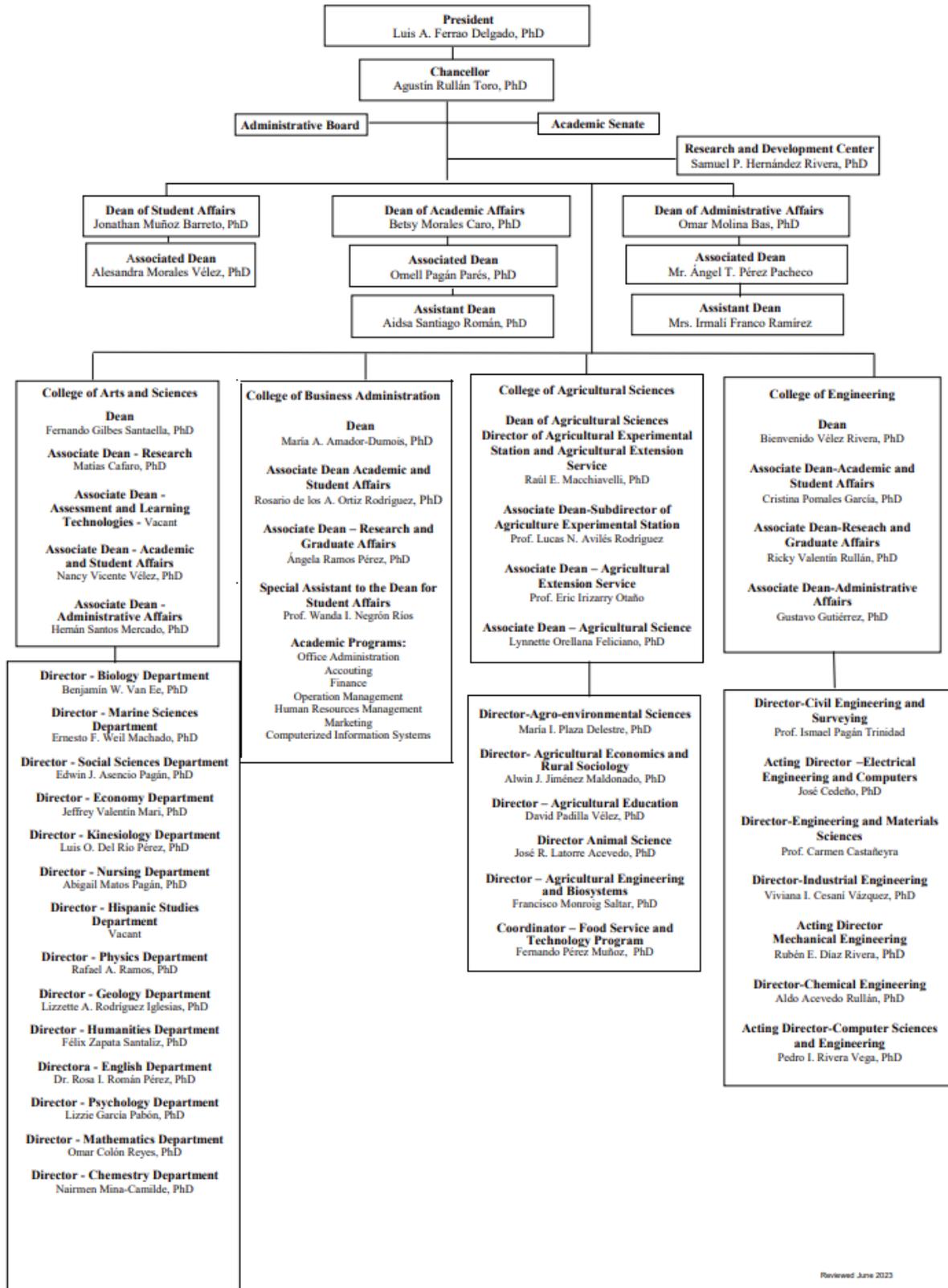
To be at the forefront as an institution in higher education and research, transforming society through the search for knowledge in an environment of ethics, justice, and peace.

Mission

To provide excellent service to Puerto Rico and the world by:

- Forming educated, cultured, capable, critical-thinking citizens professionally prepared in the fields of agricultural sciences, engineering, arts, sciences, and business administration so they may contribute to the educational, cultural, social, technological, and economic development.
- Performing creative work, research, and service to meet society's needs and to make available the results of these activities.

We provide our students with the skills and sensibility needed to effectively address and solve current challenges and to exemplify the values and attitudes that should prevail in a democratic society that treasures and respects diversity.



Executive Summary of Deanships and Faculties

Deanship of Administration

Executive Summary

The Dean of Administration is responsible for planning, coordinating, evaluating, and supervising administrative and operational processes at the second-largest university campus in Puerto Rico. It supports and leads initiatives to facilitate teaching, learning, and research activities in the faculties and departments. These activities impact over 11,000 graduate and undergraduate students, almost 700 faculty members, and over 1,000 employees. Its function is to direct, supervise, and coordinate relevant administrative services provisions that ensure the efficient operation of the campus. The Dean of Administration leads nine affiliated departments, which cooperate in providing everyday services to meet the needs of the 2.7 million square feet of campus infrastructure on an area of 231.5 acres. These services are coordinated to ensure continuity and meet the needs of the university community. In the past fiscal year, the Dean of Administration made efforts to reduce the spread of COVID-19, including completing proposed projects that utilized HEERF funds. A No Cost Extension (NCE) was requested for the HEERF funds to finalize the Coronavirus Response and Relief Supplemental Projects. These projects aimed to improve ventilation systems in classrooms and common areas to increase the intake of clean air while diminishing possible contaminants. Additionally, this effort sustained maintaining existing infrastructure while ensuring the health and safety of the campus. The following are among the current and ongoing projects identified and budgeted through these funds:

- Louvered windows (jalousie) upgraded to improve cross-ventilation with a total budgeted amount of \$1,820,068.37.
- Josefina Torres Torres (Nursing) and Sanchez Hidalgo (Economics): \$366,145.62.
- Carlos D. Chardón (General Studies) Building: \$688,166.09.
- Luis A. Stefani Engineering Building: \$765,756.66.
- Renovation and upgrade of ventilation and air conditioning systems with a total budgeted amount of \$3,068,730.02:
 - o Civil Engineering Building: \$265,245.02
 - o Physics, Geology, and Marine Sciences: \$ 289,500.00
 - o Students Union: \$131,185.00
 - o General Library: \$837,200.00

Hurricane Fiona directly hit Puerto Rico in September 2022, causing flooding, power outages, and drinking water disruptions on the west coast. In the aftermath of Hurricane Fiona, the Dean of Administration had to prioritize recovery efforts. Efforts were focused on meeting the needs of the Campus and preparing the facilities for the entire university community to reintegrate and give continuity to academic and administrative work. Recovery efforts included the following tasks:

- Provide safety equipment and materials.
- Acquire generators to power equipment during recovery tasks.
- Purchase diesel for emergency equipment and vehicles.
- Collect, clean, and haul debris.
- Clean classrooms and common areas.
- Food and water distribution for our students and personnel.

The Dean's Office also focused on improving and restoring the appearance of the Campus despite the challenges posed by COVID and Hurricane Fiona. Examples of these include:

- Upgrading the exterior cladding of buildings.
- Renovating open areas on campus.
- Procurement of urban furniture to enhance public areas.
- Partially resurface the White Area parking lot.
- Maintenance of sports facilities.
- Pedestrian bridge cleaning, in terms of funding opportunities, the Dean's office continued seeking initiatives to increase and diversify sources of revenue to meet the needs of our Campus. Among the initiatives carried out are the contract with vending machines, advertisements, and space leases. In addition, Federal Transit Authority (FTA) funding opportunities to improve the public transportation system of the Campus through the Highway and Transportation Authority followed up on the two proposals submitted and approved:
- Operating assistance for the public transportation service on the Campus with a funding amount of \$1,306,514
- Acquisition of equipment, bus stops update, and public transportation fleet expansion with a funding amount of \$734,507.

Mission

The Office of the Dean of Administration supports and leads initiatives that facilitate the teaching, learning, and research activities necessary for the University of Puerto Rico, Mayaguez Campus to achieve its mission. Over the past year, the Dean's Office and its nine affiliated units have continued to provide services by facilitating resource usage, ensuring compliance with regulations, and addressing community needs in a coordinated manner to ensure service continuity. The Dean's Office also ensures proper functioning and maintenance of existing infrastructure, oversees the health and safety of the University community and actively supports the necessary design, development, and infrastructure efforts to meet needs. Below are the main activities executed by the units under the Office of the Dean of Administration, and that are essential in supporting the Campus mission: 1. Provided services that impacted the infrastructure and green areas. 2. Guaranteed compliance with regulations applicable to acquisition processes, payments, property control, personnel actions, and occupational and environmental health and safety. 3. Provided safety and security services to the university community and the property. 4. Actively supported efforts that aimed to strengthen the built infrastructure. 5. Acquired the resources needed for the execution of academic, administrative, research, and activities in compliance with the applicable regulations. 6. Completed the personnel actions requested by the Campus units, in compliance with the applicable regulations. 7. Continued supporting the staff needs. 8. Maintained the Property Control database with the received, transferred, and confiscated equipment. 9. Provided telecommunications service and mail distribution to the university community. 10. Coordinated and actively worked on emergency response tasks to protect the health and safety of the university community and maintain the adequacy of the facilities. 11. Provided technical resources for the personnel working remotely

Deanship of Students

Executive Summary

The office of the Dean of Students oversees and provides support and direction to all offices and departments that offer student services, including:

- Social and Cultural Activities
- Financial Aid Office
- Quality of Life Office
- Student Center
- Placement Office
- Department of Counseling and Psychological Services
- Exchange Program and International Services
- Services for Students with Disabilities
- Medical Services
- Band and Orchestra Department
- Lactation Room
- Tranquility Room

In addition to these functions, the Dean of Students has the obligation to fulfill the following duties and tasks that are responsibilities of his Deanship:

- Attend cases related to conducting complaints.
- Attend scholarship appeal cases.
- Be part of the institutional committees in which the Dean is designated as a member.
- Maintain communication with the Chancellor about matters related to all offices and departments under his charge.
- The Dean of Students must be an ex-officio member of the Academic Senate.
- The Dean is a member of the Administrative Board.

- Organize and direct the efforts and preparations for the graduation ceremonies in June of each year.
- Coordinate and direct tasks related to institutional accreditations such as, the Middle States and the International Association of Counseling Services accredited by the Department of Counseling and Psychological Services.
- It links student bodies such as, the General Student Council and other student organizations.
- It carries out the process of elections of student representatives, both for the Students General Council, as well as for undergraduate and graduate representation in the Governing Board of the UPR and in the Academic Senate.
- Coordinates and manages Higher Education Emergency Relief Fund (HEERF) funds allocated to the Campus through the *Coronavirus Aid, Relief and Economic Security Act (CARES)*, *Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA)* and *American Rescue Plan (ARP)* laws. For more information, you can access www.uprm.edu/rectoria/caresact/.
- The Dean must represent the Chancellor when required.

Mission

The mission is to provide students with the necessary resources and services to contribute to their physical, social, emotional, cultural, educational and occupational-professional development, as a complement to their intellectual, academic and ethical formation.

Deanship of Academic Affairs

Executive Summary

- **Admission Office**

Admissions for the 2023-2024 academic year were conducted under the new Pilot Plan for the Undergraduate Student Admission Policy at the University of Puerto Rico, Certification 33 (2022-2023) by the Governing Board.

The pilot plan introduced a change in the formula to calculate the Minimum Entrance Index (IGS), giving greater weight to the student's GPA and reducing the percentage attributed to the College Board's PAA test. Under the pilot plan, the Overall Admission Index (OAI) is calculated by assigning 60% weight to the applicant's high school GPA, and 20% the Verbal Aptitude test, and 20% the Math Aptitude test. The plan also established the Non-Traditional Route, which allows the use of non-traditional admission methods such as placement exams, portfolio and essay evaluations, interviews, recommendation letters, and other academic criteria that ensure the student's access to university life. For this population, a minimum GPA of 2.00 was established. The policy defined categories such as students from specialized schools, international students, students with special talents or skills, adult population, and others.

With this new policy, the staff of the Admissions Office at the University of Puerto Rico at Mayagüez (UPRM) took on the task, as in previous years, of reaching out to a greater number of public and private schools through talks, orientations, and participation in educational fairs across the island to recruit students interested in our diverse academic offerings. The aim was to generate a higher number of applications to admit as many students as possible to our campus and enroll a large number of students, allowing us to fulfill our mission of providing our society with educated, cultured citizens capable of critical thinking and prepare them professionally, thereby contributing to the educational, cultural, social, technological, and economic development of our country.

For the 2023-2024 academic year 2,506 students were admitted, of these 2,478 were admitted via the traditional route and 28 students via the non-traditional route. About 600 reconsideration applications were examined from incoming first-year students and transfer students from private institutions.

To handle the applications under the Non-Traditional Route, each academic department constituted an admissions Committee and established the requirements for evaluating the applicants. The Admissions Office created folders on Google Drive for each faculty and department, contacted the applicants, and informed them of the documents they needed to submit for evaluation, according to the evaluation criteria established by each department. Upon receiving the documents, all the received documents were deposited in the corresponding folder for the subsequent evaluation by the evaluation committee. Once the departmental committee evaluated the application, they sent an official notification to the Institutional Admissions Committee with the decision for each case. The Institutional Admissions Committee reviewed the applications and communicated the final decision to the applicant.

- **Air Force ROTC**

Air Force ROTC is designed to recruit, educate, and commission officer candidates through college campus programs based on Air Force requirements. AFROTC Detachment 756 averages approximately 100 cadet sized Wing.

- **Army ROTC**

We focus our training utilizing the adaptive Soldier leader training methodology through the conduct of tough, realistic, Cadet Summer Training (CST) focused that allows us to: develop Basic Officer's Leader's Course (BOLC) ready Second Lieutenants (2LTs), develop world class cadre, and create better citizens through ROTC. Through weekly classroom instruction, labs, Field Training Exercises (FTXs), and maximizing online tools, we conducted the SY 22-23 curriculum training lessons and events, with expected changes after CST.

The following events were conducted for the past school year 2022-2023:

- BN Field Training Exercises (3-5 NOV & 24-26 FEB) with a duration of 48hrs took place in both semesters in which land navigation and Squad Tactics (STX) evaluations were assessed. This event was designed to exercise and boost the confidence of Cadets and demonstrate their knowledge from previously trained company labs.
- BN Lab (15 OCT & 15 APR) took place at the beginning of fall semester with a duration of 12 hours. A second lab took place at the end of spring semester.
- CO Labs took place by Companies on a regular weekly basis covering the material required for Cadets Summer Training/FTXs. CO Labs prepared Cadets on land nav, Basic battle drills, Operations Orders (OPORD), ruck march endurance, weapon basic familiarization (tables I, II, III).
- Annual Individual weapon qualification (15 OCT) to place in the Spring semester to prepare Cadets going to Cadet Summer Training. The Bulldog BN prepares and familiarizes Cadets with the qualification process. All Cadre supported BN efforts.
- Physical fitness was conducted four times per week regularly, and one Army Combat Fitness Test (ACFT) per semester. A selected group of 12 Cadets trained for Brigade Ranger Challenge competition where cadets represented the ROTC PR Mayaguez against the other units on 6th BDE ARMY ROTC.
- Cadet Military Ball (5 MAY) took place at the culmination of the school year for Cadets to embrace the ARMY culture, traditions, and celebrate a year of accomplishments.
- Finally, the Commission Ceremonies: (27 JAN & 16 JUN) These events took place at the end of each semester as the cadets complete the school curriculum and other commissioning requirements. We proudly commissioned 35 Student/Cadets into Army 2nd Lieutenants.

- **Bilingual Writing Center (CIVIS)**

Combines and expands the efforts of the Campus' academic colleges, under the general philosophy of STEM (Science, Technology, Engineering, and Mathematics) education, providing students and teachers with the tools and strategies to help achieve institutional learning objectives. Maintain an updated strategic plan based on the results of the evaluation of the different components to establish an environment of excellence.

- **Institutional Review Board (CPSHI)**

Evaluates requests to streamline processes and be able to provide a better service to our community. The President of the Committee reviews and approves the cases that are qualified as exempt and expedited, following the federal regulations that govern us (45 CFR 46, where CFR refers to Code of Federal Regulations). Cases heard by the full Committee are sent electronically to all CPSHI members one week before the meeting, or no later than five business days before, to allot time for them to consider them carefully.

- **Office of Graduate Studies**

The Office of Graduate Studies (OGS) is an academic-administrative institutional unit affiliated with the Office of Academic Affairs. Among our general responsibilities are:

- Promoting graduate education and research at UPRM.
- Enforcing regulations and/or certifications applicable to graduate studies.
- Developing, evaluating, and revising admission processes and procedures in coordination with departmental graduate programs, the Information Technology Center, the Office of Immigration Affairs, and the Registrar's Office.
- Promoting UPRM's graduate programs within and outside Puerto Rico.
- Chairing, coordinating, and attending Graduate Council meetings, which include representation from each graduate program at UPRM.
- Working with motions approved by UPRM's Graduate Council and directing them to the corresponding administrative offices.

The Office of Graduate Studies oversees the administration of three main service areas, directly aligned with the unit's mission. These areas are Information, Admissions, and Active Students, with their specific functions described below:

Information Area:

- Providing guidance to the university community and the public on matters related to graduate studies and research.
- Guiding prospective graduate students on requirements, processes, and deadlines through in-person, telephone, and/or email consultations.
- Receiving and distributing correspondence from various areas of the OGS.
- Documenting, classifying, and storing all received documents in physical and electronic files located in respective areas and computers.

Admissions Area:

- Administering the graduate admissions system.
- Managing documentation related to admission applications, including verifying in Admission system the applications initiated by prospective students, creating electronics files for each applicant, and receiving and organizing official documents from different institutions attended by applicants.
- Processing received applications with the Departments, which includes direct communication with the Departments until decisions are reached in each case.
- Drafting admission letters for applicants.
- When handling admission cases for international students, coordinating with the Office of Immigration Affairs to process necessary documents, enabling applicants to obtain their visas and arrive at the University for enrollment.
- Creating reports on admitted and enrolled students for offices related to official information on graduate students at the campus. This includes the Information Technology Center, the Registrar's Office, among others.

Active Students Area:

- Managing records of active students and all documentation generated while they are pursuing their graduate studies. This includes all documentation related to assistantships, Plan of Graduate Studies or its amendment, project, theses or dissertations proposals, and other project, theses, or dissertation documents.
- Organizing and participating in orientation activities for incoming students.
- Auditing and verifying the awarding of graduate assistantships based on compliance with current regulations, including eligibility (extension requests, and verification of proposal submissions).
- Coordinating the participation of campus faculty as representatives of the Office of Graduate Studies in thesis, project, or dissertation defenses for all graduate programs offered on campus.
- Indicating and verifying compliance with current rules regarding the administration of examinations corresponding to graduate studies in different programs.
- Coordinating and overseeing the processes for requesting and defending oral examinations for master's and doctoral degrees.
- Receiving electronic copies of theses and dissertations from UPRM's graduate students and coordinating with the UPRM library for their electronic publication.
- Issuing certificates of compliance with the project, thesis, or dissertation requirement for graduate students.
- Coordinating with the Registrar's Office and certifying students who are placed on probation or suspended each semester.
- Coordinating with the Registrar's Office for certification of compliance with requirements for degree completion.
- Coordinating with the Registrar's Office for the final evaluation of each graduate student upon completion of their studies and verifying fulfillment of all requirements.

In addition to the functions, the OGS has engaged in activities promoting Graduate Studies on and off campus, participating in graduate fairs organized by some of the higher education institutions in Puerto Rico. As part of the promotional efforts for graduate studies, the OGS has also organized art exhibitions featuring artists from our university community, attracting students, faculty, and the public to our office, where we provide guidance about the graduate programs at the campus. Additionally, the website and Facebook pages are regularly updated to facilitate communication and dissemination of news and activities related to the Office.

- **Office of Immigration Affairs**

The Office of Immigration Affairs is currently under the Deanship of Academic Affairs, and its principal mission is to help and guide all international students, newly hired faculty members, and short-term scholars who study and work at the UPRM. Since 2013 the office is focused exclusively on all matters related to international students, faculty, and short-term scholars. Ms. Janet Estrada, Department of State Officer (DSO), issues Form I-20 to international students admitted to the UPRM, for them to be able to get an entry visa, with F1 classification. Dr. Frances Santiago, PDSO/ARO prepares and submits H1B visa petitions on behalf of scholars that are hired into tenure track positions. She also advises on DS-2019 and the J1 visa for our short-term scholars or postdocs. Dr. Santiago also plays an important role in guiding and advising administrative staff, department chairs, personnel committees, deans, and the Chancellor's office for UPR-Mayaguez and the entire UPR system. Her presentations and orientations on regulatory updates, as well as best practices for the internationalization of Higher Ed, are scheduled regularly throughout the academic year and summer terms.

The vision and mission of this office is to facilitate study and work at the UPRM for foreign nationals making sure that all F1 international students, H1B faculty members and J1 short-term or visiting

scholars are aware of all federal regulations and comply with all bylaws and requirements during their stay within the US territory. It is our mission to stay abreast of all regulations and updates issued by Student and Exchange Visitor's Program (SEVP) for the F1 visa program, United States Citizenship and Immigration Services (USCIS) for the H1b visa program, as well as Department of State (DOS) for the J1 visa program. Other important federal agencies, under the Department of Homeland Security (DHS), that also enforce regulations and provide guidance for foreign nationals studying and/or working in the US or its territories, are Immigration and Customs Enforcement (ICE) and Customs and Border Protection (CBP).

As the Coordinator, Dr. Santiago collaborates with all administrative and academic departments at UPRM and works closely with other dependencies, such as, the Human Resources Office, the Center for Research and Development, the Chancellor's office, UPR legal counsel offices (Central Administration and UPR-Mayaguez), among others. The coordinator is continuously keeping herself updated on current issues and topics as an active member of NAFSA: The Association of International Educators at the regional and national levels. Furthermore, Dr. Santiago is consulted throughout the UPR system, from Central Administration to the other campuses comprising the UPR. She also serves as liaison to private institutions of Higher Education in Puerto Rico collaborating in matters of internationalization and regulatory issues regarding international students, researchers, short-term scholars, and faculty members.

- **Registrar 's Office**

The Registrar's Office at UPRM vision underlines the leadership towards innovative processes and advanced technology promoting the high quality, reliable and accessible services to undergraduate and graduate students as the center and rationale of university life. One of the greatest challenges of the Registrar's Office during the academic year 2022-2023 has focused on the transformation from a paper single form towards the creation of online platforms that allow students to request the services of the Registrar's Office in an agile and constant manner. The Readmissions Area at the Registrar's Office increased their ability in administrative processes and constant access to information, in real time. Also, the area that offers services with UPRM student's transcript reported an increase in digital requests.

For the coming years, the Registrar's Office will continue to look for greater efficiency towards more automated services resulting in creating a path that will provide a straighter forward experience for students and alumni at UPRM. We will continue promoting our collaborative teamwork experience with the Center of Information Technology to pursue the right automation of the Registrar's Office areas to raise the student experience, faculty assistance and administrative support.

- **Resource Center for Distance Education (CREAD)**

With the Certification of the Academic Senate 19-85, the Distance Education Resource Center (CREAD) was officially created in 2016, after 2 years of previous operation under DECEP. Today CREAD is an independent office under the Dean of Academic Affairs of our campus, but always working in synergy with other offices and dependencies such as DECEP, CEP and the Academic Departments.

- **RUMex**

The Dean of Academic Affairs, guided by the strategic plan of the University of Puerto Rico (UPR) 2017-2022, approved the pilot project under certification number 21-46 of the Academic Senate for the development of RUMex on our campus as a modality in academia to expand the schedule of the existing undergraduate, graduate, and distance education offered to nontraditional students.

After the implementation process, the evaluation process was carried out considering the financial restrictions; on December 20, 2022, the Senate institutionalized the Extended University Policy,

RUMex, under the certification of the academic senate 22-98, as an Administrative Unit of the Dean of Academic Affairs.

During the implementation period in the 2022-23 academic year, in the first semester, we had an academic offering of 28 courses, which allowed us to serve an undergraduate student population of 1,318. The courses belonged to the departments of Agricultural Economics, Animal Science, Biology, Social Sciences, Psychology, Economics, Nursing, Spanish, Teacher Preparation Program, Engineering and Information Sciences, and Computer and Industrial Engineering. This allowed the departments to free the total cost of teacher compensation amounting to \$54,906.00, non-teaching compensation of \$6,130.00, teacher salary of \$29,102.23, and wages of \$4,862.00. The department, in return, has a 20% discretionary fund and 30% to the Chancellor's office.

The second academic semester, 2022-23, there were 31 courses. The impact on undergraduate students was 1,519 in courses from the departments of Agricultural Economics, Animal Science, Food Technology Program, Biology, Social Sciences, Psychology, Economics, Nursing, Spanish, Engineering Sciences and Computer Information, Industrial Engineering and Teacher Preparation Program. The cost released to the departments for teacher compensation amounted to \$689,287.00, teacher salary \$34,394.11, assistantship \$682.12, and work study for students of \$4,862.00. The departments as well as the Chancellor received 25% discretionary fund. In certification 22-98 of the Academic Senate on December 20, 2022, there was a change in the percentage of the return to the department and the Chancellor.

These evening and weekend courses serve our student community and is supported by Academic Affairs. The departments facilitate hiring, offering courses, and incentivizing through a return on income, providing liquidity to the departments and the campus in times of economic challenges.

- **Teacher Preparation Program (PPM)**

The Teacher Preparation Program of the University of Puerto Rico at Mayaguez had several initiatives and achievements that are described in this report. Those initiatives and achievements correspond directly to its mission.

- **The Professional Enrichment Center**

The Administrative Board created the Professional Enrichment Center (CEP) to lead and administer the Teaching Strengthening Curriculum. The Curriculum ensures that the new faculty comply with 29 hours of professional enrichment activities; new graduate students and instructors will require 21 hours. Both groups need to complete their hours within the calendar year of admission or employment.

The Professional Enrichment Center held 35 activities -more than 75 hours- for the community, with emphasis on themes of interest for faculty and graduate students to comply with institutional regulations. To collaborate with other offices for faculty and students, CEP accredited more than 20 activities aligned with our mission of improving the quality of education.

Mission

Develops socially responsible, responsive, creative, committed, ethical professionals and leaders with an entrepreneurial spirit and a global focus, and develop creative, research and service work that meets the needs of society. Provides strategic direction and operational support to academic work to offer an education of excellence. Fosters an environment that promotes creativity with innovative and agile programs that incorporate theory and practice. Provides services that help the well-being of our society, our academic community and global economic development. Disseminates the results of creative labor, research, and service activities so that they are accessible to all. Plays an active role in the implementation and development of processes that promote ethics and academic integrity. Continues the appraisal cycles that support the formal processes of institutional investigation and that serve as a basis for the planning and decision-making process.

College of Agricultural Sciences

Executive Summary

For the fiscal year 2022-2023, we continued to face significant challenges caused by the COVID-19 pandemic and Hurricane Fiona, which passed through our island on September 18, 2022. The hurricane damaged the infrastructure and crops of the Agricultural Experimental Station (AES), resulting in delays in achieving the projected goals in research projects. However, thanks to the commitment of our human resources, both teaching and non-teaching staff, the Agricultural Experimental Station continued its research activities. Likewise, the Agricultural Extension Service (PRAES) continued to work diligently to fulfill its mission while improving Strategic Planning and Evaluation processes, restructuring its administrative reporting, and monitoring system, and expanding initiatives to strengthen non-formal education. One of the most utilized tools by the Agricultural Extension Service to continue its outreach work have been virtual platforms, which have allowed for the continued assistance to the needs of farmers and Puerto Rican families, despite limitations imposed by the pandemic and atmospheric events. On the other hand, the Faculty of Agricultural Sciences (FAS), through its academic departments, continued its mission to train professionals who can contribute their acquired knowledge to the development of agriculture in our country.

This annual report presents the various initiatives, activities, and achievements accomplished during this fiscal year. We express our gratitude to all staff members and personnel for their demonstrated commitment during these challenging times.

- **Faculty of Agricultural Sciences**

During the past year, the Faculty of Agricultural Sciences has been working diligently to assess all academic programs and promote them in collaboration with various offices within our college and other campus-wide offices. We have also been implementing new activities and forging partnerships to attract new students. Furthermore, we have continued to improve our physical facilities to enhance our services, and we have established new collaborations with other faculties to introduce new academic programs and offerings.

- **Agricultural Extension Service**

During the period covered by this report, the body of specialists from the Agricultural Extension Service (PRAES) played a vital role within the Faculty of the College of Agricultural Sciences (CAS), offering 16 undergraduate courses with a total enrollment of 325 students and 11 graduate courses with a total enrollment of 56 graduate students. They also had a significant impact on the research program of the CAS. The faculty members of the PRAES served as chairs (n=25) or members (n=36) of graduate thesis committees, impacting approximately 75 graduate students. They also supervised 6 undergraduate special projects. 69 assistantships were awarded, totaling \$295,711 for the specified period. During the reporting period, a total of 15 competitive proposals were submitted to various sources, including CORTEVA, USDA NRCS, MIDA, USDA-NIFA, Extension Foundation, USDA-FS, USDA-NIFA, Southern Research & Education, and National Agricultural Statistics Service. A summary table categorizing these is included. Of the 15 proposals, 11 were approved (\$ 1,366,188), 1 was denied (\$ 49,999) and 3 are pending (\$ 254,998). In terms of income for a particular use, the Pesticide program generated \$98,805, while the Food Safety program generated \$27,344.

Several projects were developed to address community needs such as Community Gardens, Socially Disadvantaged Farmers & Ranchers, Divided by water, united by need: IPM programs for PR & USVI, Integrated pest and pollinator management, "Harvesting Our Future" Banco de Alimentos de Puerto Rico, Food Systems Resilience in Coastal Communities: Fisheries and

Aquaculture in PR, Urban agriculture project developed by the "Centro Paso" in Aibonito and multiple educational activities of the Extension Community Resource Development Education Program. Initiatives to promote an entrepreneurial mindset and leadership among students included the Equity and Social Responsibility Training. Multiple activities aimed at students and young people of school age included 4-H Bug Camp, the educational event "Together... for the greater well-being of our communities" in Patillas, Service at Hogar Padre Vernard, Harvesting the well-being of our childhood, at the Aguada Community, Painting for Others, DropBox 4-H, Teen Leading Chan, Equity 4-H Challenges, 4-H Open House, among many others.

- **Department of Agricultural Economics and Rural Sociology**

The Department of Agricultural Economics and Rural Sociology has integrated the three components of teaching among its faculty: formal teaching, extension or dissemination and research. In addition, the teaching staff of the Department has been characterized by offering services to the academic community, public and private sector and communities. The Department has faculty who have been successful in obtaining competitive external funding and collaborating in various projects of competitive external funds in other Departments of the College of Agricultural Sciences and the Mayagüez University Campus, promoting multidisciplinary research and extension projects.

The undergraduate and graduate programs in this Department are unique in their class in Puerto Rico. The curricula are designed with balanced preparation between the different disciplines. Malleability of the graduate in being able to perform in various professional areas. The acceptance by our graduates in the job market has been excellent, both at the Baccalaureate and master's level. The market recognizes the importance of agricultural economists. The need for agricultural economists is imperative for the agricultural sector of Puerto Rico, as well as in agribusiness (food processors, sellers of agricultural inputs and services, food wholesalers and retailers, economic studies and others). The program has updated and relevant courses. Excellent teaching staff with good preparation in the subject and recognized professional reputation.

Since August 2021, the academic offer for the Master of Science in Agricultural Economics began under the online modality. During 2022-2023, 8 students were admitted for this new modality.

- **Department of Agricultural Education:**

The following initiatives, activities and achievements were carried out in the Department of Agricultural Education:

1. Graduate student Jonathan Irizarry created and worked on social media: Facebook, Instagram, and Twitter to give exposure to the department, promote the achievements of students, teaching and non-teaching staff.
2. Graduate student Bryan Hernandez, as part of his thesis research, managed to create and carry out the "[Agriculture Week Challenge](#)" camp that was a success in the College of Agricultural Sciences.
3. On February 17, 2023, Drs. Janitza Saavedra Lugo, Edly Santiago Andino, and a group of undergraduate and graduate students participated in the "CTE Career Expo and Career Show" at the Puerto Rico Convention Center. Activity that is celebrated as part of the activities of the Assistant Secretary of Career and Technical Education of the Department of Education in February, in the occupational month. They were representing the College of Agricultural Sciences RUM and Department of Agricultural Education - UPRM, informing students and teachers about our academic offerings.

Mission

To develop new technologies through education, research, and extension to innovate in the production of agricultural inputs and products for humans and animals through economically viable, sustainable, safe, and global agriculture that contributes to the improvement of the quality of life of society.

College of Engineering

Executive Summary

In its more than one hundred years of history, the College of Engineering of the University of Puerto Rico at Mayagüez has established itself as one of the main centers of engineering education in the United States. In the last twenty years, the College of Engineering has begun to strengthen its position in research, an essential complement to strengthen teaching in technical disciplines, while the university has received recognition for the level of activity and quality of research.

During the academic year of 2022-23 the College of Engineering accomplished significant advances centered on one fundamental goal: Improving our Students' Educational Experience. This goal involves not only increasing the quality, quantity and comfort of the physical spaces available to our students, but also improving the pertinence, and quality of our academic programs. In this section we summarize the most significant achievements.

- ***Undergraduate Programs***

As part of the continuous improvement processes required by our accreditation agencies such as ABET, we have continued the collection of data required to assess student learning outcomes. As a result, all our curricula have undergone significant improvements. Many of our curricula were restructured to allow students to graduate in the five years expected by our engineering programs. The College of Engineering requested the creation of new courses in Spanish by the Hispanic Studies Department to improve our students' written and verbal communication skills as required by our student learning outcomes. Two new courses were created and integrated into all our Engineering curricula. A homologous effort is in progress with the English Department which is expected to be completed in academic year 2023-24.

- ***Graduate Programs***

The College of Engineering continued the development of new graduate programs in areas of high potential for the creation of intellectual capital that will contribute to the formation of a well-prepared human capital, necessary for a fast-paced economy based on innovation and information. The new MS/PhD program in Software Engineering was approved by the College of Engineering and sent to the Academic Senate where it was already positively recommended for approval by the pertinent committees of Curricular Affairs and Academic Affairs. The program is expected to be considered during the first Senate meeting in August 2023. The Department of Industrial Engineering continued the development of a new PhD program in Industrial Engineering expected to be approved at the department level in early in the fall of 2023. A new 5+1 BS/MS Honors Track was approved by most of our departments and is expected to be considered by the College of Engineering assembly early fall 2023.

- ***Academic Laboratories***

Year 2023-24 will begin with one of the largest incoming Engineering cohorts. To appropriately support our students' learning experience, we began expanding academic laboratories beginning with the Department of Mechanical Engineering, the department with the largest increase in admissions from about 175 to 250 students. We made an investment of over \$400K to acquire 6 new CNC manufacturing machines and we are in the process of expanding the Manufacturing Laboratory (Luchetti L-100) to offer more parallel lab sessions to our students. The

renovation of L-100 should be completed in the fall of 2023. Similar efforts will be initiated in the other three ME labs: Mechatronics, Materials, and Thermal Sciences.

- **Student Collaborative Spaces**

The College of Engineering achieved significant advances to increase the quantity and quality of our students' collaborative spaces. A new collaborative lounge with an open terrace (L-235), as well as a newly renovated study room (L-118) will be inaugurated early in the fall of 2023. The construction of a new open plaza in the Chemical Engineering Building was completed and the plaza is expected to be inaugurated in early fall of 2023. A new roof will be installed in the Civil Engineering building to allow students to work on their materials laboratory and their special projects 24-7. The special projects facilities (a.k.a. Monkey) are undergoing significant renovations which are expected to be completed in 2023-24. Some of these improvements have been achieved with the support of donations by companies such as Chevron.

- **Research Facilities**

Thanks to grants from the DoE and the Puerto Rico Science and Technology Trust we expect to complete the installation and begin training and operation of a new Renishaw 3D metal printer in the Industrial Engineering model manufacturing plant.

- **Faculty Development Program**

The College of Engineering continued its faculty development program offering our faculty the opportunity to renew their knowledge and skills by carrying out diverse activities such as taking in-person and remote courses, attending scientific conferences, presenting their scientific results, among others. These efforts have already begun to show results such as the recent approval of an NSF \$700K research grant to Dr. Yomaira Pagán from the Chemical Engineering Department.

The remainder of this report includes additional details about this, and other initiatives carried out during the academic year 2022-23.

Mission

The College of Engineering mission is to provide citizens to our society able to think critically, be professionally prepared in engineering and related areas, and capable of exercising leadership positions to contribute to the cultural, social, economic, scientific and technological development of our immediate environment, Puerto Rico and the rest of the world. At the same time, it is the mission of the College of Engineering, the creation and dissemination of scientific knowledge, innovation and adaptation of technology for the benefit of society in general with emphasis on Puerto Rican society.

Our commitment is to prepare the best professionals in engineering and related areas, and be a major center for research, publications and service for the technological development of Puerto Rico, the U.S., the Caribbean, Central and South America.

College of Business Administration

Executive Summary

The academic year 2022-2023 was a great year. On July 8, 2022, we started the academic year with the visit of Dr. John Williams, President of the New York Reserve Bank. We also celebrated the Doctor Honoris Causa of Professor Ángel Luis Rosas Collazo, our first Dean. The personnel united to work in the continuous improvement of the College of Business Administration (CBA) to change our mission. Our mission until December 14, 2022, was to "Prepare qualified graduates for the business world through a comprehensive education of excellence and the promotion of locally and internationally recognized research." After a comprehensive work that combined class work of Dr. Edgar Soto and his students and his workshop with faculty and non-faculty personnel, the

new mission is "To impact society by transforming students, professionals, and organizations in the field of business through the provision of academic, practical, research, and community service experiences."

We achieved most of our Strategic Plan goals (67% done and the rest partially done). Some of our most relevant initiatives were updating our strategic bases, community improvement initiatives, student participation in competitions and extracurricular academic activities, dissemination of achievements, and the AACSB accreditation process. We have challenges like Hurricane Fiona, but the community help and donations allow us to help students and personnel. We also had initiatives to sustain a high-quality academic offer, increase enrollment, obtain financial stability, and improve infrastructure.

Sustaining a high-quality academic offer sufficient in quantity was a challenge due to tenure-track faculty size. Each semester, we must hire a faculty to cover more than half of our academic offer. Some of our initiatives in this area were to improve the curriculum and training of professors, complement courses with Coursera and Certiport online professional certifications, and increase active learning experiences. During 2022-2023, two hundred and twenty (220) students, as part of a class, finished a professional certification, and 146 completed at least one course. We had lessons with active learning activities in all disciplines. Another accomplishment was the increase of companies participating in the spring and Autumn CBA job fairs and weekly visits.

Sustain enrollment was also challenging due to a decrease in the population of university-ready students in Puerto Rico, high competition, and no budget for recruitment and retention. The initiatives in this area were to give three credits to a non-tenured track faculty member to work on recruitment and retention, increase website and social media presence, and integrate associations and the CBA student council (CADEM in Spanish) in enrollment efforts. The results were positive, with an increase in undergraduate and graduate applications. The new students have the highest GPA compared to previous years. To increase retention, we teamed with Dr. Roberto Rivera, professor of statistics at the Mathematics Department, to research ways to detect students who might not continue in their programs.

A third area was to sustain financial stability beyond the government budget. Although the CBA has maintained the same number of courses, we have suffered significant cuts due to decreased regular employees and appropriation for the retirement account. The budget does not include funds for employee training, student competitions, student recognition activities, honor students' incentives, emergencies, research, and research dissemination, and it has limited funds for materials, student journals, and maintenance. CBA initiatives to obtain funds by providing training and services to organizations, grants, and donations. The results are that all our community projects are self-financed. Our main grant projects are the Business and Economic Development Center¹, Área-E Incubator and Accelerator², CRECEN Workforce Development, and NPO-SIED³. Those projects finance non-faculty employees, student journals, and assistantships more than the general fund. They also fund the buy time of seven professors. Our continuing education unit, also self-financed, increased revenue compared to the previous year. Finally, compared with last year, we have increased the amount of donations received in cash and in-kind.

The most significant infrastructure improvements were a new recording studio, the Auditorium audio system upgrade, and our building's painting. Students and personnel chose the color combination. The work done during 2022-2023 was thanks to the community of internal and external stakeholders committed to high-quality higher education, knowledge search and dissemination, and service to the community. Thanks to students, professors, staff, associations, alums, and companies that supported our initiative. I end my three-year-deanship with a sense of achievement, camaraderie, and hope for a better future for our students, personnel, alums, and partners.

Mission

To be the best option in Puerto Rico for the best students, professors, and recruiters in Business Administration.

College of Arts and Science

Executive Summary

The College of Arts and Sciences has 14 departments offering 44 undergraduate and graduate academic programs. In addition, we have an interdisciplinary undergraduate program in industrial biotechnology. The annual work by these departments actively contributes to the mission of our institution. During the 2022-2023 academic year, all departments carried out multiple initiatives of teaching, research and creative work that are summarized in a very limited way in this report. However, the wide dissemination of these important achievements and events can be accessed in several ways. One of them is through the website of the Deanship (www.uprm.edu/arci/), which allows to know more details of the departmental initiatives. We also have an information technology person, who gives the appropriate maintenance to the page and facilitates the use of other technologies for the dissemination of the different initiatives. The Deanship also has a Facebook page where events and information of general interest are published. This allows for more outreach to the university community, as well as others off campus. One of the main activities carried out by the departments has to do with the culture of strategic planning and appraisal. Each unit has a planning committee and an assessment coordinator who facilitate the work according to the needs. Some of their important tasks are reported here, highlighting the work related to the revision of strategic plans and the assessment of student learning. The ACEN re-accreditation process for the Bachelor of Science in Nursing was successfully completed and the program was accredited for eight more years. It is also important to highlight the efforts made to improve academic offers and faculty recruitment. Regarding the objective of guaranteeing the best education to our students, all departments are carrying out curricular revisions that will allow our programs to be more competitive and modern. This task has included the review of courses, sequences and complete programs. A new academic program, Master of Arts in English Literatures (MAEL) was approved. Distance education has been strengthened through different initiatives, including the preparation of classrooms with appropriate technology to have face-to-face and remote students at the same time. Professors from different departments organized or participated in events that positively impacted our students. On the other hand, the different units of our Deanship have continued their efforts to increase and diversify their sources of revenue. That includes the search for private donations, research proposals, services provided such as educational talks and workshops, use of facilities, writing books, RUMex courses, continuing education programs and intramural practice. In addition, departments have made efforts to achieve more agile and efficient administrative processes. This included continuing to improve communication mechanisms, automation and digitalization of processes, staff training activities, paper reduction policies, updating forms, self-studies, and administrative assessment projects. Here we can highlight the great effort to continue incorporating signature collection processes through the Sign Request platform. This has greatly reduced the volume of paper, resulting in savings. The departments have made multiple efforts to strengthen research and creative work. Several proposals for external funding were submitted and approved as described in this report. In addition, various activities were carried out to disseminate the work, such as peer-reviewed scientific publications, books, and virtual events. The social impact of the various efforts made by our departments was demonstrated through collaborations with the University Institute for the Development of Communities, educational talks to various groups, activities of student associations, Mathematical Olympiads, Summer Camp, Open House, collaborations with the municipality of Mayagüez and other private non-profit entities, tutoring activities, radio interventions, voluntary consultancies, activities of the Seismic Network, among many others. The strengthening of the school spirit, pride and identity can be seen reflected in various activities, such as the celebration of anniversaries and those carried out by student organizations. Our teachers and students have proudly represented our campus in various local and international activities such as congresses and competitions. Several

departments organized activities to recognize the effort of our honor roll students. In various events, such as exhibitions and artistic creations, students had a leading role in which they demonstrated their talent to the entire community. International activity was also present in our efforts through collaborative agreements, internships, and participation of students and professors in symposia, workshops and congresses, among others. A large community of international students and faculty is also part of our programs. In summary, the great richness and diversity that exists in the College of Arts and Sciences demonstrates our strong commitment to continue strengthening the academic excellence of the programs.

Mission

Provide excellent service to Puerto Rico and the world:

- Forming educated citizens, capable of critical thinking and professionally prepared in the arts and sciences so that they can contribute in educational, cultural, social, technological, and economic development.
- Perform creative work, of research and service, that meets the needs of society and divulge the results of these activities so they can be accessible for everyone.
- Provide our students with the necessary skill and sensitivity, to effectively solve the problems we face and be an example of the values and attitudes that must prevail in a democratic society that values and respects diversity.

Research and Development Center

Executive Summary

During Year 2022-2023 fiscal year there has been various changes for the UPRM R&D Center. On January 2023 there was a change of Director from Dr. Manuel A. Jiménez Cedeño to Dr. Samuel P. Hernández Rivera who was assign as Acting Director as of the end of the FY (June 2023). There have been some of events that were challenging to the Center, in which there can be characterized during the closing year, having to mention several changes in its personnel, the multiple interruptions caused by natural phenomena, student and staff manifestations that introduced delays in all center reporting processes. At the same time, important events that helped advance the center goals were achieved, backed by the consistent activity of our researchers in developing successful proposals that advanced the edge of knowledge in different fronts.

At the same time the center is working on the implementation of Streamlyne as the main research administration tool to replace the aging Kualí Coeus system. This development, once completed, is slated to positively impact processes in both pre- and post-award divisions. A new in-home developed tool for tracking financial reporting status was introduced late this year along with a mitigation plan to reduce the number of delayed financial reports. Preliminary results for the April-June period revealed a reduction of 46% in the reporting backlog, shedding light on a solution with the potential of addressing this problem in an effective manner. Reading the different sections of this report will reveal the different fronts in which the center has continued to grow. The milestones reached throughout this year are the result of the dedicated work of a diverse work team where directors, supervisors, and staff have given their best effort to continue improving the center operation

Mission

Promote, develop, and facilitate creative work, research, and development at UPRM, and promote the technological, economic, and social good of Puerto Rico, in collaboration with the government, nongovernmental organizations, and the private sector.

RUM's Profile

Enrollment

For the 2022-2023 academic year, the overall enrollment of the Mayagüez Campus was 11,062 students. Of these, 10,201 were undergraduate students and 861 were graduate students. Below are some relevant data regarding this year's enrollment versus year 2021-2022:

- With respect to that year the total enrollment decreased by 8.77% (1,064 students).
- In the same period, graduate enrollment decreased by 2.15% (19 students).
- The undergraduate enrollment of the College of Engineering showed a decrease of 271 students enrolled, which corresponds to 5.48% compared to last year.

Figure 1 and Figure 2 illustrate the distribution of undergraduate and graduate enrollment at the Mayagüez Campus.

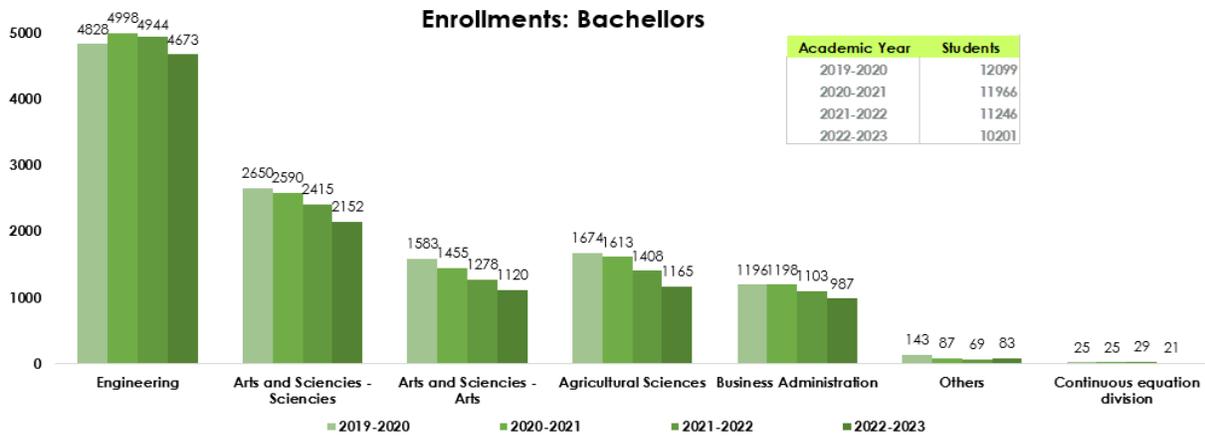


Figure 1 Undergraduate enrollment behavior

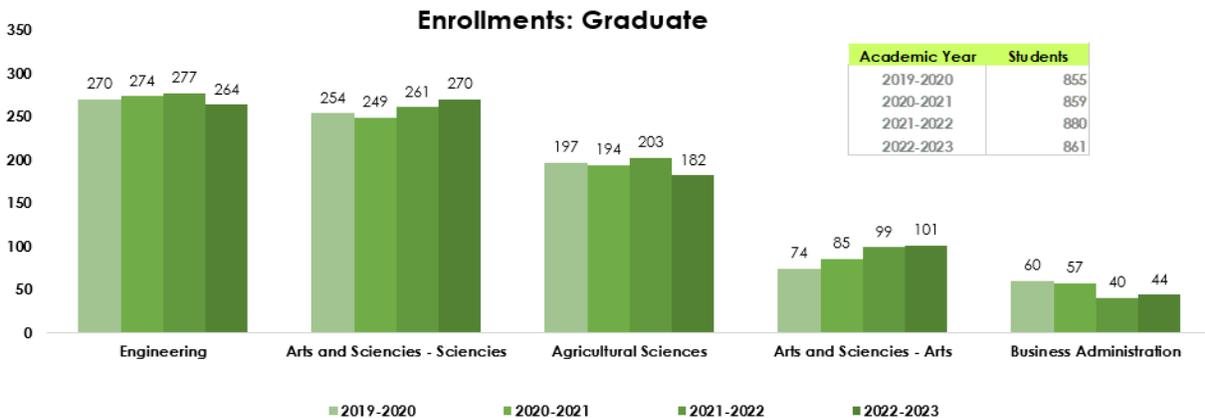


Figure 2 Graduate enrollment behavior

Figures 3 to 7 present the distribution of enrollment, at the undergraduate level, by academic program for the faculties of Engineering, Agricultural Sciences, Business Administration, Arts and Sciences. Some relevant data when comparing the enrollment for the 2022-2023 academic year with respect to the previous academic year.

The programs with the highest number of enrolled students are Mechanical Engineering (1022) and Biology (705) with 10.02% and 6.91% of undergraduate enrollment, respectively.

Enrollments Bachelors: Engineering

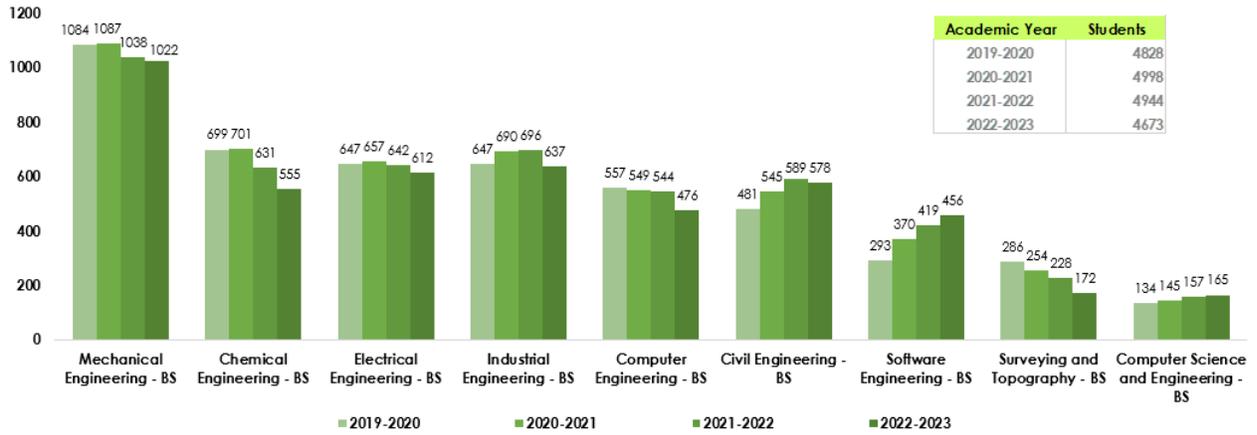


Figure 3 College of Engineering Undergraduate Enrollment Behavior

Enrollments Bachelors: Agricultural Sciences

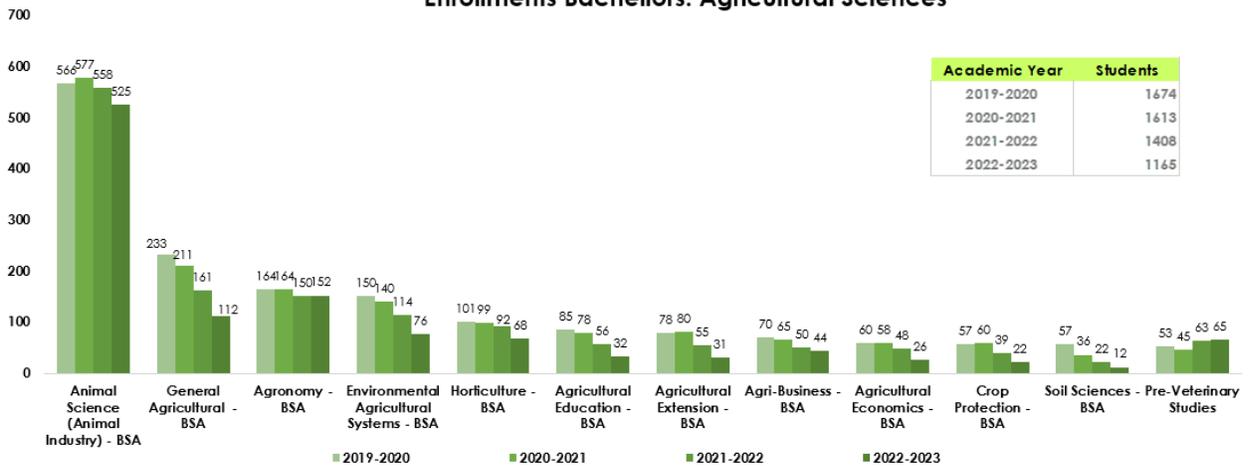


Figure 4 College of Agriculture Undergraduate Enrollment Behavior

Enrollments Bachelors: Business Administration

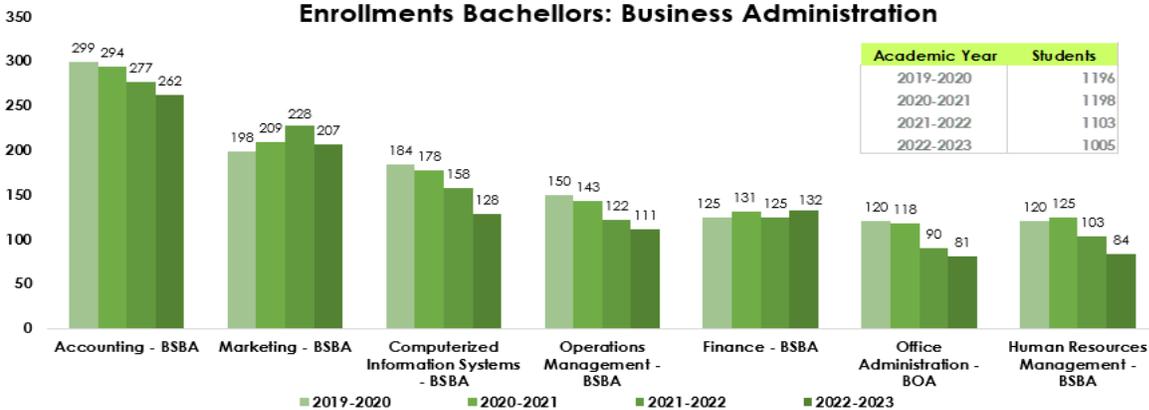


Figure 5 College of Business Administration Undergraduate Enrollment Behavior

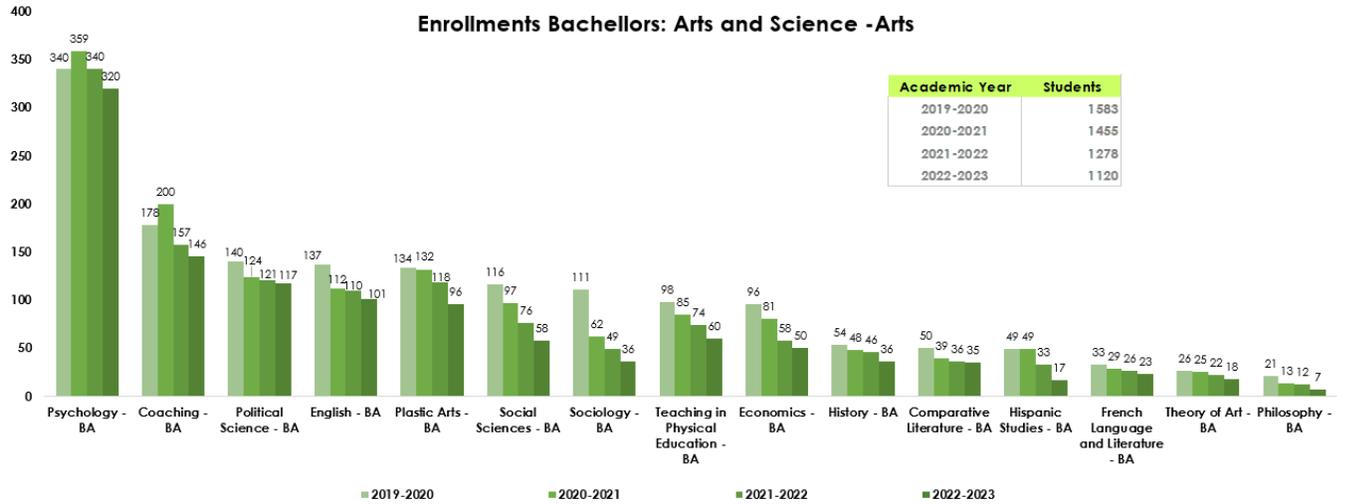


Figure 6 Arts and Science College -Arts Undergraduate Enrollment Behavior

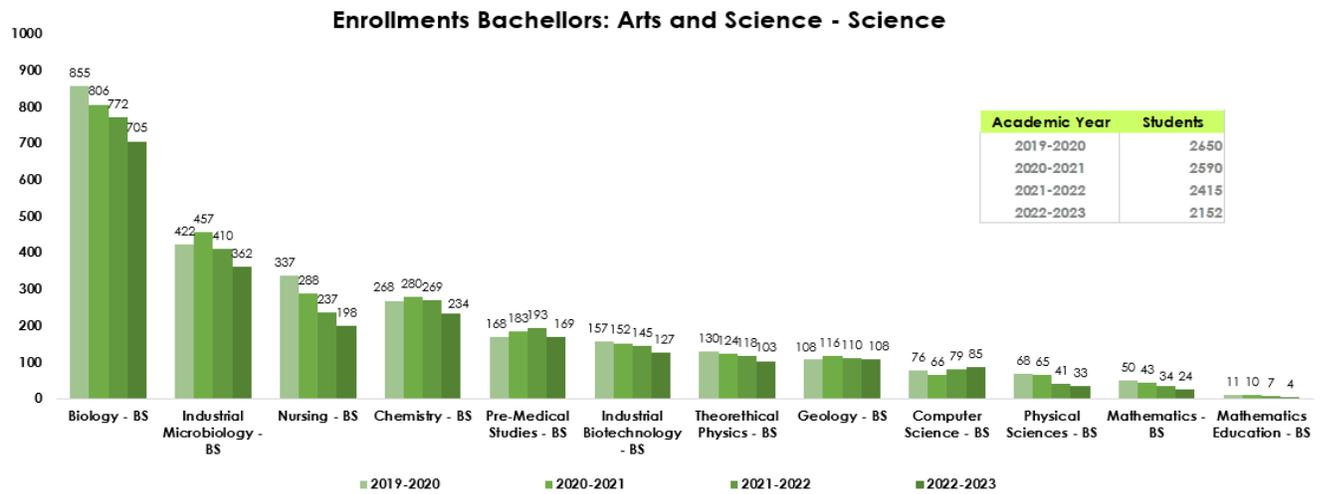


Figure 7 Arts and Sciences College - Sciences Undergraduate Enrollment Behavior

Figure 8 below illustrates the enrollment distribution for non-degree programs. During the past academic year 2021-2022, 69 students were enrolled in one of these programs. There was a 20.28% increase from the previous year (14 more students). The students enrolled in this type of program belong to the Secondary Education Course Program, Teacher Certification - CIAG, Transient, and High School Special.

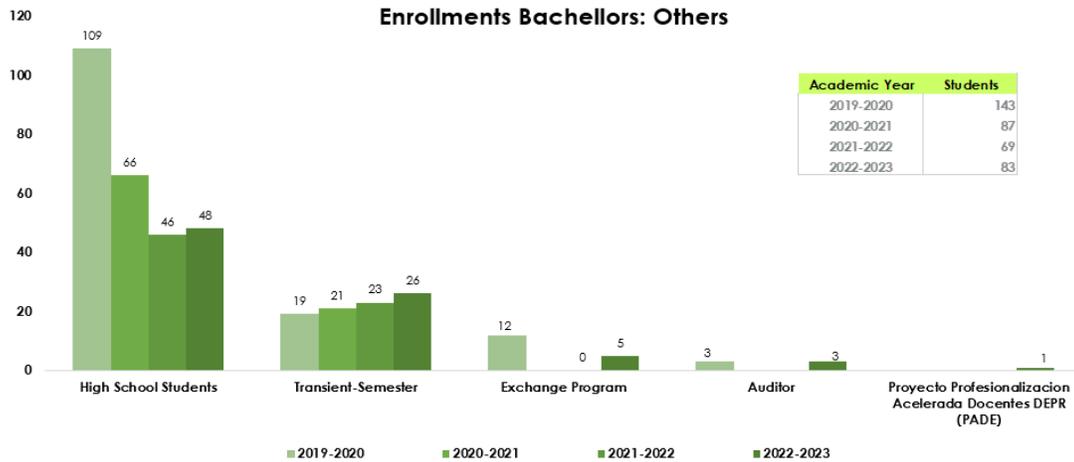


Figure 8 Non-degree programs enrollment behavior

Awarded Degrees

The total number of degrees awarded during the 2022-2023 academic year was 1934, a stable trend with respect to the previous year which conferred 2007 degrees. The degrees are distributed as 1,746 bachelor's degrees and 188 graduate degrees (164 master's degrees and 24 doctoral degrees). Figures 9 -11 illustrate the total number of degrees by faculty for bachelors, master's and doctoral degrees respectively.

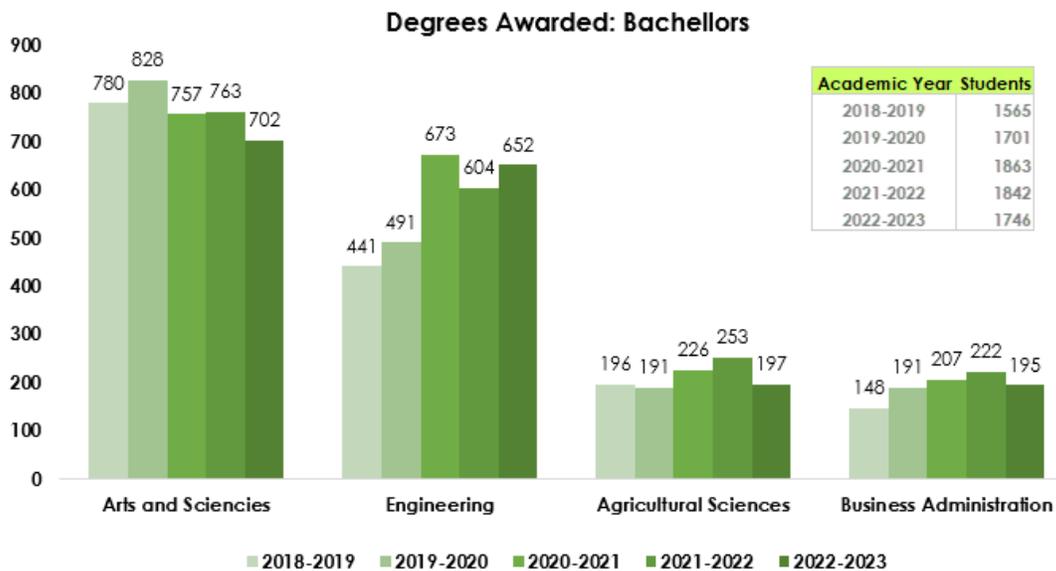


Figure 9 Bachelors Awarded Degrees

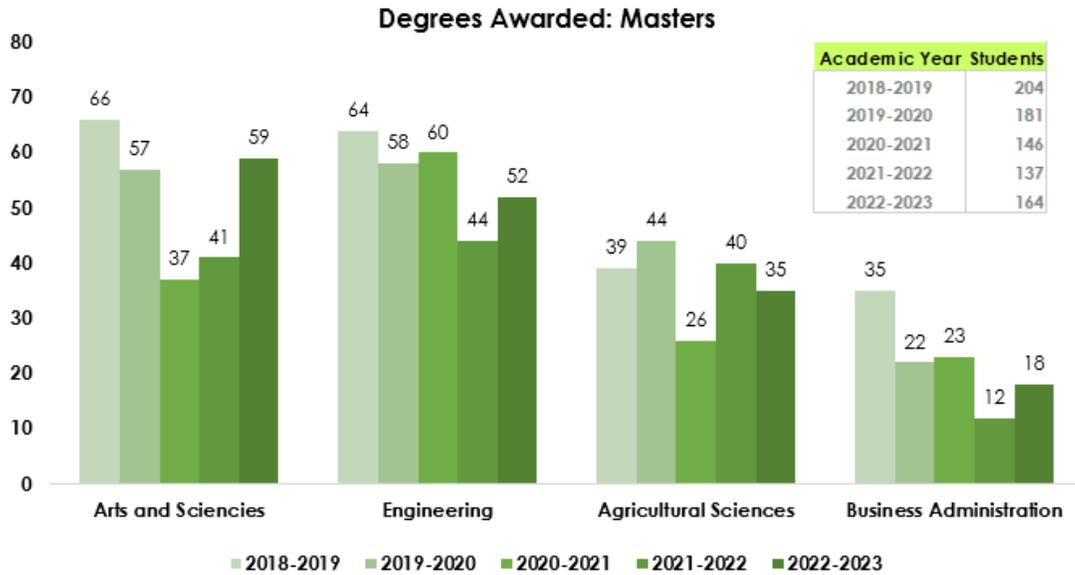


Figure 10 Master Awarded Degrees

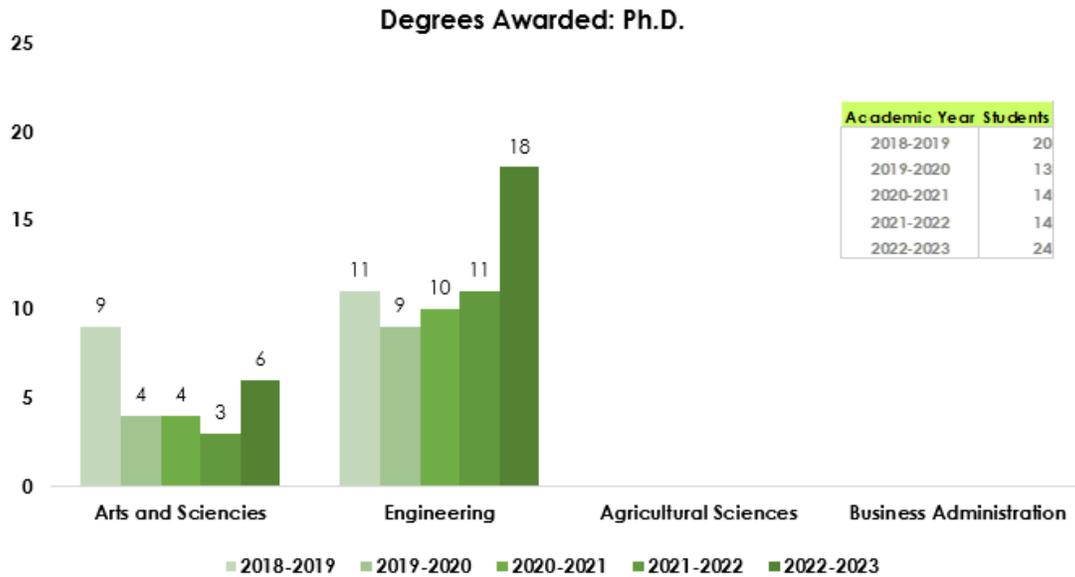


Figure 11 Ph.D. Awarded Degrees

New enrollment

In the 2022-2023 academic year, a total of 4,322 students applied for admission to the Mayagüez Campus, of which 2,350 were admitted. This number represents 54.37% of the applicants. There was a 9.09% decrease from the previous year in the number of applicants (432 students), and a

0.13% increase in the number of students admitted (3 students). Of the admitted students, 57% of the students are from private schools, demonstrating an increase in private school participation compared to the 2021-2022 academic year. The minimum IGS value of the admitted students was 207, lower than the minimum IGS value of the previous year (228). Figure 12 illustrates this distribution.

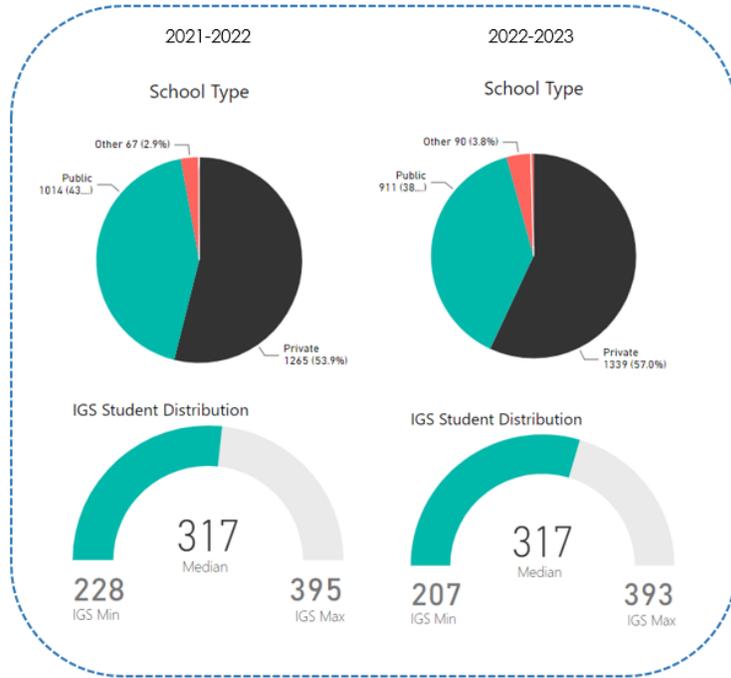


Figure 12 New Enrollment Distribution

Of the admitted students, a total of 1,697 completed the enrollment process, this amount is equivalent to 72.21% of the admitted students and represents a reduction of 7.47% with respect to the total number of students enrolled compared to the 2021-2022 academic year (1834 students). Figure 13 illustrates the distribution by faculty of incoming students, coming from high school, for the past 5 academic years.

New Enrollment

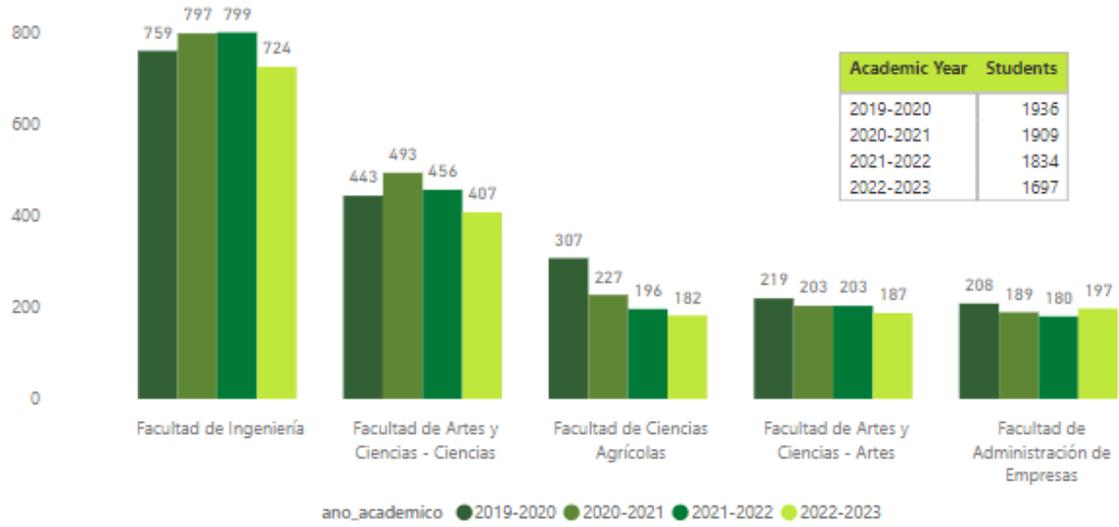


Figure 13 New Enrollment Distribution

Graduate Program Academic Offerings

College of Business Administration

Masters (MBA)

Business Administration
Human Resources
Industrial Management
Finance

College of Science

Masters (MS)

Biology
Marine Sciences
Mathematical Sciences

- Scientific Computing
-Applied Mathematics
-Statistical Mathematics
-Pure Mathematics
-Teaching Mathematics at the Pre-
University Level

Physics
Geology
Chemistry

Ph.D.

Marine Sciences
Applied Chemistry

College of Agricultural Sciences

Masters (MS)

Agronomy
Animal Sciences
Food Science and Technology
Agricultural Economy
Remote Agricultural Economics
Agricultural Education
Agricultural Extension
Horticulture
Crop Protection

Soils

Ph.D.

Tropical Agriculture

College of Engineering

Masters (MS)

Bioengineering
Materials Science and Engineering
Civil Engineering
Computer Engineering
Electrical Engineering
Industrial Engineering
Chemical Engineering
Mechanical Engineering

Ph.D.

Bioengineering
Computer and Information Science
and Engineering
Civil Engineering
Electrical Engineering
Chemical Engineering

Mechanical Engineering

College of Arts

Masters (MA)

English Education

Cultural and Humanistic Studies
Hispanic Studies
Kinesiology
English Literature
School Psychology

Ph.D.

School Psychology

Budget

The budget for the year 2022-2023 was \$124,770,287.00. The distribution of these funds by expenditure items is illustrated in Figure 14:

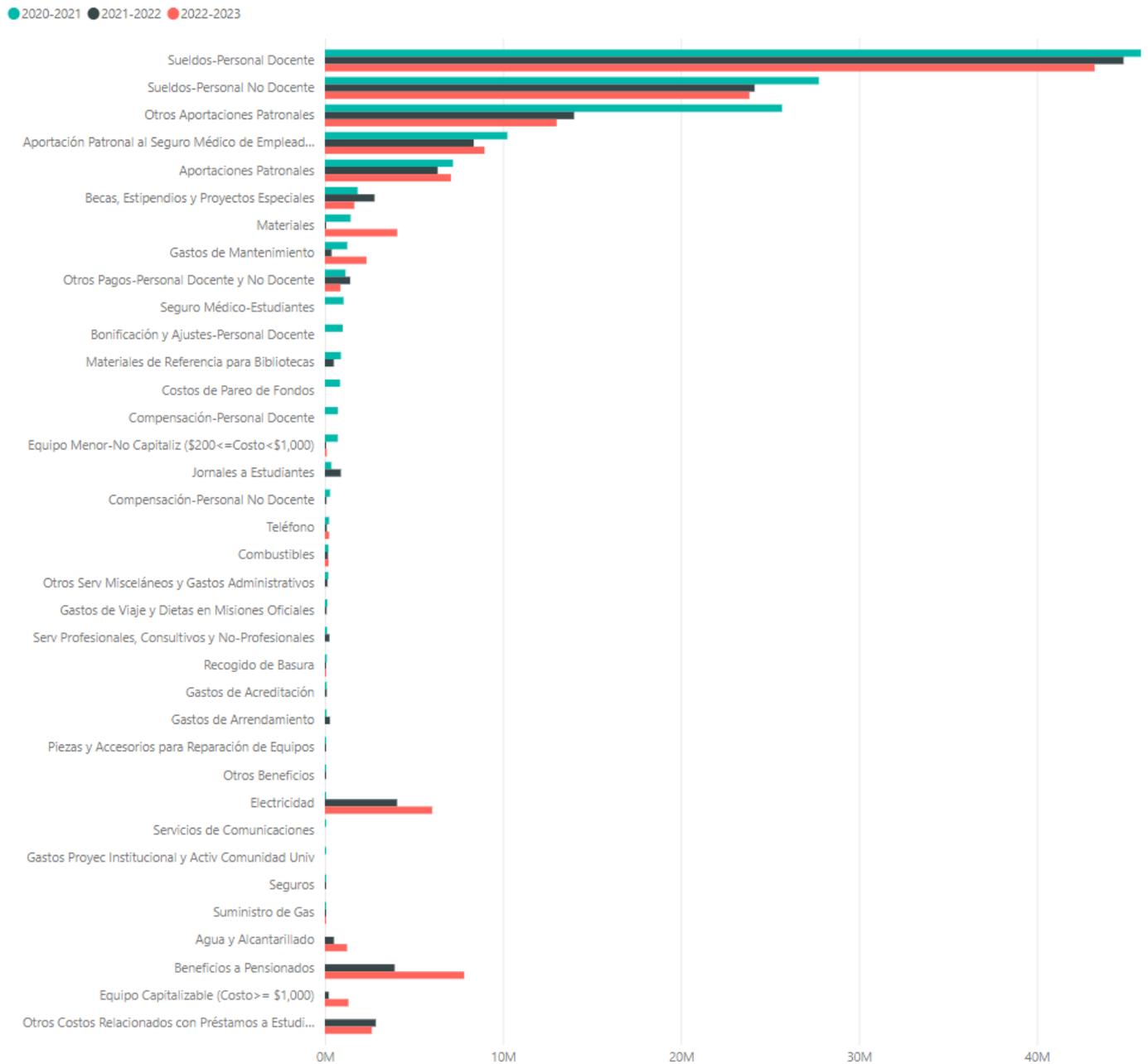


Figure 14 Budget per Description

Objective 1: Institutionalize a culture of Strategic Planning and Evaluation

Institutionalizing a culture of strategic planning and assessment has been a central objective for the University during the 2022-2023 year, aiming to enhance transparency and data-driven decision-making. Achieving this objective involved several key initiatives and accomplishments across various departments and faculties.

To begin, the Office of Planning, Institutional Research, and Management Information (OPIMI) played a crucial role in maintaining updated institutional metrics accessible through web-based statistical products. These initiatives included statistics, interactive compendiums, and a new platform in Power BI named "UPRM in Numbers." This enhanced accessibility empowered the university community to engage with valuable data more effectively. Additionally, OPIMI automated statistical reports, optimizing efficiency and reducing the effort required.

Under the Deanship of Academic Affairs and the General Library, data-driven enhancements were integrated into service enhancements. Ongoing data collection evaluated library usage, leading to adjustments in service hours and improvements in unit performance. Patron experiences were assessed through questionnaires, aligning with ACRL standards and IPEDS requirements, facilitating a continuous cycle of improvement.

The Agricultural Extension Service demonstrated precision and efficiency through the Information System of Agricultural Extension Service (SISE). User feedback drove continuous enhancements and restructuring simplified reporting processes. Accessibility to data collection platforms for Extension users further enriched the experience.

The College of Agricultural Sciences (CAS) exemplified commitment to planning and evaluation through the Strategic Planning and Evaluation Committee. This year, a focused assessment on "Student Learning Outcome number 1 (SLO #1) - Demonstrates purposeful and continuous learning" was undertaken, involving hundreds of students across relevant courses. The Faculty of Agricultural Sciences also developed draft educational outcome objectives to guide assessment and program development.

Departments like Economics, Kinesiology, Nursing, and Physics made strides in assessment. From student surveys to program evaluations, their efforts yielded valuable insights for program enhancement. Engineering departments introduced streamlined assessment processes for Student Outcomes (SOs), integrating performance indicators and rubrics to evaluate student proficiency. Similarly, the Research and Development Center's PAC Office ensured compliance, while the Museum of Art and Sciences (MUSA) revamped its mission and strategic plan to align with evolving dynamics.

The collective commitment to institutionalizing planning and assessment underscores the university's dedication to continuous improvement, data-driven decision-making, and the enhancement of the university experience for students, faculty, and staff.

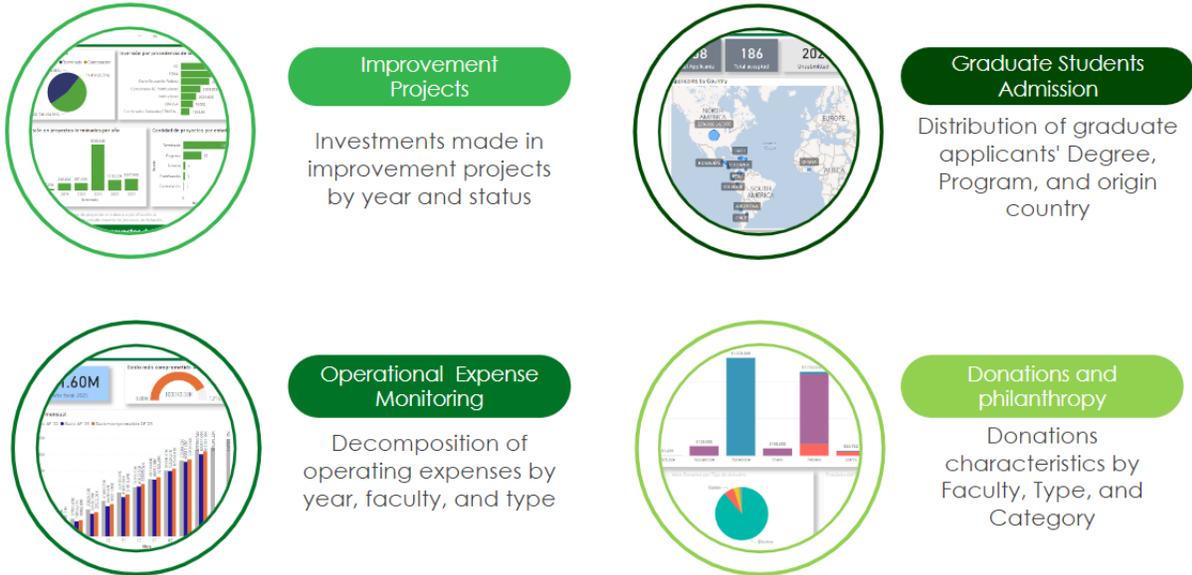
1.1 Maintain up-to-date and visible institutional metrics

Institutionalizing the culture of planning and assessment begins with ensuring the visibility and maintenance of data. This fundamental objective has been realized across various Deanships and University Faculties through a series of initiatives and accomplishments during the 2022-2023 year. The following are the initiatives and achievements that are part of the University's work during this year.

During the year 2022-2023, **OPIMI** provided relevant information for the appraisal of all academic units through its various statistical products accessible through the web page, particularly:

- Statistics
- Interactive Compendium
- UPRM in Numbers - launching the new platform in Power BI

In addition to keeping the University statistical products updated and accessible, during this year, OPIMI's office created the following interactive dashboards in Power BI to disseminate the following topics of interest to the university community: Improvement Projects, Graduate Students Admission, Operational Expense Monitoring and Donations and Philanthropy shown in Figure 15.



Improvement Projects

Investments made in improvement projects by year and status

Graduate Students Admission

Distribution of graduate applicants' Degree, Program, and origin country

Operational Expense Monitoring

Decomposition of operating expenses by year, faculty, and type

Donations and philanthropy

Donations characteristics by Faculty, Type, and Category

Figure 15 Developed Dashboards



Improvement Projects



Figure 16 Improvement Projects Dashboards



Graduate Students Admission

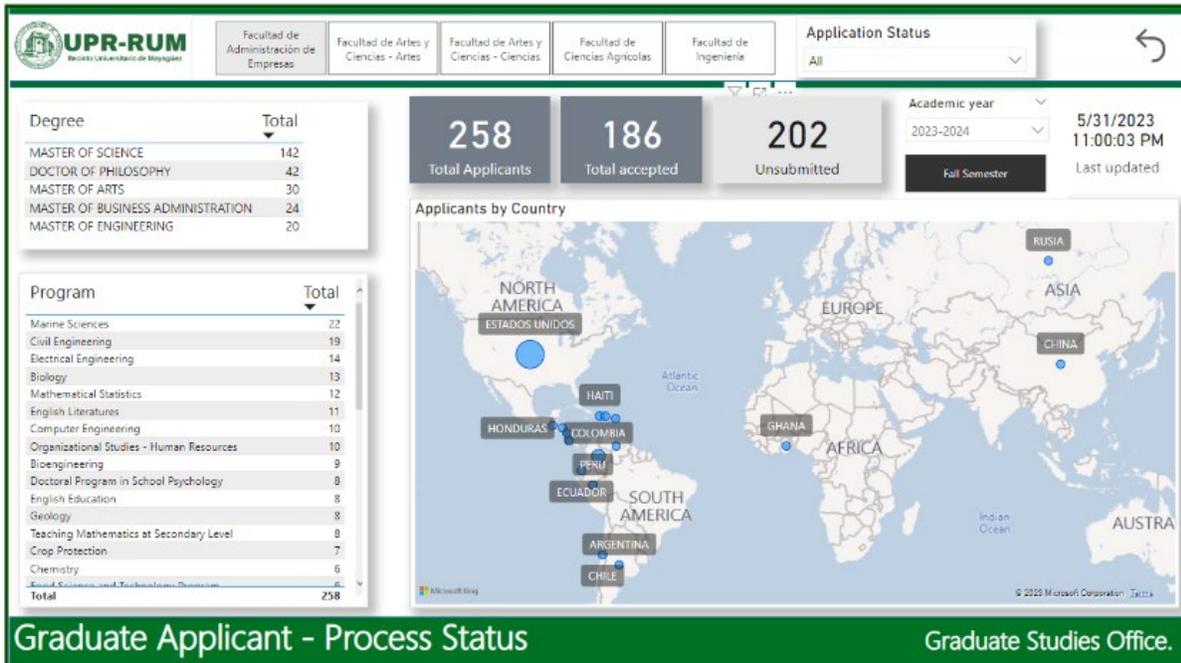


Figure 17 Graduate Students Admission Dashboard



Operational Expense Monitoring

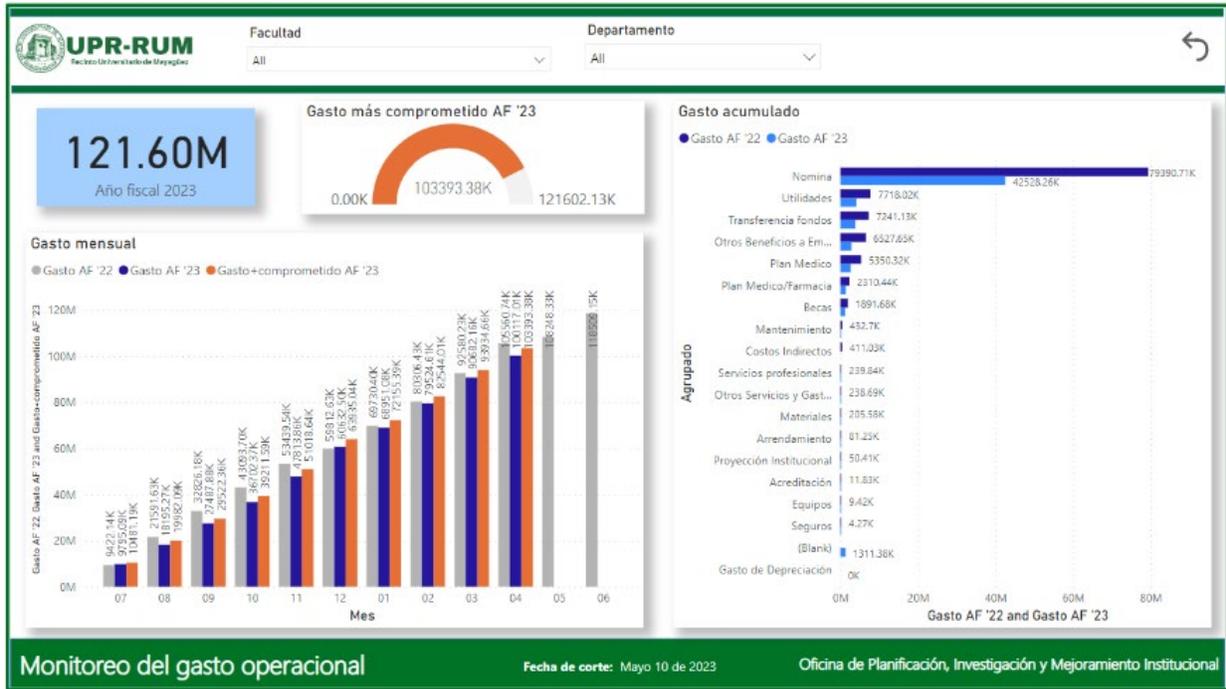


Figure 18 Operational Expense Monitoring Dashboard



Donations and philanthropy

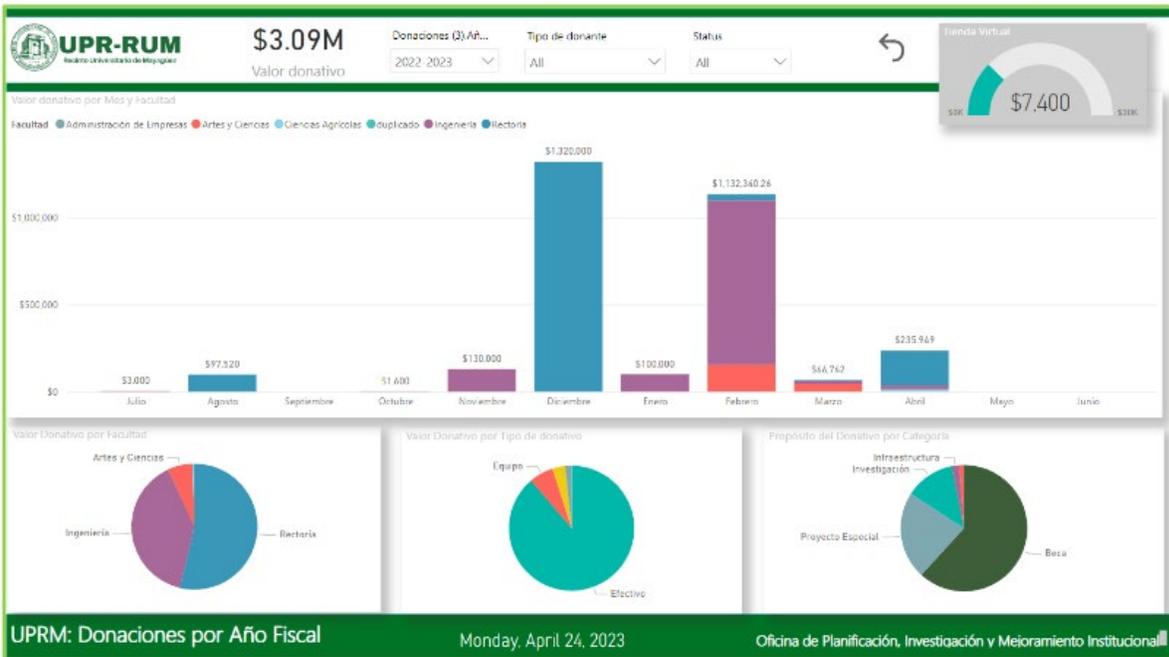


Figure 19 Donations and Philanthropy Dashboard

Deanship of Academic Affairs

Within the Deanship of Academic Affairs and the **General Library**, a data-driven approach underscored service enhancement. Continuous data collection of usage and visits across departments and collections facilitated the evaluation of service hours and unit performance. Questionnaires administered each semester, gauged patron experiences regarding consultation services, library spaces, and facilities. Aligned with ACRL standards, this data proved instrumental in completing the ACRL and Integrated Postsecondary Education Data System (IPEDS) questionnaires. Furthermore, action plans were strategically established in alignment with unit objectives, the General Library's mission, and the institutional strategic plan. End-of-semester questionnaires evaluated the attainment of established goals, promoting an ongoing cycle of improvement.

In the **Agricultural Extension Service** domain, a focus on precision and efficiency guided efforts. User feedback from the Information System of Agricultural Extension Service (SISE) prompted continuous enhancements in production, efficiency, and achievement indicators. The restructuring of SISE to accommodate the new NIFA reporting format (NRS) streamlined reporting processes. By grouping indicators under specialized programs, the complexity was significantly reduced, mitigating previous challenges.

In addition, data collection platforms were made accessible to Extension users in specific program areas, and support persisted for long-standing platforms like AMRN (PAGRI). The CASEA committee's commitment to statistical analysis was exemplified by hiring a specialized graduate student to analyze CASEA digital data. This analysis, now shaping into a publication, will empower PRAES faculty members to identify needs effectively at varying levels.

1.2 Develop an Assessment Plan that covers both the performance of internal processes and the effectiveness of the teaching-learning process.

In the realm of higher education, the commitment to excellence is manifested through a relentless pursuit of continuous improvement, where data-driven decisions lay the foundation for progress. The annual report encapsulates a myriad of initiatives undertaken across diverse departments and offices within the university, all aimed at refining processes, enhancing educational experiences, and aligning with strategic objectives. These endeavors span multiple disciplines, ranging from academic affairs to library services, administrative functions, and beyond. A synthesis of these multifaceted efforts provides a holistic view of the institution's dedication to cultivating a culture of assessment and advancement.

Deanship of Administration

The Dean of Administration Office organized activities with its nine departments to promote a culture of strategic planning and assessment. Bi-weekly meetings were held with directors to encourage interaction, streamline processes, prioritize issues, and enhance monitoring, teamwork, and identification of areas of improvement. These initiatives included: periodic meetings with supervisory staff to identify and address strategies impacting their processes, revision of Traffic and Parking Regulations, conform the Students Right to Know and Campus Security Act producing monthly reports, programming building periodical visits and preventive surveillance to maintain awareness of campus security, communication system testing, training for security officers and other personnel, and conducting service surveys to internal and external customers.

Deanship of Business Administration

The Deanship of Business Administration changed its mission aided by workshops and activities supported by their professors, students, and non-faculty personnel. An example of the updated metrics was the MBA Assessment Plan Review, which was restructured, identifying the course ADML 6816 – Capstone Experience to carry out the assessment exercise.

Deanship of Academic Affairs

The **General Library** personnel collaborated with the Technical Processes Department led to the comprehensive evaluation of resources, located on the fourth floor, discarding those in poor condition or with outdated material by taking into consideration their content, use, physical condition of the resources and the academic offering of our Campus. Culminating in the integration of valuable literary and historical materials into the Library Collection. In addition, evaluation of collections continued throughout the year resulting in 2,457 titles and 3,439 volumes being discarded.

Simultaneously, the Teaching Personnel Committee updated the Procedure Manual in alignment with university guidelines, Certification 8 (2022-2023) of the University Board (Teacher Evaluation Guide), ensuring streamlined processes.

During the academic year, within the **Office of Immigration Affairs**, presentations and advising sessions were scheduled. This past semester Dr. Frances Santiago presented five (5) orientation sessions on the following topics: on-campus employment for F1 Students; OPT and CPT application process with USCIS; who can study at the UPR – this presentation covered types of visa for study, DACA and undocumented students; institutional crisis management protocols in the event of natural disasters or attack on campus; best practices for faculty and postdoc recruitment processes – this presentation covered H1B visa petitions, J1 visa for short-term scholars and students with approved OPT, STEM-OPT or CPT. These presentations help our international students and scholars, as well as our academic administrators, and other administrative personnel to be aware of updates, changes, rulings, and other actions that may impact federal regulations, ICE guidelines, SEVP requirements and general guidance from DHS (Department of Homeland Security) affiliated agencies. After each session, participants evaluate the presentation.

These evaluations provide information that helps us coordinate and plan new presentations and choose topics that are relevant for our audiences. These regularly scheduled orientations and presentations also serve to keep our Admissions Office, Graduate School, the CID, as well as academic departments, and deans, updated on international student and scholar services, regulatory requirements, and current issues; we also become aware of other topics of interest to the university community and can assess needs and new areas that need attention.

Deanship of Arts and Sciences

In the **Economics Department**, Dr. Carlos del Valle-Gonzalez, an associate professor, led the College of Arts and Sciences' Strategic Planning Committee, overseeing the update and creation of the new Faculty Strategic Plan. At the faculty level, Dr. Ricardo R. Fuentes-Ramírez, an assistant professor, and member of the Assessment Committee, established the *Revista de Avalúo Plus: Revista de Avalúo del Aprendizaje*. This journal serves as a platform for disseminating work related to academic appraisal processes and will be available online under a Creative Commons license, with a print version distributed by the Centro de Publicaciones Académicas (CePA) of the College of Arts and Sciences. Dr. Fuentes-Ramírez also serves on the Editorial Board of the journal.

The Department's Assessment Committee conducted a comprehensive evaluation process. They developed and distributed a questionnaire via email to students of the department, followed by a focus group for 4th-year students enrolled in ECON 4392: Research Methods in Economics II. The questionnaires were approved by the Committee on the Protection of Human Subjects in Research (CPSHI/IRB) on February 21, 2023 (Protocol No. 2023020015). The final report, titled "Evaluation of the Alignment of Economics Courses and Departmental Objectives," was presented and approved at the Departmental meeting on March 9, 2023.

Additionally, a workshop titled "Academic Appraisal and the Design of Questions According to the Cognitive Levels of Bloom's Taxonomy" was facilitated by Dr. Diana Rodríguez, Appraisal Coordinator of the Department of Kinesiology. The workshop, held on November 17, 2022, at Celis 302, aimed to enhance faculty understanding of effective appraisal methodologies. The results of the academic orientation questionnaire from the second semester of the academic year 2021-2022 were presented at a departmental meeting on December 1, 2022, focusing on gathering student feedback about academic counseling services. The outcomes were shared through a designated link (<https://www.uprm.edu/economia/evaluacion-consejeria-academica/>).

Furthermore, a report summarizing the questionnaire responses of freshman students from the Bachelor of Arts in Economics Program who attended the department's welcome and orientation on August 5, 2022, was discussed during the 1st regular Departmental meeting on August 18, 2022. The Department of Economics' teaching staff received information about assessment workshops organized by the Assessments Committee of the Faculty of Arts and Sciences, distributed on October 26, 2023, enriching their professional development.

The **Humanities Department** performed a Survey for Newly Enrolled Students and Exit Survey for Graduating Students. In addition, a Freshman Survey was developed to find out the needs, academic difficulties and evaluation of the departmental programs offered services to the students during their first year, as part of the general initiative of the UPRM of the First Year Experience. Also accompanied by the improvement of the Departmental Assessment Online Portal Project description: A department web page was developed where you can consult our assessment reports and plans. Additionally, enabling students' access to interviews, surveys, and other assessment instruments from the department.

The **Department of Kinesiology** conducted various evaluations in the administrative area and the student learning process in the past five years. Based on the students' learning assessment, changes were made in the several training courses, by increasing the emphasis on Training Planning in the Coaching courses EDFI 3095 (Coaching Basketball); EDFI 3615 (Coaching Swimming); EDFI 4055 (Coaching Volleyball); EDFI 4065 (Coaching Soccer); EDFI 4075 (Coaching Baseball and Softball) and in EDFI 4177 (Exercise Physiology); EDFI 4190 (Exercise Prescription) and EDFI 4250 (Training Seminar). In addition, it is currently working in the development of new courses: Training Methods, Introduction to Kinesiology, and Anatomy and Applied Kinesiology.

The **Nursing Department** completed its self-study report to the Accrediting Commission for Education in Nursing. The strategic research plan for the identification of external funds was worked on, and a committee was established.

The **Department of Physics** continues to send the Exit Survey by e-mail to its graduates from all the programs offered by the Department. The results of the survey are currently being analyzed and they are working on it to update all their strategic plans to adapt the academic offer accordingly.

The **Department of Social Sciences** assigned a new coordinator to facilitate academic offer and curricular review planning. In addition, the department holds a database of the Social Sciences program maintained by their students, to generate information that enables them to describe the effectiveness of the programs and identify new improvement areas.

Deanship of Agricultural Sciences

The **College of Agricultural Sciences (CAS)** prioritizes strategic planning and evaluation, demonstrated through its active Strategic Planning and Evaluation Committee. This year, the committee convened regularly to address objectives within the CAS Strategic Plan, ensuring effective implementation. As part of academic assessment, an evaluation instrument was

developed for students. The assessment focused on "Student Learning Outcome number 1 (SLO #1) - Demonstrates purposeful and continuous learning." Administered via email to approximately 400 first and fifth-year students, the assessment covered Basic CIAN courses, Basic CFIT courses, and seminars.

In April, the **Faculty of Agricultural Sciences** formulated draft educational outcome objectives for academic programs. These objectives, aimed at sustainable agricultural practices, encompass a range of skills including applying concepts for resource management, practicing environmentally responsible food production, utilizing technology for solutions, and demonstrating leadership and teamwork to tackle agricultural challenges. These outcomes await approval from the Faculty's Academic Affairs Committee and will guide the development of assessment initiatives.

The **Department of Agricultural Economics and Rural Sociology** actively engaged in assessment activities at both academic and administrative levels. Meetings of the departmental Academic Affairs Committee were held during semesters to review IMIs, quotas, and departmental awards. Evaluation criteria for Non-Traditional Admission were examined, alongside semi-annual gatherings of the Graduate Committee, the Assessment and Planning Committee, and the Staff Committee. These efforts focused on promotions, recruitment, and part-time appointments. Additionally, a meeting with the Dean of Academic Affairs addressed admission processes and enrollment challenges.

Department of Agricultural and Environmental Systems

Enhancing teaching effectiveness, the department's faculty proactively administered assessment tools in their courses, encompassing initial and final surveys, pre- and post-tests. The Five-Year Evaluation Report for the Agricultural and Environmental Systems program underscored the importance of assessing and updating academic and administrative assessment plans within the department.

Over the past year, the **Agricultural Extension Service (SEA)** generated 38 evaluation reports for educational activities led by faculty members. Notably, 21 personnel evaluations for promotion were conducted and administratively approved in line with fiscal year goals.

In the **Agricultural Experiment Station**, at the Adjuntas Substation, employee performance and project objectives were evaluated through weekly work plans. Researcher tasks were submitted and assessed during agronomist meetings. In Corozal, interactions with floury crop farmers facilitated the presentation of research findings, addressing challenges and providing training on insect and disease sampling. Similarly, at the Isabela Substation, annual employee evaluations identified strengths and improvement areas, fostering personal growth.

Associate Dean of Academic Affairs

At the Engineering Advisory Board Annual Meeting, an interactive discussion occurred between the Industrial Advisory Board (IAB) members and the College of Engineering (CoE). The session facilitated the sharing of insights by companies on the desired skills in ideal candidates, fostering partnerships with UPRM, university relations, and effective recruitment strategies.

Additionally, a meeting was held with accreditation and assessment program coordinators. The agenda encompassed deliberations on accreditation modifications, the introduction of a new rubric for student outcome 7 ("An ability to acquire and apply new knowledge as needed, using appropriate learning strategies"), an analysis of students' performance in INGE 3016 Computer Programs and Algorithms, and the proposal of a new rubric for teamwork in Mechanical Engineering. Furthermore, presentations regarding the re-accreditation of UPRM by MSCHE were shared.

Furthermore, the Associate Dean for Academic Affairs conducted workshops on the Assessment of Student Learning for new faculty and teaching assistants on August 8, 2022.

Department of Civil Engineering and Surveying

During the academic year 2022-2023, the Department of Civil Engineering and Surveying implemented a streamlined Continuous Improvement Process for assessing Student Outcomes (SOs). This process adhered rigorously to ABET's Continuous Improvement Principles, focusing on generating sufficient evidence for evaluation and decision-making regarding enhancement efforts while minimizing unnecessary data collection burden on faculty members. The newly introduced approach for Direct Assessment of SOs mandates a three-year assessment cycle, aligning with the six-year ABET accreditation cycle. This cycle involves both data collection and the implementation of corrective and continuous improvement measures on each outcome as deemed necessary.

To execute this approach, the department reviewed and adjusted the syllabi of all courses, mapping each SO to upper-level core-required courses that are strategically chosen to facilitate representative data collection on student attainment. Instructors are assigned a maximum of two outcomes to assess per course, optimizing the evaluation process. Faculty members evaluate the SOs using recently adopted performance indicators (PIs) within courses that afford students opportunities to exhibit the desired outcomes. Furthermore, a comprehensive set of rubrics featuring explicit PIs was developed for each course where a specific SO is assessed. These PIs pinpoint precise accomplishments that serve as direct indicators of the extent to which students proficiently achieve the various components of each SO. This structured system constitutes a robust tool for the uniform evaluation of students' effective accomplishment of SO subsets across courses.

Department of Engineering and Materials Science

Throughout this year, a range of assessment endeavors were conducted for the courses, encompassing activities such as assessing for inactivation, revising textbooks, refreshing topics, and amending course objectives, among various others. Likewise, there is an ongoing process of scrutinizing course records to not just integrate administrative mandates but also endorsed suggestions originating from both internal evaluation procedures and departmental appeals for curricular enhancements. This concerted effort, which involves being instrumental in students' initial engagement with engineering courses, has played a pivotal role in fostering higher retention rates during their initial two years of study.

Chancellor's Office

Research and Development Center (CID)

The Research and Development Center (CID) oversees the Pre-award Compliance (PAC) Office, responsible for evaluating and implementing internal controls related to the Center's pre-award regulatory compliance in accordance with sponsor guidelines. This encompasses tasks such as identifying and directing necessary protocols for animal care, human subjects' reviews, disclosures of conflicts of interest, and responsible research conduct to the relevant institutional officer or committee. Additionally, the PAC Office addresses specific program requirements to protect UPRM's interests. Moreover, this unit provides support to other R&D Center departments and the Director's Office, assisting in the review of Standard Operating Procedures (SOPs), creating electronic forms, and streamlining process automation.

Information Technologies Center (CTI)

The office ran User Support Satisfaction Surveys that provided the office with necessary insights about processes performance.

Academic Senate, Administrative Board and Faculty

During the year, the academic senate held 10 meetings and approved motions referring to the need for a strategic plan to address demographic challenges and new personnel to be integrated into the Committee to address matters related to this matter.

MUSA

Following mentorship and an understanding of the ongoing dynamics in Puerto Rico influenced by COVID-19 and challenges faced by cultural institutions, a two-year process was undertaken. Within this framework, the museum's mission, strategic plan, and organizational profile were reviewed and endorsed in the current fiscal year. As part of this updated approach, MUSA's revised mission statement outlines four primary objectives: (1) Providing educational experiences in the arts to students and the university community; (2) Establishing connections with various university departments to highlight the arts' significance across disciplines; (3) Offering services to the broader Mayaguez community and the Western Region of Puerto Rico; (4) Emphasizing the role of art and creativity in promoting health and well-being for individuals, institutions, and society.

Preschool

The preschool department, in the preceding fiscal year, focused on refining its approach by formulating essential metrics to enhance its internal evaluation process. This involved conducting assessments of internal procedures within staff meetings, attendance records, minutes, and agendas. As part of this initiative, they also designed a Service Satisfaction questionnaire.

Objective 2: To be at the forefront of higher education in Puerto Rico by guaranteeing that our students receive the best education.

2.1 To maintain, to update, and to strengthen our academic programs by streamlining or redesigning the processes defined to effect curricular changes and to create new courses and programs.

The University of Puerto Rico at Mayaguez is committed to strengthening the academic programs to temper to the current and future needs. The academic departments worked considerably in several efforts to develop an academic offer suitable to such needs. As a result of departments initiatives, the Dean of Academic Affairs Office, and with the approval of the Academic Senate, processed 181 course actions applications. The following table summarizes the total number of courses approved and processed per Faculty.

Table 1 Courses approved and processed during the academic year 2022-2023

Faculty	Creation	Pending approval to active	Adoption	Inactive	Modifications
Business Administration	19	1	0	19	11
Arts and Sciences	15	0	0	4	32
Academic Affairs	13	0	0	1	2
Agricultural Sciences	0	0	0	0	1
Engineering	34	2	0	15	12
Totals	81	3	0	39	58

Besides, the Dean of Academic Affairs Office, processed (20) twenty curricular reviews for various undergraduate, graduate, and minor concentration programs for various colleges of the UPR-Mayagüez campus which were approved by the Academic Senate and recognized by the Vice-President of Academic Affairs as follows:

Table 2 Curricular reviews during academic year 2022 - 2023

Business Administration	Arts and Sciences	Agricultural Sciences	Engineering
7	1	1	11

Some of the academic efforts done by the academic departments are as follows:

- Redesigned activities at Food Processing Laboratory and increased contact hours.
- Prepared new educational material.
- Developed activities for revised courses.
- Added a laboratory component to Ecology course.
- Created a new general chemistry course for engineering students (in process of evaluation).
- Developed a new course in economics and sustainability (in process of evaluation).

- Prepared a draft of the proposal for a master's degree in economics.
- Completed the five-year evaluation of the Minor Concentration in Economics.
- Created and revised courses at Geology Department (under evaluation)
- Implemented the Professional master's in marine sciences with Plan II and Plan 3 (under evaluation)
- Established a committee to work in a PhD program in Physics and in the establishment of a multidisciplinary program in Marine Atmospheric Sciences
- Developed a proposal for the creation of a minor concentration in Criminology.
- Modified the rules for internal and external transfers at Business Administration programs.
- Created and modified courses for Business Administration program: Introduction to the World of Digital Marketing, Advanced Accounting Research, Introduction to Technology applications in Office Administration, among others.
- Worked on a proposal for the Online master's degree in project management.
- Approval of a minor in Pharmaceutical Engineering
- Developed a proposal for an Accelerated Step Program from Baccalaureate to Master
- Developed a proposal for the creation of new courses for the Software Engineering Graduate Program
- Prepared to Web 3 courses in collaboration with the Puerto Rico Blockchain Trade Association
- Approved curricular review of Industrial Engineering and Civil Engineering
- Worked in the initiative to develop a Baccalaureate in Engineering and Materials Science
- Participated in activities such as CTE Career Expo and Career Show and All for the Meat Industry to familiarize with new and future trends and needs
- Minor curricular revision in the BS at Mechanical Engineering

During the 2022-2023 academic year, one academic program and one curricular sequence were approved:

- **Bachelor of Sciences in Food Science**, of the College of Agricultural Sciences, effective for the First Semester 2022-2023.
- **Coastal and Ocean Engineering Curricular Sequence**, of the College of Engineering and the College of Arts and Sciences, effective for the First Semester 2022-2023.

The accreditation of UPRM programs is fundamental to guarantee academic excellence. For these purposes, academic departments continued its efforts to maintain accreditation.

- The Department of Nursing received the continuing accreditation for eight more years by ACEN.
- The College of Business Administration continues to work to maintain ACBSP accreditation and work in achieving the AACSB accreditation.
- The Surveying and Topography program submitted the interim report for the ANSAC commission of ABET for the accreditation of the program.

2.2 To support and to acknowledge those professors who are committed to teaching, to the development of new professionals, and to excellence.

a. To provide professors with the necessary tools for effective teaching

Members of UPRM faculty had strengthen their skills by its participation in diverse activities focused on teaching methodologies, leadership, distance learning, use of software's, among other trainings depending on respective interest and areas of concentration.

- Officers of Military Sciences Department participated in the International Squadron Officer, NCO Academic Training, Army Instructor Program strengthening leadership, strategy's development skills and teaching techniques.

- Librarians participated in a vast number of workshops and academic activities offered by local and international organizations (IFLA, ACRL, FRN, ACURIL, SciFinder, EBSCO, USTPO, COBIMET, UPR, among others) as part of the teacher training activities. The acquired knowledge will be integrated in one-shot instructions and formal courses offered by the library personnel in our library instruction newly renovated classrooms.
- The library had also various collaborations with campus departments and centers, like for example with the “Centro para la Excelencia Académica - Ciclo de Innovación y Emprendimiento” to provide education about intellectual property. The University of Puerto Rico needs to provide intellectual property education to promote innovation and entrepreneurship among its faculty and students.
- The Spider Web teaching method was introduced by Dr. Santiago Méndez-Hernández, Teacher Preparation Program’s Director, to more than 60 faculty members from UPRM through the Academic Affairs Deanery. This method, developed by Alexis Wiggins (2017), strengthens the participation of students during discussion sessions.
- The Agricultural Extension Service offered 42 training activities for its faculty staff. These workshops contributed to strengthening their knowledge in soil management, farms administration, pesticides and pests, pollinators, sustainable agriculture, animals’ wellbeing, foot preservation, education, among other themes related with agriculture.
- Faculty members of CCA participated in over 200 workshops related with distance learning strategies and resources, ethics, effective communication, sustainability, disaster management, soil amendments, climate crisis, artificial intelligence, reasonable accommodation, effective teaching practices, and other themes depending on the respective interests and academic specialty areas.
- Faculty members of Business Administration are being certified in educational programs such as Coursera, Certiport, MOS Power Point, MOS Excel, MOS Word, Word Expert and Project Management. These professionals serve as resources to develop trainings and tutorials to the university community.

b. To comply with the evaluation processes for all teaching personnel to encourage and acknowledge excellence.

UPRM faculty participate actively in research, innovation, community service, among other several forums of high relevance. As a result, during the academic year 2022-2023 their outstanding performance and commitment has been widely recognized by multiple institutions at local and national level.

- Education Officer of the year by the Air Force Southeast Region
- Escuela Superior Jardines
- recognized by The United States Patent and Trademark Office
- National Recognition of Excellence on behalf of the IR-4 Project.
- College of Agronomists of Puerto Rico
- Future Farmers of America
- Fundación Flamboyán
- Mellon Foundation
- Puerto Rican House of Representatives
- University of Puerto Rico (Doctor Honoris Causa)
- UPR Vita Center
- Geological Society of America
- Seismological Society of America
- Hispanic Association of Colleges and Universities
- College of Engineers and Surveyors

c. *To encourage cutting-edge initiatives among teaching-learning methodologies and support those that prove to be most effective.*

UPRM continuously supports the development of teaching – learning methodologies to promote effective learning in the classroom and out of classroom environment. During the academic year 2022-2023 the following activities were promoted

- Participation of students in summer internships and Coop Program, having the opportunity of work in research and real work experiences in their respective fields of study
- Requirement of Capstone Projects, through which students developed solutions to real life needs in the manufacturing industry, government, and service industry.
- Participation in interdisciplinary courses, allowing diverse teamwork experience with students of different fields of study through the development of projects that serve real clients.
- Through Minor Concentration Certifications students can have the opportunity to acquire additional knowledge to strength their professional capabilities
- A professor of Business Administration developed an innovative teaching method through comedy. She had the opportunity of being interviewed by Despierta America, where she presented revolutionizing education by teaching through comedy.
- Promotion of students' participation in academic competitions to challenge their capabilities.
- Use of interactive tools at online courses to enhance teaching-learning experience.
- Participation in training activities related to interdisciplinary approaches and teaching methodologies.
- Participation in trainings and workshops to strengthen skills.
- Organization of Career Orientation Day, with the objective of discuss issues related to curriculum in the areas of emphasis or tracks of the program as well as job, graduate studies and other professional experiences

d. *To acknowledge and to publish the institution's academic achievements.*

Through social networks such as Instagram, Facebook and Twitter, as well as official websites, the institution keep students, the university community and the public informed about the administrative processes, outstanding news and achievements of the student body, teaching staff and non-teaching staff. Members of UPRM staff had the opportunity to present their achievements in professional conferences, television interviews and in the written press. Students' participation in conferences and competencies is another way in which the name of UPRM and its excellence is widely promoted at national and international level. Besides, academic departments coordinate activities to recognize achievements. This is the case with the Agricultural Education Program, which offered the educational seminar "Guided by the passion to educate", with the objective of celebrating the achievements and goals achieved by the Teaching and Non-Teaching staff of the Program.

2.3 To provide an adequate and pleasing atmosphere to support teaching learning processes

UPR-Mayagüez has two hundred and eighty-four (284) international students. This is the largest number of international students in any institution of higher Education in Puerto Rico. UPRM has managed to attract and retain the best talent from Latin America, India, Europe, China, and other parts of the world. Through our international scholars and researchers our campus, academic programs, and research is known in each of the countries represented. The Office of Immigration Affairs guarantees that they complete their studies and return home as professionals. They encourage others to apply to the UPR, because of the quality of the programs and the reputation of the institution. Integrating new international students and faculty members into the UPRM

community each semester helps to promote diversity and inclusion, creating diverse and enriching spaces. Meetings, academic, social, and cultural activities also contribute to a welcoming living and learning environment. When international students interact with local students, from all over the island and from the United States, they share new perspectives that create an enriching experience for all.

b. To provide for infrastructure, equipment, and technological needs

During the past academic year UPRM continued with the process of habilitating classrooms with the technology needed to offer concurrent classroom and distance learning. These are equipped with speakers with integrated microphones, camera, projector, smartboards, computer with double monitor and television. Besides, several improvements have been made to strengthen the facilities dedicated for academic use. Some examples are as follows.

- Improvements to teaching nurseries at Finca Alzamora
- Installation of wireless communication system
- Reorganization and acquisition of equipment for the pilot plant at Food Science and Technology Program
- Acquisitions of computers for academic Computer Centers
- Remodeling of Students Associations Office at Industrial Engineering building
- Replacement of air conditioning units at classrooms
- Construction of roof of the terrace at Materials Laboratory at Civil Engineering Building
- Improvement to classrooms and remodeling of Students Associations Offices at Chemical Engineering Building
- The Teacher Preparation Program two computer labs were reequipped with 30 new computers, 10 tables and 10 battery backups.
- The Office of Graduate Studies facilitated Fan exclusive meeting room for the General Council of Graduate Students. Besides, it enabled an equipped room for completing and submitting documents electronically and offering workshops that require the use of technology.
- Remodeling of laboratory space and acquisition of new equipment for the Manufacturing Laboratory

The Center for Distance Learning Resources has been fundamental in the robust development of this modality as an effective teaching alternative. Some achievements are as follows.

- CREAD developed the training curriculum for distance teaching, now the most important in all of Puerto Rico, establishing a new model for effective distance teaching.
- About 40% of the academic offer was available through distance or hybrid modalities.
- Created more than 310 multimedia educational materials per semester for technology-assisted distance, hybrid, and face-to-face courses.
- Train 98% (more than 1,000) of all regular, contract, non-teaching, and teaching assistant teachers with the basic concepts and skills for distance learning Train 98% (more than 1,000) of all regular, contract, non-teaching, and teaching assistant teachers with the basic concepts and skills for distance learning

d. To provide adequate spaces conducive to independent and group learning

UPRM has expanded the spaces and hours for study, providing safe areas in rooms, computer centers and open spaces. RUMex expands the access of an academic offer in extended hours from 4:30 pm to 11:00 pm under a safe environment for our student community.

2.4 To maintain adequate academic offerings

- a. To guarantee academic offerings that will allow students to make advancements in their respective academic choices.

UPRM continues strengthening the academic offer, by providing three modalities of teaching: distance e (asynchronous or synchronous), hybrid and face-to-face. The offer was according to course schedule and according to course demand. The diverse modalities provide alternatives for an academic load that adjusts to the needs of the student community.

In terms of services, the students who are candidates for graduation receive academic counseling to ensure they take the necessary courses to complete their degree. Besides, the academic departments aided during enrollment or adjustment process to facilitate course selection according to their respective academic programs.

- b. To integrate the use of technology within academic activities and to provide students with skill-development opportunities essential to their career

UPRM faculty has integrated the use of technology within academic activities, by incorporating the use of specialized software and sophisticated equipment through courses and laboratories. By distance learning offering, the technology had been widely incorporated. Some examples are as follows.

- DECEP Online (administered by CREAD) has more than 70 courses, seminars, and professional certifications completely at a distance. Create the training curriculum for distance teaching, now the most important in all of Puerto Rico, establishing a new model for effective distance teaching.
- Development of distance academic programs: Master in Agricultural Economics and Master's Degree in STEAM Education.
- Development and approval by the UPRM Senate and Board the distance academic program: Professional Certification in Distance Education with a Specialty in Online Teaching.
- Acquisition of software to strengthen computer centers: STATA, AutoCAD, ArcGIS, IBM SPSS, Qualtrics, ATLAS, End Note, N Vivo, SketchUp Pro, Matlab, Synchro Studio, Abaqus, HydroCAD
- Acquisition of specialized equipment for laboratories: Nuclear Magnetic Resonance Equipment for Chemistry Laboratory, equipment for Oral Histories Laboratory, CNC equipment for Manufacturing Laboratory and other specialized equipment for Material Sciences Laboratory and Thermal Sciences Laboratory
- Organization of workshops for the Oral History Lab covering topics related to oral history collections, digital preservation, metadata, and community archiving.
- Incorporation of business simulations using specialized software's
- Use of interactive software on courses offered online to promote students' participation.

During the past academic year, UPRM students had the opportunity to participate in diverse activities that have contributed to the development of skills in their respective fields of study. They acquired practice experience in real work environments, received training, attended professional conferences, participated in competitions, and collaborated in research projects. Some examples are as follows.

- Students/cadets attended the Cadet Language Immersion Program (CLIP) in San Antonio, TX and to the US Air Force Academy in Colorado Springs, CO. The programs develop academic and professional language skills, defense techniques, research skills and confidence.
- Undergraduate and graduate students participated in National Agricultural Statistics Service (NASS) internship related to the 2022 Census of Agriculture. The institutional interest that the Census manages to obtain complete, correct, and timely data to maintain current academic programs, services offered to farmers and the preparation of research proposals.
- Intern students of Agricultural Education Program participated as instructors, collaborated in the organization of academic activities, and collaborated in the development of instructional material.
- Students of Agricultural Education visited schools to practice as teachers.
- Students of the Nursing Department were integrated in diverse clinical experiences through their attendance at hospitals and community health activities.
- Students of Food and Science Technology participated in the on campus food product development competition.
- Geology students participated in workshops: Expanding the Critical Zone Research Coordination Network, Convective and Volcanic Clouds training course.
- Students of Humanities participated of the cycle of conferences on Italian culture and civilization developed by Humanities Department
- Students of Kinesiology participated in CREPS internship in Mexico and in the Youth Ambassadors at the International Olympic Academy in Greece.
- Students of several departments took part in COOP programs, having the opportunity of a real work environment.
- Students of Physics Department participated in the NANOGrav program, presented research work at the Seismological Society of America Annual Meeting, US ATLAS SUPER Symposium and MRS Spring Meeting, and participated in summer internships at Universities in the United States.
- Students of Social Sciences participated in the United Nations Student Congress of Puerto Rico
- Students of Business Administration participated in the CFA Ethics Challenge, BAE Systems Think Tank, Sixth Annual Information and Digital Solutions Career Planning Conference for Women and in the International Collegiate Conference 2023
- Students of Civil Engineering participated in the Rise Up program to obtain a minor concentration in integrated practice in Architecture and Civil Engineering and participated in a demonstration of the TRIMBLE SX-10 equipment, a sophisticated georeferenced scanner, attended to the AGC Annual Convention and to the Symposium of the International Association for Bridge and Structural Engineering.
- Students of Civil Engineering participated in the Canadian Institute of Steel Construction Competition and in ASCE Innovation Contest National Competition, obtaining first and second place respectively. Besides participated in ASCE UESI Surveying 2023, ASC Competition and Spring 2023 Fiber Reinforced Concrete Bowling Ball Competition and Seismic Design Competition.
- Students of Chemical Engineering participated in the Southern Regional Conference, obtaining the 4th place in performance competition
- Students of Mechanical Engineering participated in the following competitions and activities: 2023 NASA Human Exploration Rover Challenge competition, Artemis Exhibition at EcoExploratorio: Museo de Ciencias de PR, VEX National Championship (PR), VEX Robotics World Championship, NASA Student Launch 2023-2024, 2023 Norwalk Havoc Robot League Event, 2023 International RoboBoat Competition and Aero Design West Competition.

Annually, the University of Puerto Rico, Mayagüez Campus receives a variety of requests from institutions across the U.S. regarding our junior, senior, and master's level students. Most of them are formalized by collaboration agreements and involve the promotion of fellowship opportunities, funded campus visits, summer research internships, master's programs, application fee waivers, research symposium invitations, new scholarships, online graduate degrees, graduate recruiting events, webinars and other academic endeavors. These are excellent opportunities to enrich academic experience. Some examples of new and active agreements are as follows.

- The College of Agricultural Sciences signed a collaborative agreement with AG-NGINE (Agriculture National Graduate Institutional Name Exchange) to recruit students by graduate programs at colleges of agriculture and related sciences from across the country organized the *Centro de Microempresas y Tecnologías Agrícolas Sustentables de Yauco, Inc.* (CMTAS); \, as a result of the Memorandum of Understanding with the College of Agricultural Sciences for the development of various initiatives in agricultural sciences, including student participation.
- In terms of active collaborations from previous years, the College of Agricultural Sciences continued with the following
 - United Nations – to participate in the Global Forum for Rural Advisory Services meeting, at the United Nations, Santiago, Chile
 - Latin American Network of Rural Extension Services – *to join the network.*
 - *University of Florida* - Translation of educational material and participation in podcasts for Spanish-speaking audiences
 - Puerto Rico Breast and Cervical Cancer Prevention and Early Detection Program – to provide educational modules with statistical information about the prevalence of cancers in Puerto Rico, the screening survey, and the analysis of interventions.
 - World Coffee Research – Memorandum of Understanding
 - University of Florida, University of Georgia, Ohio State University, USA ARS, Louisiana State University, Purdue University – TomSPOT, an integrated toolbox for managing tomato bacterial diseases in North America
 - Department of Education of Puerto Rico and its Agricultural Education programs in public schools that offer vocational programs.
 - EcoExploratorio. It offers Agricultural Literacy and its relationship with the Sciences.
- The Business Administration Faculty has collaboration agreements with BPPR-Echar to train educators in entrepreneurship and education; with FIFA/CIES to certificate in sport management and with Western New Mexico University
- The Faculty of Engineering has a collaborative agreement with Google with the objective of sponsoring an instructor to provide support the teaching of the introductory course of computer programming. Besides it provides summer internships at Google. Other agreements are with ERDC for internships opportunities, Mayaguez Municipality for the installation of the OneBusWay smartphone application, with PRDTPW & PRLTAP for the establishment of the Local Technical Assistant Program,
- The Nursing Department reestablished collaborative agreements with the agencies that provide clinical experiences to nursing students.

Objective 3: Increase and Diversify the Institution's Sources of Income.

3.1 Increase the campus' own revenues, retaining them entirely for its needs (research and creative work, university enterprises, local industry, federal government, state government, intramural practice).

The natatorium supported the diversification of income sources for the institution, through marketing and leasing of facilities for sports activities such as local and international competitions, practices for swimming teams from different parts of the world, mainly during the holiday break. Additionally, offering a comprehensive swimming program that generates income through fees for the development of swimmers.

The Athletic activities department made a collaborative agreement with Mpress Corp (AC Sports) for the creation and sponsorship of the uniforms of our sports teams.

To achieve additional sources of income, the Alumni and Philanthropy Office remained active by presenting proposals to request donations from foundations, companies, and individuals. Multiple agreements were signed with donors to establish student scholarship programs and support various initiatives such as research projects, laboratory improvements, and more. Notably, there were several one-time donations to support disadvantaged students. The office also continues to offer college merchandise (memorabilia) both in-person and online, at events like the Graduation 2023, Electro Friday, Puerto Rico Engineers College Convention, and the Tropi College Encounter activity.

Also, this office has ongoing fundraising campaigns through <https://www.uprm.edu/donaciones/>, which generated total revenue of \$38,682.00:

- Scholarships for students
- Technical and Innovation Response Center
- University Access Center
- Come Colegial
- Special Projects of competition
- Dr. Armando Riesco Scholarship Fund
- Emergency Student Aid Fund
- UPRM Fund
- Improvements to Buildings and Athletic Facilities
- Puerto Rico Mathematical Olympiad
- Sports Program
- INQU C-PEDaL Research Project
- Other student competition projects
- Puerto Rico Mathematical Olympiad (OMPR)
- SEDS UPRM
- Memorabilia Sales

MUSA had different Grants and donations funding showed in the following table:

Table 3 MUSA Donations

	ENTITY	PURPOSE	AWARD	STATUS
1	Flamboyán Arts Fund	Professional mentorship	\$3,000	Approved 2021
2	NEH Preservation Assistance for Smaller Institutions	Assessment 14 outdoor sculptures	\$10,000 the National Endowment for the Humanities (NEH) has approved an award of \$10,000.00 in support of your institution's project	Approved September 2022
3	Alianza de Museos de PR/Tiznando el Pais	For Exhibition: El arte como re-existencia: Lo Afro Puertorriqueño	Pending: Final amount to be confirmed (\$15,000-\$20,000)	Approved June 2023

4.	Fundación Amigos del MUSA	To Pay for the Community Outreach Coordinator/Educator over the summer.	\$3,000	Spring 2023
5	Individual gifts		980.59	February-Jul

Engineering Deanship

A request for funds was submitted to the Dean of Students and funds were obtained in the amount of \$391,000. The purpose of this request for funds was to generate spaces that serve students as areas for collaboration and study. The proposed projects include areas in Chemical Engineering, Civil Engineering and Mechanical Engineering. The preparation of plans and processes of quotation and design of the areas were carried out. This includes flooring, lighting, and furniture. Work began on the remodeling of the collaborative space in Mechanical Engineering. Four umbrellas were installed on the terrace of Mechanical Engineering. Plans and documents were prepared to hire the jobs in Chemical Engineering. These consist of two plazas and a collaborative space lounge. In Civil Engineering, although the selected spaces correspond to the College of Engineering, several of the proposed facilities will be for the use of all UPRM students. Some projects are completed and others continue in progress.

The Dean of Administrative Affairs of the College of Engineering coordinated the request for funds with the different Departments for the CARES Act. and CRRSSA programs. The following table summarizes the funds allocated in the different programs. The corresponding requisitions were processed from the office of the Dean of Administration and work is currently being done on the final financial report corresponding to each of these programs.

Table 4 College of Engineering Funds Procidence

FUNDS PROCEDENCE	TITLE	ASSIGNMENT
CARES Act	Remote Work - Non Docent Employees	\$ 62,891.09
CARES Act.	Additional funds for Distance Teaching	\$ 93,000.00
CRRSSA-HEERFII	Strengthening of Distance Learning Laboratories	\$ 400, 000.00
CRRSSA-HEERFII	Newly Created Academic Programs at a Distance or Modality Change	\$ 40,000.00
CRRSSA-HEERFII	Guarantee Academic Continuity Non-Teaching Employees	\$64,000.00
CARES-HSI	Open Spaces	\$391,000.00

Another source of funding are donations. Important donations to the College of Engineering have been received from Pratt and Whitney (\$500,000), Chevron (\$150,000), General Motors (\$125,000) and Boeing (\$50,000).

Students Deanship

The Deanship of Student Affairs had the following sources of income and external funding:

Table 5 Students Deanship External Funding

Income and External funding

	Year 2021	Year 2022	Year 2023
Graduation gowns agreement (Income)	\$29,641.75	\$28,183.50	\$28,000.00
Orientation and Freshmen Services Fee (Income)	\$35,380.00	\$33,600.00	\$38,000.00
Student Conduct Transcript (Income)	\$1,380.00	\$1,375.00	\$1,300.00
HACU SBP YR1 (External Funding)		\$60,000.00	
HACU SBP YR2 (External Funding)			\$69,571.43
Dominion Energy (External Funding)			\$50,000.00
	\$66,401.75	\$123,158.50	\$186,871.43

The department of Social and Cultural Activities income for the fiscal year 2022-2023 consisted of the following items:

- Online and office sale of memorabilia \$7,477
- Income with pin on graduation gown 2023 \$8,992.50
- Sale of memorabilia on Graduation 2023 \$6,015
- Game Room income \$2,130
- SUB-TOTAL \$24,614.50
- BAE Systems Think Tank II donation \$11,000
- TOTAL INCOME FOR 2022-2023 \$35,614.50**

The Medical Services had different external sources of income, having a total of \$109,500 distributed in the following way:

Table 6 Medical Services External Income

EXTERNAL INCOME OBTAINED	
\$94, 500.00	Family Planning Proposal Title X / Prevén
\$10, 000.00	Mano Amiga Colegial Proposal
\$5, 000.00	External Clinics
\$109, 500.00	Total, Income Achieved

Deanship of Academic Affairs

Resource Center for Distance Education (CREAD)

A variety of short distance courses were coordinated and offered with these results:

Table 7 Deanship of Academic Affairs External Funding

SEMESTER	ESTIMATED COLLECTION
1st	\$27,685.19
2nd	\$20,553.50

June	\$6,285.00
TOTAL	\$54,523.69

A collaboration agreement was reached to grant scholarships to students participating in short distance courses through PRTEC, which has access to BCBG funds.

Responded to the request for proposal for the 21st Century Technical and Business Education Fund to create 9 new industry-aligned short distance courses in programming.

Teacher Preparation Program (PPM)

Noyce Teacher Scholars (NOTES) is a project, sponsored by the National Sciences Foundation, to financially and academically support students to become and stay as teachers of mathematics and sciences. The goal is to prepare and support bilingual STEM Teachers in Puerto Rico. This project brings around \$240,000 per year to the institution for 5 years.

Title II tuition waiver from the Puerto Rico Department of Education brought more than \$10,000 to UPRM.

RUMEX is a strategy that helps bring income to the academic departments. The extended university at UPRM allows departments to schedule courses under no traditional time. This year the UPRM Teacher Preparation Program of incomes, through this initiative, of more than \$16,000. That amount would be used for remodeling the students' services' office area at the UPRM Teacher Preparation Program.

Agricultural Science Deanship

During the fiscal year 2022-2023, the Pesticide program generated \$98,805 in own revenue, while the Food Safety program generated \$27,344. These funds were utilized to support and sustain the respective programs. Also, at the Adjuntas Substation, horticultural improvement practices for citrus and coffee crops are continuously carried out to optimize their production, generating income through the sale of fruits and coffee in flour. A collection of mother trees is maintained in a closed structure to provide disease-free material for grafting onto citrus trees. Certified disease and pest-free citrus trees are grafted in a closed structure for sale to farmers. Over 100,000 coffee seedlings are planted for sale to the Department of Agriculture.

The Corozal Substation, we continue to sell clusters and seeds. Additionally, we have collections of starchy plants such as plantains, bananas, and yams. They used sawmill to provide wood cutting services to the public, generating income.

At the Gurabo Substation, plantings of taro, sweet potato, cassava, malanga, pumpkin, watermelon, cucumber, and plantain were established with the purpose of producing fruits and seeds. The production of round bales of improved grass continues, both for consumption by replacement cattle at the CIRAT and for sale. They received cull cows from the Lajas AES to be used in the Gurabo AES as breeding animals for fattening and meat sales in the near future. The sale of compost continues as an additional source of income (approximately \$1,280.00). They sold 8 animals for meat production and consumption, 20 heifers for milk production to independent farmers, and 3 bulls (approximately \$53,800.00). They have also sold 23 bales of 50-pound hay (\$184.00 approximately). *The following table shows the initiatives and project sources of income in the Substation:*

Table 8 Agricultural Science Deanship External Funding

Initiative/Project Source	Type of Source (internal, external or own)	Agency	Amount	Purpose/Intended Use
CIRAT (ZDA-032)	External	ADEA	\$750,000.00	Development of an Animal Reproduction Laboratory
Compost Management Project	Own Income	AES	\$1,280.00	Fertilization of Gurabo AES plots. (Reflected in A-021 Experimental IP)
Validation and Production of Improved Tropical Forages (H-502)	External Funds	AES	\$184.00	Production of improved forages for animal feed (hay bales) (Reflected in A-021 Experimental IP)
Breeding and Sale of Holstein Cattle	Own Income	AES	\$53,800.00	Development and management of the Gurabo AES herd (Reflected in A-021 Livestock IP)
Other Products	Own Income	AES	\$5,027.00	Maintenance and expansion of the planting project (Reflected in A-021 Experimental IP)

Arts and Science Deanship

The university's departments have undertaken a variety of initiatives to augment and diversify their income sources, ensuring financial stability and supporting academic and research endeavors. Here's a breakdown of their efforts, including the financial aspects:

Department of Economics

Dr. Carlos A. del Valle-Gonzalez, participated in the National UTC proposal led by the University of South Florida to establish a University Transportation Center named National Institute for Congestion Reduction (NICR).

María Eugenia Rodríguez, senior student of the Department of Economics, together with the student Adriana Ramírez, of the Department of Civil Engineering, participated in a project funded by the UPRM Sea Grant Program to document environmental conflicts on the island, through the Global Atlas of Environmental Justice. Dr. Ivonne del C. Diaz, professor at the Department of Economics participate in the project and gave research support for both students.

Dr. Carlos A. del Valle has an intramural practice with the municipality of Mayaguez. The project title is Review of Alternatives for the Collective Transportation System in the Autonomous Municipality of Mayagüez (Mayagüez Transit Study 2015).

Dr. Ivonne del C. Díaz participates as a co-principal investigator in a project developed by the faculty of engineering for the National Science Foundation, entitled "A New Paradigm for Sustainability and Resilience Engineering: A Transdisciplinary, Learner-Centered, and Diversity-Focused Approach. PI: Dr. Christopher Papadopoulos.

The Department of Economics participates in the RUMex program offering course sections of ECON 3021: Principles of Economics: Microeconomics and ECON 3022: Principles of Economics: Macroeconomics during the first and second semester of the academic year 2022-2023. Based on information provided by the Dean of Academic Affairs this participation allowed the Department to receive an income \$6,441.03 in the First Semester 2022-2023 and \$9,777.66 in the Second Semester 2022-2023. These funds are assigned according the Certification No. 21-46 and Certification No. 22-98, both of the Academic Senate.

Dr. Carlos A. del Valle participated as a co-investigator at the National Institute for Congestion Reduction (NICR of the USDOT) under the supervision of the principal investigator Dr. Alberto M. Figueroa of the Department of Civil Engineering of the UPRM. Economics students Enzo Gutiérrez and Jorge J. Quiles receive research assistantships for participating in this project.

Dr. Ricardo R. Fuentes and Dr. Jeffry Valentin are developing the logistics to visits high schools of the western region in order to promote among high school students the importance about the science of economics.

Department of English

Laboratories for Basic English I and II were created in house and generate income. These monies are used to pay the professor's extra compensation, "jornales" for graduate and undergraduate students, travel expenses, chairs for administrative personnel, materials for incoming students, summer camp, and graduating candidates, promotional materials and others.

Grants approved:

Dr. Hugo Ríos Cordero - Media Studies Power and Presentation Curricular Sequence (NEH) - \$149,178

Dr. Ricia Chansky (Oral History Lab):

"Speaking into Silences: Building Community Archives across the Puerto Rican Archipelago" funded by an American Council of Learned Societies Digital Justice Grant - \$100,000

Listening to Puerto Rico: The Promise of Oral History On-Campus and Beyond (NEH) - \$500,000

Climates of Inequality & the COVID Crisis: Building Leadership at Minority Serving Institutions (MSIs). Agency: Rutgers University – Newark - \$32,776

Department of Humanities

Dr. Jeffrey Herlihy, recipient of a \$25,000 grant from the Teagle Foundation's Cornerstone: Learning for Living project, co-sponsored by the National Endowment for the Humanities. The proposal will develop the following thematic axes: environmental humanities; digital; for engineers; and Medical in order to align with an integrative educational experience, November 18, 2022

Dr. Jeffrey Herlihy, recipient of a \$300,000 grant from the Teagle Foundation's Cornerstone: Learning for Living project, which aims to support the scale-up of the general education certificate program, including the 1st year gateway cultivating a common intellectual experience around shared texts for incoming students. The proposal will develop the following thematic axes:

environmental humanities; digital; for engineers; and Medical to align with an integrative educational experience, May 19, 2023.

The new Master's Degree in Cultural and Humanistic Studies of the Humanities Department (HUMA) of the Mayagüez Campus (RUM) of the University of Puerto Rico (UPR) received an \$825,000 grant from the Mellon Foundation to sponsor the initiative entitled New Horizons in Cultural and Humanistic Studies in Puerto Rico. Dr. Jeffrey Herlihy, Principal Investigator, Dr. Mariam Colón and Dr. Christopher Powers, Co-Directors and Co-Investigators.

Department of Kinesiology

In the past few years, the Department of Kinesiology has improved the external funding from our faculty: Iris Figueroa, Ramón Luis Álvarez, Carlos Torres and Luis O. Del Río. The Department has developed a professional improvement, training and consulting program for Personal Trainers and Physical Educators in the Western Region. This program achieved \$11,000.00 in earnings.

In addition, we expect to improve the income from the International Football Federation FIFA by the Certification Program in Sports Management. This interdisciplinary program (business administration and kinesiology) will share the profit.

Finally, we lease our sports facilities to the university community and the Western Region. All these funds have helped us to employ non-teaching staff during the month of July, hire students, and make improvements to the facilities, and purchase sports and office equipment.

Department of Marine Sciences

Even though the DMS has only eight active, full-time professors Ten (10) research proposals submitted to Federal agencies (EPA-DNRA, NASA), institutions (Purdue University, Schmidt Institution) and foundations (Wenner Green Foundation) for a total of \$ 3,747,556 in research funding were approved during this year, and several projects started during 2022-23.

Two other proposals in which the DMS (Dr. E.Weil) is a collaborator (co-PI), that were submitted to NOAA by ISER (Institute for Socio-Ecological Research, an NGO) with other collaborators, and another collaborative research with the DNRA (for a total of \$ 11,189,000 in research funds), were approved during 2022-23.

During the fiscal year of 2022-23, the DMS received a total of \$ 103,623 from the use of lab space, boats, dive tanks, and dormitories from CARICOOS, Ecoelectrica, federal agencies, visitors, students and faculty members' grants. These funds are used for the maintenance and improving of our facilities and equipment, and the purchase of new equipment such as dive tanks, outboard engines, spare parts, new air conditioners to replace old units, etc.

Institutional funds for maintenance of the Magueyes lab facilities in La Parguera were used for gasoline, diesel, motor oil, cleaning, spare parts, laboratory equipment and the update of our three (3) classrooms, one in Mayagüez and two Magueyes (\$62,973). The Faculty of Arts and Sciences provided \$32,716.32 for updating equipment for non-teaching staff. Through this, several pieces of equipment were acquired with the purpose of improving technological resources. The "Center of Technology Information (CTI)" provided \$31,176.58 to improve the teaching laboratories and classroom to be able to provide local and distance teaching and conferences.

During the fiscal year 2022-2023 the Department received \$6,250.00 for the use of the big boats, \$16,770.51 for the use of small boats, and \$5,328.00 for the use of diving equipment. For 2022-23 the use of classrooms, conference room, wetlab space, and laboratory/office space produced \$74,576.40. The use of the dormitories brought in \$626.75. The use of a photocopier at Isla Magueyes produced \$71.50.

Department of Math Sciences

Mathematical Strengthening Institute (INFOMATE), which is generating income because students have recognized its importance in reviewing the topics required to pass the Mathematics Diagnostic Exam.

Writing, revision and marketing of the books that are under our department and that are used for the basic courses.

Department of Physics

Two proposals by Dr. Armando Rúa to support his research on Materials: MRI: Track #1 Acquisition of a physical properties measurement system to support research and training in Quantum Materials and Transformative Devices, NSF, \$867,00 (pending), PI, and Unraveling the switching mechanism in phase-change materials for brain-inspired computing applications, Gordon and Moore Foundation, \$1,250,000 (pending)

Three proposals by Dr. Sergiy Lysenko to support his research on Materials: 1) PreProposal: EPiQS Flexible Funding Ideas 2023, Agency Moore, \$800,000, 2024-2027, Status: Pending, 2) Equipment: MRI Track 1: Acquisition of a physical properties measurement system to support research and training in Quantum Materials and Transformative Devices, NSF \$865,003, Period: 03/16/2023 - 02/21/2023, Status: Pending, and 3) Dual Use Exoplanet Telescope, NIAC, \$500,000, Period: 2022-2024, Status: Rejected

Two proposals by Dr. Francisco Bezares to support his research on Materials: Ultra-thin Molecular Lasers for Quantum and Photonic Technology Applications, NSF Early Career Program, \$250K/2yr, submitted 01/21/2023 (pending), and Acquisition of AFM-Raman Confocal Microscope to Enhance Materials Research and Training of STEM, NSF MURI Program, \$350K Raman Confocal Microscope, submitted 02/21/23 (pending)

External funds received: \$1,433,694.00

Department of Social Sciences

It is planning to create a continuing education program for professions that need continuing education such as Social Work professionals. In addition, the possibility of offering evaluation services to non-profit organizations whose funders require evaluation of professional services is explored. This is being planned to be carried out from the facilities of the Center for Applied Social Research (CISA).

Work is being done on the creation of the Graduate Program of the Department of Social Sciences. Currently, courses are taught at the "Rumex" night school to bring funds to the Department and, in turn, part of the budget is directed to the Mayaguez Campus.

Research:

Instituto Universitario para el Desarrollo de las Comunidades de la UPRM. Whole Community Resilience Planning (WCRP) Program under the Community Development Block. Grant for Disaster Recovery Program (CDBG-DR Program). To carry out community resilience plans in: “La Salud Mayagüez; El Cerro, Naranjito; Villa Esperanza, Toa Alta; Las Carolinas, San Germán; La Calle Abajo, Lajas; Guayabota, Yabucoa; and San salvador, Caguas”. Luisa Seijo Maldonado (PI). Ingrid Rodríguez Ramos, Reinaldo Rosado Silva, Ricardo Fuentes Ramírez, Marcel castro Setirichi, Francisco Maldonado y Lizzette González (Co-PI). Total \$1,400,000.00. Project duration: 2022-2024.

Dr. Tania del Mar López Marrero. A Participatory Approach to El Yunque Ecosystem Services and Drivers of Ecosystem Change: Ten Years Later (USDA Forest Service, Southern Research Station, and Agreement Number: 17-CS-11330144-063. \$128,721).

Dr. Tania del Mar López Marrero. Trees in urban spaces: History, meanings and uses (USDA Forests Service, International Institute of Tropical Forestry, Award Number: 21-CA-11120107-016. Total \$185,755).

In June 2023, it approved a modification to the proposal to extend the completion date of the project and add new objectives and publications. The modification also included an additional contribution of funds from the USDA-FS IITF for \$41,920, mainly to cover assistantships for undergraduate research assistants, among other items.

Dr. Tania del Mar López Marrero. Project 1867: Disasters and memory in Puerto Rico. During this year, a component was developed for the project of writing stories about disasters in Puerto Rico. Six Comparative Literature students wrote them; they are in the process of publication.

Dr. Tania del Mar López Marrero. Land cover built one kilometer from the coast of Puerto Rico. This research is carried out through the Sea Grant Program, which has subsidized stipends to students as research assistants.

Business Administration Deanship

The amount accounted for EDUCON, PIPC, and Donations was a total net income of **\$407,483** of which \$117,683 were in cash and \$289,800 in-kind.

Table 9 Business Administration Donations

Area		Gross Income	Net Income	Total Net by Area	
EDUCON	Courses & Workshops	\$90,051	\$53,092	\$90,292	
	<ul style="list-style-type: none"> • Billed to CRECEN: \$76,300 • Other: \$13,751 				
	Fixed rents		\$7,200		
	<ul style="list-style-type: none"> • Billed to CRECEN: \$7,200 				
	Collaboration Agreement Projects		\$30,000		
Donations Cash	<ul style="list-style-type: none"> • Lockheed Martin: ○ \$6,000 – Laundry gas ○ \$5,000 - Software • APICS – Laundry gas \$100 • VITA and VITA U donations: \$11,376 net 			\$22,476	
	PIPC	CBA Job Fairs	\$10,700	\$5,785	\$4,915

		Subtotal	\$117,683
Donations In-kind	In-Kind Donation:		\$289,800
	• Coursera Google: \$199,500		
	• Accountberry: \$84,900		
	• Luis Mercado, alumni: \$5,400		
		TOTAL	\$407,483

Deanship of Administration

To continue collaborating with the increase and/or diversifying revenue sources to meet the needs of our Campus, the Administration Dean Office followed with initiatives that in addition improve service to the University community, including:

- Pepsi Contract: Executed to provide vending services throughout the Campus.
- BMedia Contract: Awarded to place advertisements in the Darlington Building.
- Mrs. Socorro Bracero's Contract: Renewal for the lease of a residence located on Highway #108.
- Cooperative Contract: Space leased on the first floor of the Student Center for the operation of cooperative services at RUM.
- JI Sites Developers, LLC Contract: Structure leased for telecommunications business purposes.
- Banco Popular Agreement: Space lease for the operation of a branch of the bank.
- Cafeteria Contract: Space leased to provide food service to the University community.
- Chiropractic Clinic: Space leased in the Medical Services Building for Dr. Ron Mann's chiropractic services to the University community.

Also, to strengthen public transportation services on our Campus the Office of the Dean of Administration executed the tasks approved under the proposals submitted to the Highway and Transportation Authority. The task included acquiring approved buses and new tools for the mechanic workshop and assisting with the bus drivers, mechanics, and administrative staff salaries. The projects currently administered are:

- Operating Assistance for the campus public transportation service with a funding amount of \$1,306,514.
- Acquisition of equipment, bus stops update, and expansion of public transportation fleet with a funding amount of \$734,507.

The Administration Dean Office units have also continued implementing activities to increase and/or diversify revenue sources, examples of such are:

- Buildings and Grounds Department

The Department rents chairs, tables, and tents for official Campus activities, and bills for lost official keys. Decorative plants were also rented but after COVID-19, we lost the nursery. In addition, copies of plans in CD format are sold.

Human Resources Department

The department plans to participate in proposal drafting, which will allow us to recruit personnel using external university funds to minimize the impact on the budget and to be able to meet the needs of human capital, specifically within the units under the Dean of Administration.

- Property Office

The office plans to recruit an employee with duties specifically dedicated to cannibalizing useless electronic equipment that is deposited in the Surplus Warehouse and that is not accepted by the relevant agencies. The intention is to deposit the material in a recycling agency to build a source of income for the Institution. In addition, it will help create more space and maintain control of the Surplus Warehouse in general. It is considered that a regular appointment be called for the said position to preserve the resources and avoid extensive recruitment processes, unexpected resignations, and personnel cuts due to the availability of funds, among others.

Our office also complies with the policy on recycling and environmental laws, managing to cannibalize the equipment by classifying and separating the composite materials of metal,

aluminum, and copper. They were deposited in the relevant Recycling Agencies obtaining income at the end of the fiscal year to the Administration Dean's Office.

- University Service Enterprises

The University Service Enterprises office is in charge of the Bookstore and the Printshop, which are self-sufficient since they use their income to maintain the service. The bookstore offers services to the university community with books, school supplies, as well as University apparel and souvenirs, in a limited inventory, to avoid excessive unsold merchandise. We are working to develop a virtual store to expand the market.

In terms of Printshop, it offers all kinds of printing work such as business cards, stamped paper, envelopes, banners, posters, flyers, and much more, not only to the University community but also to the public. It is currently working on a project to acquire large format flatbed printing equipment, in which they will have the capacity to print on different substrates, including wood, acrylic, glass, and PVC, on plates up to 4'x 8' and 2" thick. This project is intended to increase the sales volume by 20%. Another project, currently in the design stage, is acquiring equipment for printing t-shirts, caps, and other promotional products.

3.2 Disseminate information among graduate and undergraduate students about scholarship and assistantship funding opportunities from external sources.

In the pursuit of fostering educational opportunities and ensuring access to higher education, it is essential to provide comprehensive and transparent information about scholarship funding opportunities from external sources.

Air Force ROTC

Nine (9) students received an Air Force Scholarship payable to the Institution or stipend to the student to include enrollment fees, books, and stipends. The estimated total paid out to all current cadets is \$330,000.

And additional eight (8) students will receive AF scholarship upon their completion of Field Training (above).

The following is the Financial Aid Budget and private Scholarship report for the 2022-2023 year.

Table 10 Financial Aid Budget

TYPE OF ASSISTANCE	TOTAL PAID	STUDENTS BENEFITED
Federal Pell Grant	\$37,533,003.62	6,679
Federal SEOG Grant	\$582,666.67	1,439
Federal Work-Study Program	\$958,819.99	625
Federal Subsidized Loan	\$3,907,146.00	869
Federal Unsubsidized Loan	\$1,091,835.00	198
Short-term (emergency) loans	\$1,720.00	9
GEER Loan	\$9,700.00	12
ARP HEERF III Grant	\$504,463.05	635
Athlete Merit Scholarship	\$371,200.00	464
Band Merit Scholarship	\$239,136.00	299
Honor Merit Scholarship	\$480,000.00	601
Special Fund Law 44 Scholarship	\$490,044.75	890

Special Fund Law 44 Indiv Scholarship	\$42,410.00	95
Special Fund Law 44 Grad Scholarship	\$56,392.57	102
Special Fund Law 44 Grad Indiv Scholarship	\$5,155.00	10
2021-2022 Certification #148-Law 4	\$2,895,953.41	2,263
Law 4 Grad Grant	\$354,500.00	378
2019-2020 Certification #4	\$2,623,939.28	1,934

Table 11 Private Scholarship Report

NAME OF SCHOLARSHIP	PARTICIPANT	TOTAL PAID
Abbvie Employee Assistance Fund	7	\$32,000.00
AISC Education Foundation	1	\$1,000.00
Amazon Future Engineers	1	\$10,000.00
American Baptist Home Mission Societies Scholarship	2	\$2,000.00
American Chemical Society	1	\$5,000.00
AmeriCorps	4	\$9,802.00

Objective 4: Implement Agile and Efficient Administrative Processes

Across various deanships and administrative units within the University of Puerto Rico at Mayagüez (UPRM), a concerted effort has been made to enhance administrative efficiency. This pursuit of streamlined processes, improved communication, and digital solutions has resulted in a series of initiatives aimed at elevating the overall productivity and effectiveness of administrative tasks. In this overview, we will delve into the activities undertaken by each deanship, namely the Administration Deanship, Business Administration Deanship, Arts and Science Deanship, Deanship of Academic Affairs, Chancellor's Office, and Engineering Deanship, to streamline their respective administrative functions. These initiatives range from digital signature implementations to personnel training programs and process automation, all contributing to a more efficient and productive administrative landscape at UPRM.

The Office of the Dean of Administration at UPRM has focused on improving administrative efficiency through various initiatives. These include implementing the SignRequest digital platform to replace paper-based signatures and maintaining an updated web page for easy access to administrative information. The cleaning service has been restructured for better efficiency, and electronic attendance records are now used. Shared directories have been introduced to streamline information access across units. Collaborations with the Department of Human Resources have led to personnel training programs, while several departments have digitized their processes for greater efficiency.

The Business Administration Deanship has undertaken continuous improvement exercises, automating various administrative processes and enhancing training opportunities for staff. Offices and projects have embraced automation for reporting and communication. The Arts and Science Deanship has conducted administrative assessments and staff development activities, focusing on website accessibility and document digitization.

The Deanship of Academic Affairs has optimized administrative processes, such as library procedures and interlibrary loans, and offered diverse workshops and training sessions. The Chancellor's Office has evaluated and improved enrollment processes, while the Information Technology Center has supported the transition to the Wordpress platform for official web pages. The Student Ombudsman Office has enhanced visitor statistics and contact information tracking.

The Engineering Deanship has improved administrative processes by updating the COOP program's website and collaborating on curricular changes. The Mechanical Engineering Department has automated graduate student processes and surveys. These efforts across different deanships and offices demonstrate a commitment to enhancing administrative efficiency and effectiveness at UPRM.

4.1 Dedicate human and fiscal resources to the simplification and automation of critical internal processes

Administration Deanship

To enhance efficiency and streamline administrative processes, the Office of the Dean of Administration and various units within the organization have adopted several initiatives. These initiatives encompass a wide range of activities and strategies aimed at reducing paperwork, improving communication, and enhancing overall productivity.

Digital Signature Process: The implementation of the SignRequest platform has revolutionized the signature process by eliminating the need for paper documents and courier services. This digital solution has been applied to various administrative documents, including Affidavits, PRASA and PREPA Invoices, Solid Waste-ConWaste documents, Transfer of Funds Requests, and Invoices between Accounts, among others.

The Dean of Administration's web page is consistently updated to ensure that all relevant information and documents supporting UPRM administrative management are readily accessible. Additionally, a restructuring of the cleaning service has been initiated to improve task distribution based on space type, area, and proximity, thereby enhancing efficiency in maintenance activities. In another initiatives, the Time & Attendance Program is being actively used for electronic attendance records, simplifying the process of tracking employee attendance. Summed to Shared Directories, that have been implemented across all units of the deanery, facilitating easier access to information and streamlining administrative workflows.

The Deanship was in collaboration with the Department of Human Resources and Personnel Liaison, which has resulted in the coordination of training activities to enhance personnel skills and knowledge. Additionally, a specialized training workshop has been organized for traffic and surveillance personnel to ensure they are well-equipped for their roles.

The **Auxiliary Services Department** changed their communications services, including certifications of calls and invoices, by processing them electronically. Postal meter maintenance services, electronic funds transfers, and other requests were handled electronically for greater efficiency.

The **Building and Grounds Department** digitally files project information and communication is streamlined through a dedicated email address. Additionally, a Campus Vehicle Fleet Maintenance Program has been implemented to simplify the acquisition of vehicle parts and improve maintenance. Also, building maintenance and repair requisitions are directly entered into the SIA program for efficient procurement processes. The materials warehouse employs an inventory management program for more efficient merchandise dispatch and tracking.

The **Finance Department** enhanced internal control reviews and streamline processes by utilizing Microsoft Excel tools for data query and pivot tables. Various workshops have been conducted on topics like purchasing, accounts payable processes, and travel expenses. The Department actively engages in audits and committee work to ensure financial compliance, such as Single and Financial Audits, HEERF funds, GASB 87, Research and Development Center Audit, Audit CP-17-02, Budget and Expenses Dashboards.

The **Environmental, Health, and Safety Office** had Collaborative efforts with other offices and departments to streamline administrative procedures and enhance the administrative system's agility.

The **Human Resources Department** developed several projects to improve administrative processes, including the KRONOS "Time and Attendance" project and the digitization of personnel actions. Also, training initiatives, digitalization efforts, and process improvements are being implemented to enhance efficiency.

The **Property Office** planned to establish a small office within the Surplus Warehouse to better manage space property inventory. Also, recruitment efforts are in progress to fill essential positions and ensure continuity of office functions. Additionally, a new truck is being acquired to improve collection and delivery services for equipment and merchandise.

The implementation of a shared system in the property section is complete, offering paperless and accessible inventory management. Also, electronic equipment purchases have been made to improve working conditions and administrative processes. Furthermore, a security door installation project has been completed to enhance warehouse security.

The **Traffic and Surveillance Department** used a specific email address for official communications and documents has expedited document exchange. Teams are employed for sending attendance cards to administrative staff.

The **RUMAD Program** streamlines parking permit issuance for students and employees. Complaints received are recorded for better control and resolution. Electronic folders of administrative documents are maintained for easy access and printing. Access control systems have been expanded to facilitate entry for employees, professors, and mobile units. Fines are sent through the College Portal, and a hearing procedure for appealed tickets is in place. Administrative staff members have participated in various workshops, enhancing their skills and knowledge.

The University Service Enterprises guided new professors through the ordering books process through the Bookstore using an automated email-based system. The university community is kept informed about return policies for purchased materials. Orders for books and materials are expedited through the Purchasing Department to ensure timely processing. Quotations for materials are provided promptly to academic departments, expediting the obligation process and merchandise dispatch.

In summary, the Office of the Dean of Administration and its various units have implemented a wide range of initiatives to improve efficiency, enhance communication, and streamline administrative processes. These efforts encompass digital solutions, training programs, process improvements, and the adoption of modern technologies to ensure the smooth operation of the University of Puerto Rico at Mayagüez (UPRM).

Business Administration Deanship

During 2022-2023, the offices and centers reviewed current processes as part of a continuous improvement exercise. For example, the Office of Academic reviewed the process of Information on irregular contracting, which was sent by e-mail as cases arose. To keep the information updated and shared with the Dean's Office and the Office of Administrative Affairs. Additional questions were added to the form sent to teachers on Information for the Teaching Program. The Graduate Committee decreased the number of courses and activities for the MBA Assessment. Several offices implemented or completed process automation projects.

The UPRM has diverse offices providing training and tools, such as the Center of Information Technology and the Professional Development Office. At the CBA level, we provide in-person and virtual training in using technology in our classrooms⁸ and pay for in-house⁹ or external training. CBA Centers and projects have constant training for their personnel. Other examples of teacher training activities are:

- CBA paid for training, as in the case of the WordPress workshop.
- On August 25, training was offered for the use of hybrid classrooms. Prof. Milagros Castro and Mr. Daniel Rivera, coordinator of the CBA Information Systems Office, prepared YouTube tutorial videos on how to use the mixed classrooms¹⁰.

- Accreditation Retreat I to V: A SEDONA Workshop and How to Present the Assessment Results was offered only to the non-faculty staff on the first retreat.

Examples of offices, centers, or projects that automated processes:

The **Dean's Office** created spreadsheets to facilitate reports and decision-making: (1) grants and donations, (2) CBA in the news, and (3) social impact activities. (4) Creation of email actividades.adem@uprm.edu and process to facilitate the communication of activities and minimize double bookings.

The **Office of Academic Affairs** maintained the course offers in Google forms survey. Enabling them to keep the responses accessible. In addition, it allows us to generate a report of all responses to facilitate designing the course offering. An Excel document was created and shared with the different offices with the information of the professors, course schedules, and status of the teaching programs, office hours, and syllabi delivery. The folder will help us have an updated record of the work.

The **Business and Economic Development Center (BEDC)** created an employee training site with documents and videos. Another initiative is using the software When2meet to facilitate the meetings scheduling of all employees. Also, BEDC simplified operational processes led by the CNDE Improvement team composed of an industrial engineering professor and her students.

The **Internships and Coop Plan Program** used Calendly to improve the process of providing in-person and online services, such as interview preparation. Also, change the final report to a form to facilitate grading and comparison for assessment report writing.

The Arts and Science Deanship

During the fourth regular meeting of the **Department of Economics**, which took place on December 1, 2022, the outcomes of the administrative assessment questionnaire were presented. This assessment had been conducted on March 3, 2022, using Google Forms to distribute the questionnaire among the nine active teachers of the Department. The meeting aimed to discuss and analyze the results of this assessment, likely addressing various administrative aspects within the Department.

In addition to the administrative assessment, the Department of Economics has been actively involved in staff development. Several workshops were attended, covering topics such as LGBTQ+ student rights, administrative training, and new travel forms in the UPR system. Furthermore, the Department has been engaged in an ongoing effort to digitize documents to optimize storage space. Additionally, they are awaiting the arrival of a new POE Switch to enhance their VoIP telephony services and are actively soliciting student feedback through an online questionnaire. The Department is also committed to maintaining an up-to-date website and invests in staff training to ensure accessibility to web pages for all individuals, as demonstrated by their participation in a training session on May 3, 2023.

The **English Department** received the following feedback on received Sign Request training on June 28, 2023: prepare sheets with accumulated data for part-time and temporary faculty showing workload per semester, provide access to MAEE and MAEL folders with information from each program to the graduate coordinators, and provide undergraduate students access (view only) to their evaluation forms and curricular documents as well as to their advising professors.

The **Department of Marine Sciences** has been working to simplify the flow of information and run administrative tasks more efficiently across employees, faculty, and students. A Spreadsheet summarizing information related to the different steps of the purchase process has been created, for example. This table is in OneDrive for easy access to everyone. Additionally, The process of tracking fuel use (Diesel and gasoline) in Magueyes has been optimized using Google Forms to evaluate consumption and have an efficient plan to avoid running out of fuel for the boats and diesel for the generators during normal use, and in case of an emergency. This record, in conjunction with calendar reminders, has improved the purchasing and sourcing process.

The **Department of Math Sciences** is working with a "no-paper" policy which includes files digitization, increasing the efficiency of the digitized process of approval certifications for the Mathematics Diagnostic Exam and of the Institute of Mathematical Strengthening. In addition, keeping up to date information to continuing offering of the INFOMATE (Institute of Mathematical Strengthening) completely online.

Semi-annually, the **Nursing Department** offered administrative workshops on stress reduction, communication skills, and teamwork.

The **Social Sciences Department** collaborated in this objective by keeping up-to-date information in their Web page platform <https://www.uprm.edu/cienciassociales/>

Deanship of Academic Affairs

The **General Library** was in constant procedure revisions to minimize time consuming processes, like for example bookings, checkouts, and interlibrary lending (ILL). The Interlibrary Loans Department added new forms of request, by email and directly from the databases, which led to more requests for ILL from our students and more efficient handling of the data received.

Additionally, throughout the year Library assistants and administrative staff participated into a variety of workshops, webinars, and talks on diverse subjects. These included sessions on topics such as the history and language of fans in Puerto Rico, citation styles and inclusive language, Microsoft Word usage, library automation systems, climate change education, patent searches, data management, and self-care. Additionally, they organized cultural activities like the exploration of Puerto Rican Bomb history, Christmas traditions, and the Puerto Rican Collection sponsored several of these events.

Moreover, the schedule included professional development opportunities, such as sessions on intellectual property, cybersecurity, and a significant assembly addressing conventions. These offerings reflected a comprehensive range of academic, cultural, and professional development interests catered to the community.

Chancellor's Office

The **Ad Hoc Committee of the Academic Board** held in January 2023 evaluated the procedure for updating documents required by the Medical Services Department for the enrollment process, to optimize and make this process more efficient. Also, the Certification Number 22-23-019 was stated requesting Registrar, Financial Aid, Finance, and Medical Services Offices joint with the Information Technology Center to evaluate the enrollment process and to submit a report by mid-October with their recommendations to optimize the process.

The **Information Technology Center (CTI)** collaborated with different departments in the Wordpress transition of their official pages, moving from the previous platforms to the new institutional

platform Wordpress. The campus pages are being revised in order to comply with the digital accessibility requirement. Among the pages that were updated are:

- UPRM web Page
- Dean of Academic Affairs
- Register's Office
- Admission Office
- Financial Aid Office
- Medical Services Office
- Counseling and Psychological Services
- Service for Students with Disabilities
- Dean of Student Affairs
- Dean of Administration
- Human Resources Office
- Transit and Surveillance Office
- Agricultural Sciences
- Engineering
- Business Administration

Also, CTI updated and developed programming solutions in the administrative systems based on new administrative requirements. These were worked based on Certifications and Circular Letters issued by Academic Senate and Administrative Board:

- Certification 18-105 Academic Achievement Standards. For undergraduates, with the evaluation of probation compliance, continuing on probation, and not complying with probation was completed and applied in May 2023.
- Certification 22-87 of the Academic Senate related to the Pass/Fail modality for the first semester 2022-2023.
- Certification 148 2021-2022 Approve the Policy for the Concession of Financial Aid of the Scholarship Program to Mitigate Plan Tuition Rise Prosecutor of the University of Puerto Rico, which is an integral part of this Certification.
- HEEND agreement 2021-2024. Article 126 Formulate eligibility criteria that will govern the process of granting benefits related to Academic Development Program for Undergraduate and Graduate students.

The **Student Ombudsman Office** jointly worked with the Database System, to keep visitors statistics and contact information. Additionally, and in collaboration with the Vice Presidency, they worked on a form implementation, which contains all the offices contact information to offer direct services to students in all UPR dependencies.

Additionally, **OPIMI** promoted the automation of statistical reports for the consumption of the university community, particularly the UPRM in Numbers. Usually, this report is usually updated annually using Excel with many person-hours dedicated to the task. The implemented changes allowed the department to automate the preprocessing of the databases, reducing the person-hour requirements by about 60%, creating the opportunity to develop new projects with the same personnel.



Reduction of Activities

Activities were reduced by 20%



Pre-processing Time

82% reduction in data preprocessing time for the most complex table

Tool	Months	Total Hours	Hours/table
Excel	4.5	90	4.7
Power Bi (estimated)	1.71	34.2	1.8

Figure 20 OPIMI's Migration Time reduction

Engineering Deanship

The **COOP program** improved their administrative process by updating their website www.uprm.edu/coop/ with new information for students, the resume update area, and the required documents area for recruiting employers.

The **Articulated Transfers Programs** held meetings with other UPR units' coordinators, to present new curricular changes. These meetings discussed transfer best practices and orientation for the fall 2023 transfer process.

The Mechanical Engineering Department automated their processes by creating a graduate students OneDrive repository, where all faculty involved in the graduate program has access to these documents. The SignRequest is used to signature flow, the demand for graduate courses, Teaching Assistant (TA) availability and TA work plan is surveyed via Microsoft forms.

Objective 5: Strengthen Research and Competitive Creative Work

5.1. To provide the support and resources necessary for creative and research work to be carried out efficiently.

Deanship of Administration

Units of the Deanship participated in the following activities: The Environmental, Health, and Safety Office under the Administration Dean, to strengthen research and competitive creative endeavors provided training on industry regulations on health, occupational safety, and environmental issues. Also provided training and access to technological tools to graduate and undergraduate students as well as teaching and non-teaching staff to facilitate the research process, for example, the use of Chematix to identify the availability of chemical reagents. In addition, strategies for risk assessment in testing processes.

Chancellor's Office

The **CTI** department effectively managed institutional software licensing agreements for academic use, ensuring adequate access to essential applications like ArcGIS, Minitab, Microsoft 365, and Microsoft Development Tools for Teaching. The CTI User Services Unit maintains usage information and installation instructions on its Electronic Resources page. This unit collaborates with the CTI Systems Management Unit to provide access to academically used applications and tools. Additionally, the department extends support to international students, both those visiting through the Exchange Office and those enrolling as undergraduate and graduate students. International students are introduced to tools like Moodle, and secure VPN access is offered to faculty and researchers traveling abroad, ensuring a seamless academic experience.

Deanship of Business Administration

During this academic year, the **Center for Business and Economic Development** recruited 26 undergraduate and graduate students from different disciplines to work directly on the execution of the projects. CRECEN recruited eight undergraduate and graduate students. These students developed guides, manuals, processes, and other work requiring research and creative work. The Business Research Center had five graduate assistantships during the semesters. Additionally, during this period, the BEDC had three research assistantships.

Deanships of Arts and Science

The **English Department** had Graduate assistantships for research and teaching. In fall 2022-23, there were 23 (43% of the teaching faculty) graduate teaching assistants teaching 6 (9%) of the different courses in 51 sections (31%) that impacted 1301 students (35%) of the population served. (51 sections x \$500 = \$25,500). In spring 2022-23, there were 23 (42% of the teaching faculty) graduate teaching assistants teaching 7 (12%) of the different courses in 47 sections (31%) impacting 1266 students (39%) of the population served. (47 sections x \$500 = \$23,500)

Deanship of Academic Affairs

The **Graduate Studies Office**, acknowledging that graduate education is an inseparable part of graduate research, participated in the Institutional Research and Creative Work Committee started to design a guideline to award the number of credits and remuneration for graduate research assistantships. Regarding graduate assistantships, during the Academic Year 2022-2023

a total of 1,869 graduate assistantships were awarded, for a total amount of \$6,416,152.79. These assistantships are detailed as follows:

Table 12 Graduate Assistantship Awarded with Institutional and External Funds 2022-2023

Session	Assistantships Awarded	Funds
Summer 2022	442	\$ 878,817.74
Fall Semester 2022-2023	708	\$ 2,785,338.65
Spring Semester 2022-2023	719	\$ 2,751,996.40
Total	1869	\$ 6,416,152.79

Addition

Agricultural Sciences Deanship

The deanship awarded 160 research graduate assistantships with a value of \$610,044.00 and developed several initiatives to involve students in research projects: Summer Internship 2022 Censo Agrícola (USDA-NASS: 2022 Puerto Rico Census of Agriculture Agreement Number 58-3AEU-0048) by Dr. Alexandra Gregory and Dr. Gladys M. González. Comparison between locally produced food prices and imported food prices by Dr. Julio C. Hernández Correa. Topics in Applied Economics: Agricultural Economics, Natural Resources, and Health by Dr. Alicia V. Barriga. Food System Resilience in Puerto Rico by Dr. Robinson Rodríguez.

5.2. Increase external funds for research and creative work that provide income to the campus, while stimulating Campus, stimulating in turn the generation of income for researchers.

Deanship of Business Administration

Total external funds received in 2022-2023 were \$2,056,037 in awarded research and service proposals.

Table 13 Deanship of Business Administration External Funds

Office, Center, or Project	Title, PI, and Co-PIs	Agency	Annual amount
Business and Economic Development Center	Capital Semilla, Drs. Leila Marcano and Moriana De Hoyos	Banco Popular de Puerto Rico	\$200,000
	University Center, Dr. Moraima De Hoyos	Economic Development Administration	\$137,923
	Área-E, Drs. Moraima De Hoyos and Mari Luz Zapata	CDBG-DR	\$613,731
	NFDO, Drs. David Santiago y Moraima De Hoyos	Economic Development Administration	\$293,697

CRECEN	CRECEN, Drs. María Amador Dumois, Mario Córdova and Mari Luz Zapata	CDBG-DR	\$800,686
Accounting Professors	2023 PwC INQUIRES, Drs. David González and Luz Gracia	KPMG	\$10,000
TOTAL ANNUAL			\$2,056,037

During the 2022-2023, professors submitted six proposals. As of June 30, two were funded with a \$210,000 value, two were non-funded, and two are pending.

Table 14 Deanship of Business Administration Submitted Proposals

Title	Funding Source	Status	Full Name	Requested / Funded
2023 PwC INQUIRES	PwC - PriceWaterhouseCoopers	Funded	Dr. David González-López	\$ 10,000
Capital Semilla 2	PRI-Banco Popular de Puerto Rico	Funded	Dr. Leila Marcano-Nieves	\$ 200,000
NeuroLab-NIS: Neuro Lab, Neuromarketing & Innovation Space	PRI-Venturewell	Not Funded	Dr. Leila Marcano-Nieves	\$ 30,000
Volunteer Income Tax Assistance Higher Education Challenge II	USDA - National Institute of Food and Agriculture	Not Funded	Dr. David González-López	\$ 103,481
Talleres de Simulación de Negocios para Emprendedores y Empresas en Desarrollo	Departamento de Desarrollo Económico y Comercio	Pending	Dr. Edgar Soto-Rodríguez	\$85,500
Talleres de Simulación de Negocios para Emprendedores y Empresas en Desarrollo	Pathstone	Pending	Dr. Edgar Soto-Rodríguez	\$85,500

The Business Research Center works on five systematic reviews and supports faculty research. Dr. David González and Dr. Luz Gracia obtained a grant from the PwC INQUIRES Program to develop accounting courses in Business Intelligence and Data Analytics, Data-Driven Development with Python, and Cybersecurity Planning.

Deanship of Arts and Sciences

The **department of Biology** participated in 13 new publications; Five Scientific Articles of the **Department of Chemistry** were published during the academic year 2022-2023. The **department**

of economics through Dr. Carlos A. del Valle-Gonzalez participated in the National UTC proposal led by the University of South Florida to establish a University Transportation Center named National Institute for Congestion Reduction (NICR), also Ivonne del C. Díaz-Rodríguez (Ph.D) participated in a proposal sponsored by the NSF and Microsoft for the development of two courses on economics and sustainability, through the Department of Materials Engineering of the UPRM. Publication of the book "Verdor que Clama" in September 2022, edited by doctors Carmen Rivera Villegas and Alexandra Morales of the Department of Hispanic Studies of the UPRM. The publication includes an essay "Impact of Catastrophic Climate Changes" by Dr. Ivonne del C. Díaz.

- Dr. Ivonne Del C. Diaz-Rodriguez participated in a collaborative agreement with the UPRM Sea Grant Office to document environmental conflicts through the Environmental Justice Atlas. Two students participated during the second semester 2022-2023: María Eugenia Rodríguez-Carrió, from the Department of Economics, and Adriana Ramírez-Cuebas, student at the Department of Civil Engineering.
- Dr. Ricardo R. Fuentes-Ramirez, participated in a proposal funded by the Economic Development Agency (NPO-SIED) in collaboration with the UPRM College of Business Administration. Participated in a pre-proposal submitted to the National Science Foundation entitled "Engineering Research Center for a Rural Adaptable and Inclusive Community Resilience Decision-support System (Rural-ACCoRDS)". In addition, a contract was signed to start work during the Second Semester 2022-2023 with a grant from CDBG-DR funds for the development of resilience plans for seven communities on the island. In addition, he participated as a speaker in the following conferences: Political Economy of Native Capital. Conference Critical Political Economy of Puerto Rico: Past, Present and Future. University of Puerto Rico-Rio Piedras. April 27, 2023. Economic Planning in National and Regional Contexts. Third Congress of Applied Economics of Puerto Rico. University of Puerto Rico-Mayagüez. May 5, 2023. Participated as an investigator in the following's proposal awarded:
 - The Comprehensive Community Resilience Planning Program, funded by federal CDBG-DR funds administered by the Department of Housing, was able to present the planning process to be carried out to the seven participating communities, and all of them were able to obtain the signing of the collaboration agreement.
 - Nonprofit Organizations Strengthening Initiative for Economic Development, funded by the U.S. Bureau of Economic Analysis, after "graduating" the first cohort of Non-Profit Organizations (NPOs) that received assistance from the project, the call was launched and constituted the second cohort.

The Department of Economics announced to the UPRM university community on Wednesday, December 14, 2022, the publication of the tenth volume of the digital magazine "Ceteris Paribus".

The **English Department** awarded 23 graduate assistantships per semester in Fall 2022-2023 and Spring 2022-2023, also had the following remarkable publications and presentations:

- Font-Santiago, Cristopher, Mirva Johnson, & Joseph Salmons. Reallocation: How new forms arise from contact. In Rebecca Roeder & Gabriela Alfaraz (Eds.), *Language and Linguistics Compass* 16(8). Hoboken: Wiley-Blackwell. (Invited, Peer Reviewed). DOI: <https://doi.org/10.1111/lnc3.12470>
- Stephens, Gregory, "Postcolonialism as Leftist Firing Squad and Procrustean Bed: A Communicative Take." *Journal for Cultural Research* (Spring 2023).
- Uwakweh, Stephania. *Omekam: Poems*, ISBN- 978-1-970166-60-6, CePa, 2023
- Chansky, Ricia, Co-Editor, *The Divided States: Unraveling National Identity in the Twenty-first Century* – University of Wisconsin Press – January 2023
- Soto-Santiago, S. L. (2023). You have to learn the language of where you are: Language ideologies and the educational experiences of Puerto Rican transnational

youth. Special Issue on Languages in Modern Day Puerto Rico. (Manuscript submitted for publication).

The **Department of Geology** had the following research contributions:

- On 26-January-2023, Prof. Stephen Hughes sent an invited collaborative proposal with colleagues at SUNY (State University of New York) Albany to the NSF Environmental Sustainability program. The title of the proposal is "Collaborative Research: On the Resiliency of the Power Infrastructure to Recurrent Extreme Weather Events of Islanded Communities". The \$494k proposal is for a 2.5-year project that would be coordinated with the local electricity utility in Puerto Rico and would add to the research portfolio of the department.
- On July 22, 2022, Prof. Stephen Hughes was informed that a proposal he is co-PI on and submitted to the NSF Centers for Innovation and Community Engagement in Solid Earth Geohazards program was recommended for funding. The 2 years \$497k project is titled "Track I Center Catalyst: Collaborative Center for Landslides and Ground Failure Geohazards" and is collaborative with Georgia Tech and the University of Colorado. Additional UPRM co-PIs are Alesandra Morales and Ismael Pagan of the Civil Engineering department. At the end of the 2-year period, the group will have the opportunity to submit a proposal for a 5-year, \$15 Million project.
- On July 23, 2022, Prof. Stephen Hughes was informed that a proposal he is co-PI on and submitted to the NOAA Climate Program Office Regional Integrated Sciences and Assessments opportunity was recommended for funding. The 5-year \$5 Million project is titled "Caribbean Climate Adaptation Network: Building equitable adaptive capacities of the US Virgin Islands and Puerto Rico." and is collaborative with several institutions including the leading university: UPR-Medical Sciences. The other UPRM co-PI is Eric Harmsen of the Department of Agricultural and Biosystems Engineering.
- The Prof. Thomas Hudgins NSF grant has been awarded. The title is "Collaborative Research: Characterizing Iron Deposits in Puerto Rico to Elucidate Metal Transport and Magnetite Mineralization Processes in Skarn Systems".
- The Puerto Rico (PR) Component of the NTHMP 22-23 was awarded, in the sum of \$400,864.00. This project will allow for the continuity of the PR tsunami program. Prof. Victor Huerfano is PI and Prof. Elizabeth Vanacore is Co-I of the grant.
- The "UPRM Geophysical Studies for Updating the Puerto Rico Seismic Hazard Map: A Local Workshop Approach" proposal was approved for funding with the USGS. The proposal is for 2 years (September 1, 2022, to August 31, 2024), with the objective of providing information conducive to the updating of the seismic risk map of PR. The funding is \$497,523. The proposal was submitted by Profs. Alberto López, Víctor Huérfano, Elizabeth Vanacore, and José Martínez Cruzado.
- On October 24, 2022, Prof. Stephen Hughes received a \$21,750 grant from NSF titled Collaborative Research: RAPID: The fate of landslide-derived sediment following tropical cyclones: a case study of Hurricane Fiona in Puerto Rico.
- On Oct 25, 2022, the NOAA Climate Program Office officially announced it would fund a 5-year, \$6M Climate Adaptation Partnership in PR and USVI. The project title is "Caribbean Climate Adaptation Network" and includes PI at UPR-Ciencias Médicas and co-PIs Eric Harmsen and Prof. Stephen Hughes at UPRM.
- Over 20 undergraduate and graduate students participated in summer research internships in 2022, at different universities in USA, the National Weather Service in Pennsylvania, IRIS, the Arctic REU internship, NOAA, the NSF initiative Student-Driven Internship Opportunities in the Atmospheric Sciences, the National Weather Center in Oklahoma, the Denver Museum of Nature & Science, the Laboratory of Communication in Meteorology at WAPA-TV.

- Presentations at the 2022 Geological Society of America conference, celebrated in Denver, CO, in October 9-12, 2022: "Inventing AUGR: Reflections on designing and implementing an Authentic Undergraduate Geoscience Research experience", co-authored by Prof. Stephen Hughes. Lead author is Isabella Bennett of the Univ. of Vermont, and "Remote mapping and landscape morphology of potentially active faults in Puerto Rico", co-authored by Prof. Stephen Hughes. Lead author is Jessica Thompson-Jobe of the USGS Earthquake Hazards program.
- Graduate student Yanira Rivera participated in the NOAA EPP/MSI Education and Science Forum, in Tallahassee, FL, in August 2022. Her poster was titled: "Measuring Hurricane Maria's Impacts and Recovery Remotely with Blue-Roof-Tarps and Nighttime Lights throughout Puerto Rico". She received a third-place award in Social Science, Education and Communications.
- The "CARIBE WAVE: A Decade of Exercises for Validating Tsunami Preparedness in the Caribbean and Adjacent Regions" manuscript was accepted for publication at BSSA, by student Stephanie Soto, Christa von Hillebrandt-Andrade, Prof. Elizabeth A. Vanacore, Silvia Chacón-Barrantes, and Alison Brome.
- Alum Giovanni Nin presented his MS thesis research at the Simposio Santiaguito 100 Años, a hybrid conference dedicated to research related to the activity at the Santiaguito Dome Complex, in Guatemala, which started growing in 2022 and continues.
- The following article was published: "Estimating Co-seismic Deformation of Southwestern Puerto Rico from the 7 January 2020 Mw 6.4 Earthquake: Constraints from Campaign and Continuous GPS", by Alberto M. López-Venegas; Glen S. Mattioli; Margarita Solares-Colón; David Mencin; Pamela E. Jansma, at Bulletin of the Seismological Society of America (2023) 113 (1): 99–114.
- Delgado Maisonet, D., Rodriguez Iglesias, L.A., 2023, "Analysis of SO₂ Emissions from Active Volcanoes in Guatemala to Assess Volcanic Degassing and Eruptive Activity", Sigma Xi Poster Day, 27 April, University of Puerto Rico-Mayaguez Campus.
- Clouard, V., Angove, M., Rodriguez, L., Tenorio, V., Joseph, E., Ryan, G., McCreery, C., Calvache, M., Paris, R., Lynch, L., McNamara, D., Arcos, N., Talavera, E., von Hillebrandt-Andrade, C., Aliaga, B., 2022, "On-going implementation of tsunami procedures for volcano crisis in the Caribbean", LACSC 4th Assembly, Quito, Ecuador.
- Charbonnier, S.J., Garín, F., Rodríguez, L., Ayala, K., Cancel, S., Escobar-Wolf, R., Chigna, G., Chun-Quinillo, C., González, D., Chigna, W., Chun-Quinillo, K., Mérida, R., Juárez, F., Calder, E.S., 2023, "Unravelling the Dynamics and Hazards of the June 3rd, 2018, Pyroclastic Density Currents at Fuego volcano (Guatemala)", Journal of Volcanology and Geothermal Research, Volume 436, 107791, ISSN 0377-0273, <https://doi.org/10.1016/j.jvolgeores.2023.107791>.
- Prof. Elizabeth Vanacore was informed in March 2023 that the last version of the Global Key Performance Indicators for Tsunami Warning and Mitigation of which she was a member of the UNESCO/IOC task team to develop will be published as a Terms of Reference by UNSECO/IOC and developed into a webtool by UNESCO/IOC for global tsunami hazard mitigation reporting.
- On 08-March-2023 the Geotechnical Extreme Events Reconnaissance report for Hurricane Fiona was published. The report was a collaboration between UPRM, Georgia Tech Univ., Univ. of Michigan, and Univ. of California Berkeley. UPRM authors include Alesandra Morales (INCI), Stephen Hughes, Edwin Irizarry, Estefania Vicens, Tania Figueroa, Coralís Friedman, Kiara Cunillera, Anishka Ruiz, and Victor Ortega. <https://geerassociation.org/component/geer-reports/?view=geerreports&id=108>
- Presentations at the Seismological Society of America (SSA) Annual Meeting, in San Juan, PR (17-20 April 2023): Integrating Volcanic Sources into the Tsunami Warning System for the Caribbean and Adjacent Regions, Authors: Christa von Hillebrandt-Andrade, Valerie Clouard, Jelis J. Sostre-Cortés, Elizabeth Vanacore, Bernardo Aliaga, Mike Angove, Nicolas

Arcos, Silvia Chacón-Barrantes, Francisco Dourado, Octavio Gomez-Ramos, Erouscilla Joseph, Laura Kong, Lloyd Lynch, Charles McCreery, Dan McNamara, Raphael Paris, Lizzette Rodriguez, Roy Watlington, and Vs30 Measurements at Puerto Rico Seismic Sites, by Cherilyn Toro and Elizabeth Vanacore.

- On 27-Apr-2023 Prof. Stephen Hughes gave an invited presentation for the FEMA Community Assistance Recovery Support Function Virtual "Simposio de Agua". The title of the online seminar was "Recovery Strategies for Community Access to Drinking Water and Landslides Mitigation".
- Graduate assistantships for research and teaching (quantity and amount awarded): TA: 11; Total = \$44374.99 RA: 8; Total = \$47216.60

The **Department of Humanities** had the following projects: Dr. Sara Gavrell: Beyond Obstetric Violence: Imposed Caesareans as Institutionalized Torture; Dr. Jeffrey Herlihy: Eurocentrism and the Limits of Foreignness in the Academic Ecosystem, and Land Grant Universities and Cultural Dispossession;

Dr. Noemí Maldonado: The validity and relevance of ancestral cultural practices for the benefit of current artistic and pedagogical practices; Dr. Emilia Quiñones: Marcos Irizarry: life and work; Dr. Jerry Torres: Nature and the city: cultural study of the relationships between the built environment in the city of San Juan, Puerto Rico and its natural environment. In addition, Dr. Melissa Ramos, Dr. Emilia Quiñones, and Prof. Claudia Torres worked with the project The Materialization of the Domestic corporal.

The **department of Kinesiology** had different in-field contributions that are mentioned above:

- Dr. Luis O Del Río, Puerto Rican Handball Federation, exalted as an athlete and promoter to the Handball Hall of Immortals. Sports Museum, Guaynabo (2022).
- Prof. Manuel Morales, The Puerto Rico Paralympic Committee and the Paralympic Academy awarded the recognition as an APAPUR Presidium for his outstanding participation and support to Paralympic Education. Ponce (2022).
- Del Río, L.O.; Figueroa, I.A. and Quiñones, C. (2022). Conversatory on Prevention and Reduction of Childhood Obesity in Puerto Rico. School of Public Health, UPR Medical Sciences Campus.
- Figueroa, I.A. (2022). NIH Research Proposal to submit, for submission form Transformative Research to Address Health Disparities and Advance Health Equity Institution. Research proposal jointly with CDC, Ohio State University, University of Wisconsin-Madison, Universidad de Caldas, Manizales and Universidad de Antioquia, Medellin, Colombia.
- Figueroa, I.A. (2022). PTEENS (Focused on Obesity and Children in Mayagüez) intervention with CDC, Ohio State, University of Wisconsin, and Coco Pediatrics.
- Torres, C.X. (2022). Racial, ethnic, and nativity disparities in physical activity and sedentary time among Cancer Prevention Study-3 participants. Accepted for publication (January 2022). *Medicine and Science in sports and exercise*. ACSM.
- Morales, M.; Torres, C. and Del Río, L.O. (2022). Personal Training for people with disabilities. Workshop for members of the Puerto Rico Paralympic Committee. Catholic University of Puerto Rico. Ponce, October 22, 2022.
- Del Rio, L.O. (2022). Physical activity during times of COVID-19. Annual Convention of Physical Education and Recreation of Puerto Rico. Salinas, PR.
- Del Río, L.O. and Álvarez, R.L. (2022). Coordinators of the National Physical Education Convention, Aguadilla, PR.
- R. Álvarez (2022). Research was conducted with seed funds entitled: Impact of the Ephibia Manual in Puerto Rico.
- Del Rio, L.O. (2022). Review for the Fitness Trainer License Certification Examination. Department of Recreation and Sports. December 10, 11, and 12, 2022.

- Del Rio, L.O. (2022). Review for the Fitness Trainer License Certification Examination. Department of Recreation and Sports. May 12, 14 and 15, 2023.
- Morales, M. (2023). In charge of the Gymnasium Safety and Fitness Commission. Department of Recreation and Sports.
- Morales, M. (2023). Physical Fitness Instructor Education Program Director. FIDES Corp.
- Morales, M.; Torres, C.; Rodríguez, E. and Del Río, L.O. (2023). Lecturers in the Physical Fitness Instructor Education Program. FIDES Corp.
- Rodríguez, J.N. (2023). Development of the Beach Volleyball Technical Program in the western area.
- Rodriguez, J.N. (2023). NFHS Coaching Adapted Sports. Research. Rodriguez, J.N. (2023). NFHS ACL Injury Prevention. Research.
- Rodriguez, A.L. (2022). Therapeutic Prevention Exercise Reduces the Risk of Overuse Injuries in Sports Players of 13-17 Years Old. Research.
- Rodriguez, A.L. (2022). Impact of Low-Level Laser Therapy in Pain Rehabilitation. Research.

The **Department of Marine Sciences** submitted 10 research proposals (Pi and Co-PI) to federal agencies, foundations, and institutions such as EPA-DNRA, NASA, Purdue University, Schmidt Institution, and Wenner Green Foundation. With an approved research funding of \$ 3,747,556. Also, Collaboration agreements were discussed between the DMS and the California State University, NorthRidge Campus (Dr. Peter Edmunds) and SCRIPS Institute of Oceanography, University of California, San Diego (Dr. Dahiana Arcilla and Dra. Isabel Collazo). An MOU is being developed to officialize the verbal agreement with CSU, which includes student exchange, remote teaching of courses, and research collaborations. Similarly, two MOUs are being developed between the DMS and two Departments at the SCRIPPS Institution, University of California, San Diego. One with the Department of Anthropology (Dra. Isabel Collazo), and one with the department of biology (Dr. Dahiana Arcilla). A summer course in fish biology and evolution was organized by the DMS and Dr. Dahiana Arcila to be offered for the first summer session of 2023. Unfortunately, there were no applications because of the high cost of the course; therefore, the department is seeking alternatives to provide financial support for next year.

- Drs. T. Courtney and E. Weil collaborated with the Schmidt Ocean Institute, a private NGO, with an agreement to collaborate with a mesophotic project and to secure the participation of DMS students in the planned cruise for the project. The project was entitled "Corals and Sponges as Biological Hotspots of Reactive Oxygen Species in the Mesophotic to Deep Sea Habitats". The PI of the project, Dr. Colleen Hansel, from Woods Hole Oceanographic Institution, was the person of contact for a science research cruise scheduled for April - May 2023 aboard SOI's research vessel Falkor. Five students from the DMS participated in this unique experience.
- Collaboration agreement with the University of Southern Mississippi (USM) and the Marine Consortium of the University of Louisiana (LUMCON). This link opens collaboration doors in aspects related to oceanography, possibilities to interact with other institutions and the opportunity for all UPR students.
- The Sea Grant College Program has formalized a collaboration agreement with the DMS, through which we will join efforts to increase the impact of both programs in the community with a perspective of education, applied research and marine extension.
- CoHemis Consortium Framework Agreement, between the UPR-Mayagüez and the University of Málaga, the purpose of which is to expand hemispheric collaboration by facilitating institutional and professional relations and faculty and student exchanges. In addition to supporting various investigations and information transfer through conferences and workshops.
- Cooperative Agreement between the Woods Hole Oceanographic Institute and the UPR-Mayagüez for the purpose of promoting education and research through the

establishment of academic exchange programs Academic exchange, visits by professors, research staff and students, particularly in association with joint research, workshops. Exchange of publications, scientific materials, academic articles, and research information resulting from joint activities, etc.

- The DMS is a participating member of the Gulf of Mexico University Research Collaborative (GOMURC) which allows us to expand our collaboration ties in oceanographic activities (Letter of Support).
- An MOU was signed between the DMS and the CARICOOS program. It establishes cooperation with infrastructure and logistical support, and an agreement for use of space in Magueyes, and use of DMS boats and diving support for the projects sponsored by the organization. CARICOOS provides several research assistantships for DMS students and has helped with some equipment and upgrading of infrastructure.
- An understanding agreement is maintained with the University of Rhode Island with which a migratory bird monitoring station was established that will allow the development of studies related to seabirds (Validity: 2019). In the Marine Sciences facilities on Isla Magueyes, the NOAA tide station with older data in this area of the Caribbean is maintained (<https://tidesandcurrents.noaa.gov/stationhome.htmlid=9759110>) (Undefined)
- A collaborative agreement is in force under the East Coast Oceanographic Consortium (ECOC) agency to guide and supervise the utilization, operation and administration of a currently active UNOLS research vessel, the R/V Endeavor; to promote cooperation and collaboration in marine science and education.
- The financial aid to our graduate students improved significantly due to external funding linked to new research projects awarded to DMS faculty, and collaborative projects between the DMS and NGOs and other institutions. Fifteen (15) teaching assistantships were funded with institutional funds distributed between the Departments of Biology (11) and Geology (4). Two (2) research assistantships were funded by EcoElectrica (MOU). The total amount of funding for these 17 assistantships was \$66,306.74 (appendix 2).
- Fifty-four (54) research assistantships were funded with external funds provided by research grants awarded to DMS faculty members and other sources (appendix 1). The total amount of funding from was \$174,101.60. A NASA funded project by Dr. R. Armstrong supported (\$11,632.5) nine (9) undergraduate students working on different projects in Magueyes. Fourteen graduate students receive hourly wages (jornal) to assist in different tasks, including research projects and maintenance of the invertebrate collection. The total amount was (\$27,253).
- Productivity in terms of peer-reviewed publications was high again. Twenty-two (22) peer-reviewed manuscripts were published in recognized journals, four (4) technical reports were submitted to agencies, and eleven (11) manuscripts (for 41) are under review in recognized journals. Students are listed as senior/co-authors authors in 19 of all the published/submitted manuscripts, which represents a 57% participation

The **Department of Math Sciences** had 5 accepted publications and three other submissions; Dr. Luis F. Cáceres has 5 approved proposals; Dr. Reyes Ortiz has three NSF funded projects. Dr. Israel A. Almodovar submitted a proposal to NSF titled *Estimating the number of groups using distribution free methods*. Dr. Alcibíades Bustillo Zarate-Subgraduate Investigation- *Constructing 2D Watermarks by Composition*. October 2022- December 2022 CASH SI LREU Program. In addition, seven students, under faculty mentoring, participated in conferences, workshops, talks, or presented posters.

The **Nursing Department** made agreements with the Nursing School of the Washington University to start a project on global warming and its impact on health, student exchange and

collaborative funds to get involved in community education activities, research, and socio-cultural experiences. Dra. Sheila Mercado presented at the International Education Summit, Chile – “*Educating Generation Z.*” Dr. Miriam Nieto presents at the Scientific Convention of the American College of Cardiology Puerto Rico – in San Juan PR. Team Cardiovascular Section “Care of the geriatric patient with heart failure.” Dr. Abigail Matos presents at the Scientific Convention of the American College of Cardiology Puerto Rico- in San Juan PR Team Cardiovascular Section “Inoca vs. Minoca”

- Dra. Abigail Matos and Dra. Miriam Nieto were appointed President and Secretary Treasurer of the American College of Cardiology Puerto Rico Cardiovascular Team.
- Working towards collaborative agreements for research and creative work:
 - *Purdue Global, Virtual reality nursing skills (Nursing Administration)*
 - *Westfiel State University College of Nursing: Collaborative agreements towards cultural and student Exchange.*
- Dr. Solangie Pagan Lugo reviewed 17 abstracts for the American Public Health Association Annual Meeting & Expo in Atlanta, GA 2023.
- Webinar Sexual Transmission Infections offered by Dr. Solangie Pagan Lugo, Epidemiologist Northeast Caribbean AIDS Education and Train Center UPR RCM. April 28, 2023.
- Dr. Sheila Mercado presented at the 5th International Congress of Research Interamerican Division (5CIDIA). Wednesday, March 16th, 2023. Her topic was on promotion and safety of fall quality of assessment.
- Faculty participation in the health fair of Ferries del Caribe, Dominican Republic. March 2023. Professors and students participated in offering health promotion activities.
- Publication of article by Dr. Sheila Mercado: *Role of the professional nurse in public policy.* VestigiumUAA, Vol. 8, No1. 2022.

The **Physics department** has seven ongoing research and creative work projects, six funded by the NSF and one by the Department of Defense. Also had 111 publications and 25 talks, conferences, and poster presentations. The department submitted 10 proposals with two of them approved. Dr. Henri Radovan, UPRM Physics professor and member of North American Nanohertz Observatory for Gravitational Waves (NANOGrav) has announced the first evidence of gravitational wave background.

- Four research collaboration agreements: *Laboratorio de Comunicación Científica between NotiCentro -WAPA TV and Meteorology Program, Since August 2021; High Luminosity (HL) LHC CMS Detector Upgrade Project FPIX: Mechanics & Assembly - Principal Investigator: Sudhir Malik; NANOGrav collaboration between Physics Department with the North American Nanohertz Observatory for Gravitational Waves (NANOGrav) Physics Frontiers Center.* This partnership looks to advance several key NANOGrav science goals and to increase the participation and retention of minorities in the field of physics. Undergraduate students from UPRM will be involved in research projects of relevance to NANOGrav's mission, mentored at UPRM as well as remotely and onsite at several NANOGrav institutions.
- Institute for Research and Innovation in Software for High Energy Physics (IRIS-HEP) - (Dr. Sudhir Malik), Collaborative Agreements with Princeton University.
- Graduate teaching assistantships total \$86,100.21 during the first semester of the academic year 2022-2023, and \$75,166.85 during the second semester of the academic year 2022-2023. While the graduate research assistantships total was \$53,825.00 for the entire academic year.

The **Psychology department** had the following contributions to this objective:

- Dr. Milagritos González is the PI of the project entitled: Pathway to Success: RUMBos for Success – US Department of Education, Title V. They offer a variety of direct services to the new student's population (tutoring, counseling and education services and psychological services, personal development workshops, among others).
- Dr. Bernadette Delgado oversees the overall evaluation of the project titled "Ecosystem to Expand Capabilities and Opportunities for Scholars (EECO Scholars) (NSF EECOS-STEM #1833989). EECOS aims to provide academically talented and low-income UPRM students who were impacted by Hurricane Maria with the financial, academic, and socio-emotional support they need to expand their academic, personal, and professional capabilities and thus complete their program within institutionally established time limits (retention and student success). Finally, Dr. Delgado also participated in the writing of the following research proposals: Evaluation of the University of Puerto Rico at Mayagüez Coastal Resilience Center (UPRM-CRC) and Co-Design of Integrated Energy and Mobility Hubs for Service and Resiliency.
- Dr. Janet Bonilla is the external evaluator of the program PEARLS "Engineering PEARLS: Program for Engineering Access, Retention and LIATS Success". This program is aimed at helping bachelor's and master's level students in all engineering disciplines successfully complete their programs of study and transition to professional life. Specifically, this program seeks to improve the recruitment, retention, time to graduation and graduation rates of Low Income Academically Talented Students (LIATS).
- Dr. Ana Nieves provides numerous services and psycho-social-emotional support to women and their children who are survivors of violence. Dr. Nieves works particularly with children and women survivors of domestic violence. She was PI and Co-PI in the following externally funded research proposals: SIEMPREVIVAS Transforming Lives: Integral Services for Autonomy, Federal Department of Justice –VOCA; and, Interdisciplinary Data-Driven Discovery Traineeship, (b) NSF-(NRT).
- The Department of Psychology continued implementing the Undergraduate Research Training Program (Programa de Adiestramiento en Investigación Subgraduada) – PAIS. PAIS is led by doctors Douglas Santos and Janet Bonilla. During 2022–2023, graduate students of the Doctoral Program in School Psychology led the research projects. In total, 7 research projects were developed and 53 undergraduate students from the Department of Psychology participated.
- Dr. Eduardo Lugo participated as Co-PI in the proposal entitled "Opportunities for Distributed Solar to Improve Resilience and Energy Justice in Puerto Rico". U.S. Department of Energy.
- Doctoral Program faculty and graduate students published 5 articles in several peer journals.
- Faculty and graduate students of the Doctoral Program participated in several professional conferences and forums. Highlights include participation in: The Annual Convention of the Puerto Rico Psychological Association and the Convention of the National Association of School Psychologists (NASP) in Denver, CO.

The **Social Sciences Department** had 38 publications, 8 book chapters and 11 presentations. Faculty professors compiled "Cuentos Desastrosos" which consisted of seven stories written by undergraduate students of Comparative Literature. In addition, the book: "Cólera en Puerto Rico: Impacto de la epidemia en San German y Mayaguez", 1856, Kindle Direct Publishing, Amazon (USA), abril, 2023.

Deanship of Academic Affairs

The **Air Force ROTC** celebrated the Blue Helix Project, highlighting resiliency in Puerto Rico and answering career questions. Also, the Overnight Field Training Exercise was performed with a 50-cadet audience to enhance leadership skills and simulate a deployed environment.

The **University Library** had two Grant projects: *Listening to Puerto Rico: The Promise of Oral History on Campus and Beyond* with National Endowment for the Humanities (NEH) as Funding Source and Granted Amount of \$500,000 from January 1, 2022, to December 31, 2023. The other project was *Speaking into Silences: Building Community Archives across the Puerto Rican Archipelago* with the American Council of Learned Societies (ACLS) as funding source and a granted amount of \$100,000 from January 1, 2023, to June 30, 2024.

At the Oral History Project Work, GRIC personnel played a vital role in collecting, processing, and ingesting oral histories into the institutional repository. In addition, a complementary Omeka collection was created to increase the visibility of oral history. Educational materials, including bilingual online guides and instructional videos, were developed for both projects.

Furthermore, as part of the "Listening to Puerto Rico" project, GRIC organized a series of workshops on digital preservation, oral history, and community archives, well-received by professionals in Puerto Rico and beyond.

At the 2023 Association of College and Research Libraries (ACRL) Annual Conference, GRIC librarians presented a session on the multidisciplinary collaborative model of the Oral History Lab. Where one librarian also presented a poster as a member of ACRL's Residency Interest Group. Additionally, at the 2023 Association of Caribbean University, Research, and Institutional Libraries (ACURIL) Annual Conference, the GRIC team presented a poster highlighting initiatives to support the Scholar@UPRM growth, the institutional repository.

The GRIC librarians published a research article in the Puerto Rican scholarly journal "Acceso", focusing on UPRM faculty members' perceptions of Scholar@UPRM, with the aim of encouraging faculty to deposit their research in the repository. Also, the GRIC personnel collaborated on a proposal for a Caribbean Digital Scholarship Collective Micro-grant, though it was not accepted. They are actively exploring upcoming funding opportunities from agencies like the Institute for Museum and Library Services (IMLS) and NEH, preparing proposals for submission.

Complementary, there is an ongoing project to digitize historical videos of the University of Puerto Rico, Mayagüez Campus. These resources are made accessible to the public through the Internet Archive webpage, covering a wide range of academic, social, sports, cultural, political, historical, and technical topics.

The **Resource Center for Distance Education (CREAD)** created instructional materials to support the delivery of technology-enhanced courses by incorporating fresh guideline policies into the adistancia.uprm.edu website. In addition, submitted a proposal in response to the 21st Century Technical and Business Education Fund, securing funding of \$360,200.00 for the development of nine new industry-specific online courses in programming.

The **Teacher Preparation Program (PPM)** and their Helpers program (Helping English Learners & Partners Excel with Research-based Practices & Support) sponsored by the US Department of Education and Ohio University, provides \$20,000 in funding over five years, while the Noyce Teacher Scholars (NOTES) project, backed by the National Science Foundation, secures approximately \$240,000 annually for five years to support the development of bilingual STEM teachers in Puerto Rico. Additionally, Dr. Santiago Méndez's Social Foundations Course conducted a survey among Mayaguez adult citizens, with over 600 participants identifying family budget management and addressing mental health family patients as their top educational needs, with results to be shared with government policymakers. Furthermore, the UPRM Teacher Preparation Program's publication, *Revista Impacto Educativo*, is set to release its third edition during the upcoming academic year 2023-2024, featuring contributions from faculty and external writers focusing on educational benefits for educators.

Deanship of Agricultural Sciences

The following describes the Deanship research collaboration agreements:

Table 15 Agricultural Sciences Research Collaboration Agreements

Organization	Effective Date	Purpose
Escuela Agrícola Panamericana, Inc.	12/05/22 – 09/30/23	Agricultural Experiment Station - 'Development and Release of bean cultivars for Central America and the Caribbean having multiple virus and bruchid resistance.' Prof. Abiezer González Vélez and Dr. James Beaver - Project Leaders
Fondo para el Fomento de la Industria Lechera	01/13/23 – 01/13/24	Agricultural Experiment Station - Analysis of milk samples from dairy farms in operation in Puerto Rico Dr. Esbal Jiménez Cabán and Dr. Jaime E. Curbelo – Project Leaders
Talam Biotech Holdings, Inc.	01/27/23 – 01/27/24	Agricultural Experiment Station – Rice cultivation trials in the EEA-Lajas. The proposed test is of interest and benefit for the rice cultivation projects developed in the substation. Prof. Anthony Rivera – Project Leader
World Coffee Research	03/01/23 – 08/31/25	Agricultural Experiment Station - 'Research Agreement between World Coffee Research and UPR-Agricultural Experiment Station' – Evaluation of high production coffee varieties provided by the company Word Coffee Research. Dr. Fernando Gallardo - Project Leader
Department of Agriculture FIDA	02/10/23 – 09/30/23	Agricultural Experiment Station - "Protecting the fruit sector of Puerto Rico from the fruit fly" - Sampling of traps and fruits and monitoring of the fruit fly.

		Prof. Irma Cabrera Asencio - Project Leader
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The **Department of Agricultural and Environmental Systems** submitted 7 proposals as PI and 7 proposals submitted as Co-PI and had three new projects as PI and four as Co-PI. And has five ongoing projects as PI and 11 as Co-PI. Several significant projects within the department include research on soil erosion processes in the Soil and Water Management course, a collaborative initiative with the University of Illinois addressing community issues, the adaptation of the GOES-PRWEB model for assessing drought impacts in the Caribbean Region, and an evaluation of alternative coffee harvesting methods in Puerto Rico, which will lead to recommendations and workshops on their proper usage.

Also, the **Department of Food Science and Technology** had 6 submitted proposals as PI of which 3 were approved. They conducted research to create value-added products from specific raw materials. This includes studying the nutritional characteristics of these materials and developing products such as root and tuber flours, fermented coffee beans, and goat milk-based products. The aim of these projects is to enhance the quality and marketability of food products and promote innovation within the food industry.

The **Agricultural Extension Service** during the reporting period generated 15 proposals, amounting to \$1,339,213 in requested funds. Out of these, 11 proposals (73%) were approved (\$1,366,188), 1 proposal (7%) was denied (\$49,999), and 3 proposals (20%) are still in the evaluation process (\$254,998). In addition, the extension has 19 other ongoing projects. The following are the outcomes:

- a. Project: Use of Artificial Light and Nutrient Solutions for Off-Season Flower Induction in Dragon Fruit.
 - Artificial light produced with solar energy for 5 hours per day in winter stimulates dragon fruit flowering in 27 to 28 days. Flowering and harvesting were advanced by 6 weeks (from early April to mid-February).
 - During the natural flowering season, 5 hours of artificial light increased the number of flowers by 27 to 32 percent. Application of nutrient solutions high in potassium before flowering increased fruit size by 21 to 24 percent.
- b. Project: The effect of the TeatScrubber on teat condition, teat hygiene, and milking efficiency in a tropical dairy farm.
 - The TeatScrubber improved teat condition and teat hygiene compared to traditional milking methods.
 - The use of the TeatScrubber significantly reduced the occurrence of delayed milk ejection, resulting in an economic benefit of \$60,108 per 100 cows annually.

The agricultural experiment station had the following behavior in the previous year:

Table 16 Agricultural Experiment Station Proposal's Behavior

Department	Number of proposals submitted	Number of proposals approved	Number of proposals pending
Animal Science	4	2	2
Agri-environmental Sciences	37	29	4

Food Science and Technology (CITA)	1	1	---
Agricultural Economics and Rural Sociology	7	1	4
Agricultural Education	1	1	---
Agricultural and Environmental Systems	6	2	3

Dr. Martha C. Giraldo Zapata secured USDA Hatch funding of \$1,500 for the project H-94C, focused on the conservation and utilization of banana and plantain genetic resources during 2022-2023. This project aims to preserve and utilize valuable genetic resources of these tropical crops.

Dr. Wilfredo Robles obtained a substantial USDA Hatch grant of \$3,000 for H-372, concentrating on Integrated Pest Management Technology for Specialty Crops and Specialty Uses during 2022-2023. The project seeks to develop sustainable pest management strategies for specialty crops.

Dr. Melvin Pagán led the successful execution of H-488, securing a substantial \$200,000 USDA Hatch grant for the implementation of novel reproductive biotechnologies and genomics for the multiplication of Slick cattle from 2017-2022, contributing to advancements in cattle breeding technology.

Dr. Verónica Negrón Pérez obtained \$750,000 in funding through ADEA for ZDA-032, which aimed to establish a research, reproduction, and genetic propagation center for tropical livestock, specifically Puerto Rican Slick Hair Holstein cattle, from 2019-2023. The project aimed to create a model dairy program adapted to the tropics and facilitate the distribution of superior genetic material to dairy farms.

Additionally, Dr. Alfredo Aponte has been managing the Experimental Organic Farm under C-517, which has been ongoing since 2011. The project focuses on demonstrating organic agriculture certification processes, improving organic crop management techniques, and promoting organic agriculture.

These projects highlight the dedication and contributions of these researchers in areas ranging from genetic resource conservation to livestock breeding and organic agriculture promotion. Their efforts have significantly impacted agricultural research and development in their respective fields.

Engineering Deanship

The university successfully completed a collaborative agreement to become a member of the United States Space Force's association of member universities. The rector, with support from the Dean of Engineering's research and innovation office, signed this agreement. An official signing ceremony with Space Force directors is scheduled for September of this year, cementing the university's dedication to space-related initiatives and research.

Dr. Valentin, the Associate Dean, held productive discussions with Jorge Antonio Reyes Avendaño, the Regional Director of the Mechatronics Department at Tecnológico de Monterrey. These discussions set the stage for collaborative efforts to encourage Tec students to apply for graduate Engineering programs, fostering academic partnerships and expanding student opportunities. Dr. Valentin also met with Jocelyn G. Capeles, Manager of Philanthropic Services

and Relationship Management at the Puerto Rico Community Foundation, to explore potential avenues for global collaboration in the field of mobility.

Furthermore, the Associate Dean, Dr. Valentin, spearheaded the formation of a group of professors from the Electrical and Mechanical Engineering departments to participate in a legislative proposal. This proposal seeks \$76 billion in funding under the CHIPS Act to stimulate research and development within the semiconductor supply chain, demonstrating the university's commitment to technological advancement. The university also celebrated the tenth anniversary of the SAFER-SIM research project with the UTC Safer-Sim Symposium in February 2023, underscoring its enduring dedication to advancing transportation safety research. Additionally, the university welcomed a visit from the Air Force Research Laboratory, resulting in an agreement to utilize the 3D metal printer, further enhancing its research capabilities. Finally, discussions with Dean Aaron Bobick of Washington University have initiated potential collaborations that could broaden the university's academic reach and research opportunities. These recent developments reflect the university's commitment to fostering innovation, research, and partnerships on both a national and global scale.

The **Computer Science and Engineering Department** during this period had six (6) active Grants, six (6) submitted proposals and ten (10) publications summarized in the following table:

Table 17 Computer Science and Engineering Grants, Proposals and Publications

Grants	Submitted Proposals	Publications
Heidy Sierra (PI), CAREER: Computational Optics and Photonics for Deep Imaging of Live Tissue, NSF, \$498,905, 5/1/18-4/30/24	Stackable Certifications in Computing Programs at the College of Engineering of the University of Puerto Rico, Mayaguez, Manuel Rodriguez (PI), DDEC, Budget: \$300,000. (Awarded)	Goulopoulos, A, Etim, E, Korupolu, S, Farinelli, W, Sierra, H, Anderson, R, et al. Optical flow, and thermal analysis of a phototherapy extracorporeal membrane oxygenator for treating carbon monoxide poisoning. <i>Lasers Surg Med.</i> 2023; 55: 390– 404. https://doi.org/10.1002/lsm.23649
Emmanuel Arzuaga (PI), DCP: Improving Virtualized Data Center Resource Efficiency Using Dynamic Container Placement Strategies, DoD, \$320,634, 5/8/19-5/7/23	Low-cost and high-end technologies for people with disabilities to enhance entrepreneurship and self-employment, Manuel Rodriguez (PI), Emmanuel Arzuaga (Co-PI), Heidy Sierra (Co-PI), Subaward NSF, \$74,921.	Z. Zhou, L. Ye, J. Wang, K. Wu, and L. Kejie. Hivt: Hierarchical vector transformer for multiagent motion prediction. In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2022.
Emmanuel Arzuaga (PI), Trilobyte: Generating Accurate 3D Spectral Scene Models Using Hyperspectral and LiDAR Data Fusion with Deep Learning Techniques, L3Harris Technologies, \$130,000, 1/1/21-12/31/22	Sustainable Research Pathways: Building Inclusive Pathways to AI, HPC, & Scientific Computing Careers, Wilson Rivera (PI), Subaward DoE, \$705,593.	Yifan Zhang, Jinghuai Zhang, Jindi Zhang, Jianping Wang, Kejie Lu, and Jeff Hong. 2022. Integrating Algorithmic Sampling-Based Motion Planning with Learning in Autonomous Driving. <i>ACM Trans. Intell. Syst. Technol.</i> 13, 3, Article 39 (June 2022), 27

		pages. https://doi.org/10.1145/3469086
Emmanuel Arzuaga (Co-I), Remote Sensing of Sargassum Accumulation and Impacts on Tropical Marine Ecosystems: A Multi-Scale Approach, NASA, \$749,721, 08/2021 – 07/2024	Preparing a Computational Research Workforce Through Lab-Institution Partnership, Wilson Rivera (PI), Subaward DoE, \$639,951.	C. Xu, Q. Xu, J. Wang, K. Wu, K. Lu and C. Qiao, "Aol-centric Task Scheduling for Autonomous Driving Systems," IEEE INFOCOM 2022 - IEEE Conference on Computer Communications, London, United Kingdom, 2022, pp. 1019-1028, doi: 10.1109/INFOCOM48880.2022.9796958.
Kejie Lu (PI), CI-New: Collaborative Research: Developing an Open Networked Airborne Computing Platform, NSF, \$242,451, 9/1/17-8/31/22	Collaborative Research: CCRI: ENS: Enhanced Open Networked Airborne Computing Platform, Kejie Lu, NSF, \$287,019. (Awarded)	Zhang, Jinran Zhang, Baoqian Wang, Dong Wang, Shengli Fu, Kejie Lu, Yan Wan and Junfei Xie, "An SDR-based LTE System for Unmanned Aerial Systems," 2022 International Conference on Unmanned Aircraft Systems (ICUAS), Dubrovnik, Croatia, 2022, pp. 1448-1454, doi: 10.1109/ICUAS54217.2022.9836117.
Manuel Rodriguez (PI), R15 THS: Using Twitter and Big Data Analytics to Track and Predict Health Conditions, NIH, \$359,367, 9/15/21-5/1/24	Development of Biosensing System from Power to Analysis for GFAP and UCH-L1, Lisandro Cunci (PI), Emmanuel Arzuaga (Co-PI), CAWT Integrative Research Exploratory Grants, \$150,000. (Awarded)	Y. Zhang, Q. Xu, J. Wang, K. Wu, Z. Zheng and K. Lu, "A Learning-Based Discretionary Lane-Change Decision-Making Model with Driving Style Awareness," in IEEE Transactions on Intelligent Transportation Systems, vol. 24, no. 1, pp. 68-78, Jan. 2023, doi: 10.1109/TITS.2022.3217673.
		J. W. Z. Lu, M. Fu, J. Wang, K. Lu and A. Jukan, "Decode-and-Compare: An Efficient Verification Scheme for Coded Distributed Edge Computing," in IEEE Transactions on Cloud Computing, doi: 10.1109/TCC.2022.3228243.

		B. Wang, J. Xie, K. Lu, Y. Wan and S. Fu, "Learning and Batch-Processing Based Coded Computation with Mobility Awareness for Networked Airborne Computing," in IEEE Transactions on Vehicular Technology, vol. 72, no. 5, pp. 6503-6517, May 2023, doi: 10.1109/TVT.2022.3231179.
		Wang, Y., Zhang, K., Lu, K. et al. Practical black-box adversarial attack on open-set recognition: Towards robust autonomous driving. Peer-to-Peer Netw. Appl. 16, 295–311 (2023). https://doi.org/10.1007/s12083-022-01390-9
		Lagares, C.; Rivera, W.; Araya, G. Scalable Post-Processing of Large-Scale Numerical Simulations of Turbulent Fluid Flows. Symmetry 2022, 14, 823. https://doi.org/10.3390/sym14040823

The **Industrial Engineering Department**, during this period, had eight (8) publications and 33 presentations including Posters' Day activities. These are summarized in the following table:

Table 18 Industrial Engineering Publications and Presentations

Publications	Presentations		
H. Carlo, An Integrated Ride-Sharing and Parking Allocation System Transportation Letters: The International Journal of Transportation Research.	M. Jiménez, L. Guillemard, S. M. Bartolomei-Suárez, O. M. Suárez, A. Santiago-Román, N. Santiago, C. López del Puerto, P. Quintero, N. Cardona-Martínez, and A. Valentin, (2023), "Boosting Career Awareness via a Structured Introductory Experience to Engineering", Accepted to be presented at the 2023 American Society of Engineering in Education	AE Luna-Alvear, A Sánchez, A Rentas, M Cabrera-Ríos, CE Isaza, Do the Differentially Expressed Genes in Pancreatic Cancer Match Those After CAR T Cell Treatment? 2023 UPRM Simposio de Investigación de Biología, Mayagüez PR, May 5, 2023	NR Xu-Cuevas, CD Rosario-Marcano, LR Ríos, Santiago, M Cabrera-Ríos, CE Isaza, Correlation of Two Time Series Through Class-Based Forecasting: The Covid19 Case in Puerto Rico, 2023 Sigma Xi Poster Day, Mayagüez PR, April 26, 2023

	Annual Conference, June 25-28, 2023, Baltimore, Maryland, USA.		
M. Jiménez, L. Guillemard, S. M. Bartolomei-Suárez, O. M. Suárez, A. Santiago-Román, N. Santiago, C. López del Puerto, P. Quintero, N. Cardona-Martínez, and A. Valentin, (2023), "Boosting Career Awareness via a Structured Introductory Experience to Engineering", Accepted to be published as part of the proceedings of the 2023 American Society of Engineering in Education Annual Conference, June 25-28, 2023, Baltimore, Maryland, USA.	M. Jiménez, L. Guillemard, S. M. Bartolomei-Suárez, O. M. Suárez, A. Santiago-Román, N. Santiago, C. López del Puerto, P. Quintero, N. Cardona-Martínez, and A. Valentin, (2023), "Perspectives from an Intervention Model to Improve Retention and Success Among Low-income Hispanic Engineering Students", Accepted to be presented at the 2023 American Society of Engineering in Education Annual Conference, June 25-28, 2023, Baltimore, Maryland, USA.	A Camasta, I Narváez-Bandera, D Suárez-Gómez, C Castro, M Durán, M Cabrera-Ríos, CE Isaza, BioOptimatics Analysis of Gene Expression Data for the Identification of an Association Between Hepatitis C Viral Infection and Parkinson's Disease, 2023 UPRM Simposio de Investigación de Biología, Mayagüez PR, May 5, 2023	V Figueroa-Stuart, SR Méndez-Cruz, A Bravo-Cordero, F Ferrer-Sáenz, I Narváez-Bandera, M Cabrera-Ríos, CE Isaza, Gene Expression Commonalities Between Autism and Schizophrenia in Postmortem Brain Tissue Through BioOptimatics, 2023 Sigma Xi Poster Day, Mayagüez PR, April 26, 2023
M. Jiménez, L. Guillemard, S. M. Bartolomei-Suárez, O. M. Suárez, A. Santiago-Román, N. Santiago, C. López del Puerto, P. Quintero, N. Cardona-Martínez, and A. Valentin, (2023), "Perspectives from an Intervention Model to Improve Retention and Success Among Low-income Hispanic Engineering Students", Accepted to be published as part of the proceedings of the 2023	L. Guillemard, S. M. Bartolomei-Suárez, and A. Santiago-Román, (2022) "Individual Development Plans (IDPs): A useful tool for academic and professional mentoring of undergraduate engineering students", Workshop Accepted to be presented at the 2023 American Society of Engineering in Education Annual Conference, June 25-28, 2023, Baltimore, Maryland, USA.	D Suárez-Gómez, V Figueroa, SR Méndez, A Bravo, F Ferrer, I Narváez, M Cabrera-Ríos, CE Isaza, Gene Expression Commonalities Between Autism and Schizophrenia Through BioOptimatics, 2023 UPRM Simposio de Investigación de Biología, Mayagüez PR, May 5, 2023	AS Cabrera-Isaza, CE Isaza, M Cabrera-Ríos, Time Series Forecasting Supported by Fractal-based Classes, 2023 ABRCMS ePoster Spring Symposium for Emerging Scientists, April 28, 2023

<p>American Society of Engineering in Education Annual Conference, June 25-28, 2023, Baltimore, Maryland, USA.</p>			
<p>JL Vega-Feliciano, AP Vera-Torres, NA Rodríguez-Figueroa, ZA Reyes-Rivera, CE Isaza, M Cabrera-Ríos, 3D Scanning to Enable 3D Printing in Ergonomics Projects, Científica (2023) 27:1</p>	<p>LR Ríos, NR Xu-Cuevas, CD Rosario-Marcano, Santiago, M Cabrera-Ríos, CE Isaza, Time-Delayed Correlation of Two Time Series Through Class-Based Forecasting: The Covid19 Case in Puerto Rico, 2023 UPRM Research Symposium for Faculty and Graduate Students, Mayagüez PR, May 17, 2023</p>	<p>D Rocha, L Teran, C Staiger, W Zhang, J Helwig, M Dávila, C Barski, M Cabrera-Ríos, CE Isaza Empirical Modeling of Calcium Dynamics: Initial Results, 2023 UPRM Simposio de Investigación de Biología, Mayagüez PR, May 5, 2023</p>	<p>D Suárez-Gómez, I Narváez-Bandera, V Figueroa-Stuart, SR Méndez-Cruz, A Bravo-Cordero, F Ferrer-Sáenz, M Cabrera-Ríos, CE Isaza, Gene Expression Commonalities between Autism and Schizophrenia in Postmortem Brain Tissue through BioOptimatics, 2nd Annual BioX Symposium, Mayagüez PR, March 31, 2023</p>
<p>DF Rivera-Hernández, JA Durand-González, CE Isaza, M Cabrera-Ríos, Augmented Reality to Guide Pedestrian Evacuation in Earthquake Events, Ingenierías (2023) 26:94, 59-63 https://doi.org/10.29105/ingenierias26.94-793</p>	<p>C Castro-Rivera, I Narváez-Bandera, D Suárez-Gómez, A Camasta-Beníquez, M Durán-Quintana, L Ortiz-Rivera, M Cabrera-Ríos, CE Isaza, Novel BioOptimatics used to Identify Gene Expression Changes Between Hepatitis C Viral Infection and Parkinson's Disease Development, 2023 UPRM Simposio de Investigación de Biología, Mayagüez PR, May 5, 2023</p>	<p>MI Betancourt-Toro, KL Torres-Galarza, FL Morales-Salgado, FN Sepúlveda-Alvarado, M Cabrera-Ríos, CE Isaza, iWILL+ViSER: Flood Preparedness, 2023 UPRM Simposio de Investigación de Biología, Mayagüez PR, May 5, 2023</p>	<p>D Rocha-Clavijo, L Teran-Herrera, JR Helwig, W Zhang, CJ Staiger, M Cabrera-Ríos, CE Isaza, Statistical Models for Calcium Signaling in Arabidopsis Plant, 2023 Interuniversity Seminar on Research in the Mathematical Sciences SIDIM XXXVIII, Mayagüez PR, February 25, 2023</p>

<p>J Mercado-Colón, N Salas-González, R Larrieux-Díaz, V Díaz-Cruz, R Fernández-Lafuente, K Cruz-Salas, W Mercado-Sanabria, V Cruz-Jiménez, L Meléndez-Santiago, J Ortiz-Marrero, P Ramírez-Cruz, P Ortiz-Roque, CE Isaza, M Cabrera-Ríos, Pairing Simple Domestic Needs with Product's Reusability Applications, <i>Científica</i> (2022) 26:2, 1-13</p>	<p>L. Guillemard, S. M. Bartolomei-Suárez, and A. Santiago-Román, (2022) "Individual Development Plans (IDPs): A useful tool for academic and professional mentoring of undergraduate engineering students", Workshop Presented at the 2022 S-STEM Symposium, September 29- October 01, 2022; Washington, DC., USA.</p>	<p>NR Xu-Cuevas, CD Rosario-Marcano, Santiago, LR Ríos, M Cabrera-Ríos, CE Isaza, Time-Delayed Correlation of Two Time Series Through Class-Based Forecasting: The Covid19 Case in Puerto Rico, 2023 UPRM Simposio de Investigación de Biología, Mayagüez PR, May 5, 2023</p>	<p>H Montes-Masmela, ME Maldonado-Toledo, R Vázquez-Rosario, M Cabrera-Ríos, An Iterative Multicriteria Simulation Optimization Method Applied to True Experiments, 2023 Interuniversity Seminar on Research in the Mathematical Sciences SIDIM XXXVIII, Mayagüez PR, February 25, 2023</p>
<p>NJ Ortiz, M Méndez, G Avilés-Coss, C Román, P Narváez-Cordero, E Valdés, M Cabrera-Ríos, CE Isaza, A Cost Model for Neurological Diseases: Parkinson's Disease, Alzheimer's Disease and Huntington's Disease in Puerto Rico, <i>Puerto Rico Health Sciences Journal</i> (2023) 42:2, 146-151</p>	<p>ME Maldonado-Toledo, R Vázquez-Rosario H Montes-Masmela, M Cabrera-Ríos, An Iterative Multicriteria Simulation Optimization Method Applied to True Experiments, 2023 IISE Annual Conference and Expo, New Orleans LA, May 20, 2023</p>	<p>LR Ríos, NR Xu-Cuevas, CD Rosario-Marcano, Santiago, M Cabrera-Ríos, CE Isaza, Time-Delayed Correlation of Two Time Series Through Class-Based Forecasting: The Covid19 Case in Puerto Rico, 2023 Interdisciplinary Scientific Meeting/Junior Technical Meeting, Bayamón PR, April 29, 2023</p>	<p>D Suárez-Gómez, SR Méndez-Cruz, K Rivera-Rodríguez, I Narváez-Bandera, M Cabrera-Ríos, CE Isaza, Blood Gene Expression Comparison between Autism and Schizophrenia through BioOptimatics, 2023 Interuniversity Seminar on Research in the Mathematical Sciences SIDIM XXXVIII, Mayagüez PR, February 25, 2023</p>
<p>V Díaz Pacheco, A Nieves-Jiménez, R Whalin, T Richardson, C Pomales, CE Isaza, M Cabrera Ríos, Individual Emergency Response and Recovery: What People Worried About During and After Hurricane Maria, <i>Journal of Emergency Management</i>, (2023) 21:2, 155-163 https://doi.org/10.5055/jem.0747</p>	<p>AE Luna-Alvear, A Sánchez, A Rentas, M Cabrera-Ríos, CE Isaza, Do the Differentially Expressed Genes in Pancreatic Cancer before Treatment Match Those After CAR T Cell Treatment? 2023 The Alliance Scientific Day, San Juan PR, May 3, 2023</p>	<p>ME Maldonado-Toledo, R Vázquez-Rosario H Montes-Masmela, M Cabrera-Ríos, An Iterative Multicriteria Simulation Optimization Method Applied to True Experiments, 2023 Interdisciplinary Scientific Meeting/Junior Technical Meeting, Bayamón PR, April 29, 2023</p>	<p>AE Luna-Alvear, A Sánchez-Castro, AC Rentas-Echevarría, M Cabrera-Ríos, CE Isaza, Optimization-based Analysis of Microarray Experiments involving CAR T-Cells, 2023 Interuniversity Seminar on Research in the Mathematical Sciences SIDIM XXXVIII, Mayagüez PR, February 25, 2023</p>

	<p>AE Luna-Alvear, A Sánchez, A Rentas, M Cabrera-Ríos, CE Isaza, Do the Differentially Expressed Genes in Pancreatic Cancer before Treatment Match Those After CAR T Cell Treatment? 2023 Sigma Xi Poster Day, Mayagüez PR, April 26, 2023</p>	<p>A Camasta-Beníquez, I Narváez-Bandera, D Suárez-Gómez, C Castro-Rivera, M Durán-Quintana, L Ortiz-Rivera, M Cabrera-Ríos, CE Isaza, Identification of an Association Between Hepatitis C Viral Infection and Parkinson's Disease, 2023 Sigma Xi</p>	<p>AS Cabrera-Isaza, CE Isaza, M Cabrera-Ríos, Time Series Forecasting Supported by Fractal-based Classes, 2023 Interuniversity Seminar on Research in the Mathematical Sciences SIDIM XXXVIII, Mayagüez PR, February 25, 2023</p>
	<p>C Castro-Rivera, I Narváez-Bandera, D Suárez-Gómez, A Camasta-Beníquez, M Durán-Quitana, L Ortiz-Rivera, M Cabrera-Ríos, CE Isaza, Novel BioOptimatics used to Correlate Gene Expression Changes between Hepatitis C Viral Infection and Parkinson's Disease Development, 2023 UPRM Research Fair, Mayagüez PR, January 26, 2023</p>	<p>SR Méndez-Cruz, D Suárez-Gómez, K Rivera-Rodríguez, I Narváez-Bandera, M Cabrera-Ríos, CE Isaza, IGHV3-74 Gene Expression Change Linked with Several Biological Processes in the Neurodevelopmental Disorder of Autism, 2023 UPRM Research Fair, Mayagüez PR, January 26, 2023</p>	<p>AE Luna-Alvear, A Sánchez-Castro, AC Rentas-Echevarría, M Cabrera-Ríos, CE Isaza, Optimization-based Analysis of Microarray Experiments involving CAR T-Cells, 2023 UPRM Research Fair, Mayagüez PR, January 26, 2023</p>
	<p>SR Méndez-Cruz, D Suárez-Gómez, K Rivera-Rodríguez, I Narváez-Bandera, M Cabrera-Ríos, CE Isaza, IGHV3-74 Gene Expression Change Linked with Several Biological Processes in the Neurodevelopmental Disorder of Autism, 30th Puerto Rico Neuroscience Conference, Ponce PR, November 11, 2022</p>	<p>C Castro-Rivera, I Narváez-Bandera, D Suárez-Gómez, A Camasta-Beníquez, M Durán-Quitana, L Ortiz-Rivera, M Cabrera-Ríos, CE Isaza, Novel BioOptimatics used to Correlate Gene Expression Changes between Hepatitis C Viral Infection and Parkinson's Disease Development, 30th Puerto Rico Neuroscience Conference, Ponce PR, November 11, 2022</p>	<p>D Rocha, L Teran, M Cabrera-Ríos, CE Isaza, Rapid Estimation System for Biological Integration Across Multiple Scales: Calcium signaling, EMBRIO Institute 1st Annual Meeting 2022: Purdue University, July 21-22, 2022</p>

The **Civil Engineering Department** during the 2022-23 academic year managed 27 project accounts with a combined budget of about \$5 million. The Civil Infrastructure Research Center (CIRC) within the department provided administrative support for 24 of these project accounts, amounting to \$3.14 million in external funding.

INCI faculty members were actively engaged in 33 proposal submissions, totaling \$36.85-million budget. Among these proposals, INCI faculty served as Principal Investigators (PI) for 27 projects, representing a substantial portion of \$25.81 million in funding.

Remarkably, the department received approval for 22 new or renovated projects during the 2022-23 year, with INCI-AGTO faculty members leading the way as PIs. These projects collectively secured a budget of \$8 million. Notably, nine of these projects were entirely new research endeavors, securing \$4.5 million in funding. Four of these new projects were part of the USDOT UTC Program, boasting a combined budget of \$4.29 million. Furthermore, three new US-DOT UTC consortia—CREATE, DURE, and UTRC—were approved for a five-year duration starting in fall 2023. Additionally, the department secured approval for four new projects from the National Science Foundation (NSF), totaling \$188,925 in funding.

The following table summarizes the nine previously mentioned projects and their related information:

Table 19 Civil Engineering Projects

PI	Project	Budget	Sponsor
Alberto Figueroa (PI); Ismael Pagan and Carla López del Puerto	Coastal Research and Education Actions for Transportation Equity (CREATE) UTC Tier-1	\$ 1,692,840	US Dept. of Transportation / Texas State (lead)
Didier Valdés (PI); Alberto Figueroa, Ivette Cruzado & Daniel Rodríguez	University Transportation Research Center Region II (UTRC) REGION 2 UTC	\$ 1,500,000	US Dept. of Transportation / City University of New York (lead)
Felipe Acosta (PI); Arsenio Cáceres	Center for Durable and Resilient Transportation Infrastructure (DURE) UTC Tier-1	\$ 975,000	US Dept. of Transportation UTC / Univ. of Texas at Arlington (lead)
Daniel Rodríguez (PI); Alberto M. Figueroa, Carlos del Valle, Héctor Carlo & Nayda Santiago	National Institute for Congestion Reduction (NICR) UTC: Carpool-Based Parking Assignment Policy.	\$ 124,868	US Department of Transportation / Univ. of South Florida (lead)
Walter Silva (PI)	Collaborative Research: RAPID: Assessing the Resilience of Centralized and Decentralized Water Supply Infrastructure to Hurricane Fiona in Puerto Rico	\$ 109,925	National Science Foundation
Daniel Rodríguez (PI); Carla López; KPs: Héctor Carlo & Marcel Castro	Co-Design of Integrated Energy and Mobility Hubs for Service and Resiliency	\$ 50,000	National Science Foundation / Civic Innovation Challenge
Alesandra Morales (PI); Stephen Hughes	Collaborative Research: RAPID: The fate of landslide-derived sediment	\$ 24,000	National Science Foundation

Daniel Rodriguez (PI)	RUM BUS	\$ 20,000	Fundación Comunitaria de Puerto Rico
Alesandra Morales (PI); Stephen Hughes (CoPI)	GEER-NSF Rapid Reconnaissance after Hurricane Fiona, Phase 1 - Geotechnical Damages Findings	\$ 5,000	National Science Foundation

In the past year, several projects led by INCI-AGTO faculty have provided valuable opportunities for students. The RISE-UP project, spearheaded by Dr. Carla López del Puerto, admitted 31 undergraduate students from UPRM, UPR Río Piedras, and UPR Ponce. These students are pursuing a minor concentration in Integrated Practice in Architecture and Civil Engineering, with 127 students entering this minor, 57 of whom have already completed it. Additionally, the National Institute for Congestion Reduction (NICR), led by Dr. Alberto M. Figueroa, had eight active projects during 2022-23, awarding \$135,500 in research assistantships to 28 graduate and undergraduate students. NICR focuses on developing congestion reduction strategies using technology and innovative transportation options. Furthermore, the Education and Research Internship Program (ERIP) of the US Army Engineering and Research Development Program, under the guidance of Prof. Ismael Pagan, recruited 14 students from various departments for summer work in different laboratories, leading to excellent project results.

Another impactful initiative is the Safety Research Using Simulation (SAFER-SIM) project, led by Dr. Didier Valdes. SAFER-SIM, a Tier-1 UTC funded by the US Department of Transportation, includes UPRM and other prominent universities. During 2022-23, UPRM had six active SAFER-SIM projects, providing \$96,740 in research assistantships to 13 graduate and undergraduate students in Civil Engineering and Software Engineering. Moreover, eight graduate students were supported by the Puerto Rico Science, Math, and Engineering Program (PRSMPE) during this period, working under the guidance of faculty mentors. Additionally, the RUMBUS project, advised by Dr. Daniel Rodriguez, secured a \$20,000 grant from the Toyota Mobility Program to develop a real-time smartphone application for campus bus service information. Lastly, three undergraduate students participated in the Dwight D. Eisenhower Transportation Fellowship Program, managed by Dr. Benjamin Colucci, working on transportation-related research projects, and receiving travel grants for participation in the 2023 Annual Meeting of the Transportation Research Board in Washington D.C.

The following table provides an overview of the collaboration agreements, their respective purposes or programs, and their durations.

Table 20 Civil Engineering Collaboration Agreements

Purpose/Program	Collaboration Agreement	Duration
Implement ERIP Internship Program	ERCD & UPRM	Ongoing
NICR Project - Install OneBusAway App	Autonomous Municipality of Mayaguez & UPRM	2021-2023
Establish LTAP and Oversee Projects	PR DTPW & PRLTAP	Ongoing
Research Program under USDOT UTC	NICR UTC UPRM & University of South Florida (lead),	2020-2024
	Texas A&M University, UC-Berkeley, and UPRM	

	Safer-Sim UTC UPRM & University of Iowa, UW-Madison,	2013-2024
	University of Central Florida, UMASS, and UPRM	
	CREATE UTC UPRM & Texas State University,	2023-2028
	Oregon State University, Texas A&M University,	
	University of Miami, and UPRM	
	DURE UTC UPRM & University of Texas – Arlington	2023-2028
	UTRC Region 2 UTC UPRM & City College of New York	
Research Program under US NIH Program	PROTECT UPRM & Northeastern University	Ongoing
Research Program under US DHS CRC Program	CRC UPRM & University of North Carolina	Ongoing

The INCI-AGTO Department had a total of 220 research disseminations, and also, awarded 261 research or teaching assistantships for a total amount of \$587,369 during the 2022-23 academic year.

The **Department of Engineering Sciences and Materials** had 9 active proposals and two of them received an institutional incentive for their excellent performance in attracting external funds.

The **Chemical Engineering Department** had several submitted and approved research proposals, covering diverse fields and funding sources. One significant proposal, "Transformative Manufacturing," submitted to the US Department of Energy (DoE), received formal approval for \$4.5 million over three years. Another project, "Spacecraft Water Streams Monitoring," secured \$750,000 over two years from NASA STTR P2, while the "Soldier Lethality Enhancement" initiative received \$150,000 for one year through the DoD STTR P1 program.

Furthermore, a range of scientific centers and initiatives are in progress. The "Chemo-Mechanical Transduction" effort is being explored with a pre-proposal submitted to the National Science Foundation (NSF). Machine learning applications for biomarker detection and photovoltaic energy harvesting are under consideration through NSF CAWT, with a funding request of \$200,000 for one year. Additionally, the Diversity Supplement Program by NIH-NIGMS is conducting research on the Hedgehog Pathway in Triple-Negative Breast Cancer, with a budget of \$300,000 from August 2022 to July 2024.

Also, several research projects focused on engineering and biomedical advancements. The Engineering Research Center (ERC-NSF) project, in collaboration with Georgia Tech and other institutions, spans from October 2022 to August 2027. Engineering biomaterials that mimic extracellular matrix signaling are being explored under NSF-DMP-BMAT, with research funding from January 2023 to December 2027. Additionally, research initiatives are underway to isolate matrix-bound nano-vesicles, reduce greenhouse gas emissions from wastewater treatment, and develop AI-guided catalysts for waste plastic upcycling.

Additional research projects aimed to advance health and medical knowledge. Notable among these is a study focusing on Sonic Hedgehog signaling in tumors, funded by NIH for \$3,450,053, spanning from August 2024 to July 2029. Research into endothelial-specific extracellular vesicles is

also being conducted with a \$50,000 grant. Furthermore, proposals related to the Next-Generation Power Grid and the Caribbean Collaborative Center for Food, Agriculture, Natural Resources, and Human Sciences are pending approval.

Computational research initiatives were underway, including the analysis of metal-substituted zeolites for CH₄ conversion. Collaborative projects, such as AI-guided catalyst development and selective catalytic transformations for waste plastics, are being pursued. Lastly, a project to reduce greenhouse gas emissions in wastewater treatment is ongoing.

The research and scientific initiatives reflect the department's commitment to advancing knowledge and addressing critical challenges across various fields. The following are the future of department's projects:

- **Small Instrumentation Grants (PR-INBRE):** Dr. C. Acevedo led an initiative to acquire a KSV NIMA Langmuir Trough, securing an award of \$30,000 in June 2022. Additionally, a Small Instrumentation Grant application led by Latorre-Esteves, requesting \$25,000, was approved. Another project, investigating the antiproliferative activity of Graviola extract-coated silver nanoparticles in Head and Neck Cancers and led by Latorre-Esteves, received approval for \$9,554 through the PRINBRE Developmental Research Project Program.
- **NIH/PR-INBRE Small Instrumentation Research Grants:** Maribella Domenech led a project resulting in a sub-award to UPRM totaling \$50,000 from February to June 2022.
- **Membrane-Catalyst Co-Design for Transformative Manufacturing (US DoE):** A pre-proposal submitted in March 2022 by a collaborative group led by Michael Tsapatsis (Johns Hopkins U.) was approved. The group subsequently submitted a formal proposal to the US DoE, seeking \$4,500,000 over three years.
- **Unraveling Polymicrobial Interactions in Human Disease (NIH):** A project led by Patricia Ortiz Bermúdez, PI, secured \$107,150 for 1.5 years to investigate modulators of polymicrobial interactions in human disease.
- **Diversity Supplement Program (NIH-NIGMS):** Maribella Domenech led a project alongside Camilo Mora, focusing on the effect of extracellular matrix components on the Hedgehog Pathway in Triple-Negative Breast Cancer. This initiative was granted \$300,000 and spans from August 2022 to July 2024.
- **Machine Learning Exploration for Biomarker Detection (NSF-CAWT):** Under the leadership of Dsuleiman as Co-PI, this project, with a budget of \$200,000 for one year, explores materials for cardiorespiratory disease biomarker detection and photovoltaic energy harvesting devices. The project was recently approved.

The following table summarizes the research purposes per professor in the **Electrical Engineering Department**:

Table 21 Electrical Engineering Research Summary

Professor	Research Purpose(s)
Fabio Andrade	EDA - Solar Business, DOE EpSCOR (ALASKA), NSF RISE-UP, DOE ORNL, 2022 Continuation of the TI Program at UPRM, DOE-RESILIENT PV-ASU
Erick E. Aponte	DOE NNSA CHRES, Interconnected DCMG Under Geographical Dispersion (SNL)

Gerson Beuchamp	DOE ORNL: Resilient Operation of Networked Community Microgrids with High Solar Penetration
Marcel Castro	DOE Resilient PV, EDA Solar Business Accelerator, DOE SNL PR100, EDF - Poder Solar Comunitario, HUD-CDBG-Vivienda WCRP
Gladys O Ducoudray	TI-UPRM Electronic Initiative, NSF CARSE
Shawn D. Hunt	NSF CARSE
Agustin Irizarry	EPSCoR DOE Dynamic modeling of converter-dominated power systems, EDA Dept. of Commerce - Puerto Rico Solar Business Accelerator
Manuel Jiménez	NSF PEARLS, 2022-2023 Continuation of the TI Analog, Digital, and Mixed Signal Electronics, NSF Center for Advanced Radio Science & Engineering (CARSE)
Eduardo J. Juan	NSF-PFI-TT Development of Miniature Induction Heaters for Cancer Treatment
Adriana Luna	New Faculty Research: Preparing three research proposals related to various topics
Vidya Manian	NASA EPSCoR R3: Rapid Research and Education on TLEs, NASA EPSCoR: Multispectral and Hyperspectral Data Representation, USDA NIFA RIIA Z-375: Strengthening Multidisciplinary Integration
Rafael Medina	PRSTR Dual-band, low SWaP VTOL-mounted Microwave Radiometer for Salinity Mapping (MiRaS), SpectrumX - An NSF Spectrum Innovation Center, NOAA: Low SWaP digital receiver for dual-band microwave radiometer, UPR Development of reconfigurable antennas using vanadium oxides
Nayda Santiago	NSF ePEARLS, NSF CAHSI INCLUDES, NSF CAHSI BPC AE, NSF MSI CISE Resiliency
Guillermo Serrano	Continuation of the TI Analog, Digital, and Mixed Signal Electronics program at UPRM, UPRM's Solar Boat: The Solar Splash Competition

And the following table summarizes the publications and investigation topics per professor:

Table 22 Electrical Engineering Publications

Professor	Investigation Topic	Number of Publications
Erick Aponte	Optimized Control of Distribution Switches Using Neural Networks	1

Fabio Andrade	Data-driven Modeling of Photovoltaic Inverter Dynamics	6
Marcel Castro	Collaborative Planning for a Resilient Puerto Rico	1
Eduardo J. Juan	Development of Handheld Induction Heaters for Magnetic Fluid Hyperthermia	1
Vydia Manian	Graph Convolution Network for Hyperspectral Image Classification	1
Eduardo E. Ortiz	Various papers submitted for evaluation	8
Adriana Luna	State-of-Charge Equalizations Comparison in a Multi-prosumer Environment	3
Manuel Jiménez	Engineering Study Program Awareness and Intervention Model	2
Nayda Santiago	A New Paradigm for Sustainability Engineering	1

In the realm of external funding for research and creative endeavors, the **Department of Mechanical Engineering** has received a total of \$307,037 from various sources. Notably, they secured \$10,000 from the Social Science Research Council, \$67,772 from UPR Bayamon, and a substantial \$229,265 from Collaborative Composite Solutions Corp. Regarding their proposal activity, the department has been actively engaged, having submitted a significant number of 11 proposals. Out of these, 3 have been successfully approved, with 7 currently pending review. Additionally, they've embarked on 3 new research and creative work projects, while maintaining a commendable 16 ongoing projects, underscoring their commitment to advancing knowledge and innovation.

The department's graduate assistantships encompass both teaching and research roles, demonstrating a strong commitment to student support. In the realm of teaching assistantships, they've allocated a total of \$106,362.21, corresponding to 150 credits awarded. Meanwhile, research assistantships have been generously funded with a total of \$221,375.20, distributed across 221 credits. The origin of graduate students in the program showcases a diverse and international pool, hailing from institutions such as Universidad Ana G. Méndez and Universidad de Puerto Rico in Puerto Rico, as well as institutions in Colombia, México, Perú, and the Dominican Republic. This rich variety underscores the department's global appeal and engagement with students from various regions.

The department's research and creative work projects have yielded promising impact outcomes, including a provisional patent application (US Provisional Patent Appl No. 63/472,072) filed on June 9, 2023. This patent application focuses on "IMPEDANCE-BASED CLASSIFICATION OF BIOLOGICAL CELLS OR OTHER PARTICLES VIA MACHINE LEARNING METHODS" and lists several inventors. The department also actively engages students in research and creative work initiatives by promoting its graduate program through various activities. These include hosting events like "Area 51" in the lobby of the Luchetti building, providing access to research laboratories, participating in graduate study fairs, and involving department professors in the Mechanical Engineering graduate seminar.

These efforts not only drive impactful research but also foster a dynamic learning environment for students.

The most relevant publications and presentations are listed below:

- Rivera, M., López, E., & Cancelos, S. (2022). Increasing the gas dissolution rate of bubbles via a non-invasive resonant acoustic technique. *Applied Acoustics*, 200, 109087.
- López, E., & Cancelos, S. BUBBLE RUPTURE & VIABILITY OF RED BLOOD CELLS UNDER RESONANT ACOUSTIC STANDING WAVES. *Undersea and Hyperbaric Medicine Journal*, (accepted for publication).
- Santiago-Roman, A., Jimenez, M., Guillemard, L., Bartolomei-Suarez, S., Santiago, N., Suarez, O., ... & Valentin, A. (2022, August). Perceptions of low-income and academically talented students and mentors of [Program Name]-an S-STEM program at a Hispanic Serving Institution. In *2022 ASEE Annual Conference & Exposition*.
- London, J., Lara-Rodriguez, Y., Paschal, C., Atadero, R., Vigmostad, S., Ozkan, D., ... & Jefferson, N. (2022, August). WIP: ASEE Year of Impact on Racial Equity: 90 Day Equity Challenge. In *2022 ASEE Annual Conference & Exposition*.
- Banerjee, J. (2022, August). WIP: Problems and Promises of Online Lectures for the Mechanics of Materials related Courses during and after COVID-19. In *2022 ASEE Annual Conference & Exposition*.
- Lugo, J. E., Gutiérrez, L. E., Herrero, I., & Rivera, H. A. (2024). Comparison Between VR and CAD Product Representation on Subject Preference Via Discrete Choice Experimentation.
- Menegozzo, M., Cecchini, A., Ogle, R. C., Vaidya, U. K., Acevedo-Figueroa, I., & Torres-Hernández, J. A. (2023). Scale Effect Assessment of Innovative 3D-Printed Honeycomb under Quasi-Static Compression. *Aerospace*, 10(3), 242.
- Guzman Hernandez, M., Tubije, J. M., Bernardoni, F., Ciri, U., Rodriguez-Abudo, S., & Leonardi, S. (2022). Direct Numerical Simulations of Oscillatory Boundary Layers Over Moving Spherical Particles. *Bulletin of the American Physical Society*.

Chancellor's Office

The **Alumni and Philanthropy Office** actively engaged in presenting proposals to various stakeholders, including philanthropic organizations, industry partners, and local and state government entities. These proposals aim to secure support for a range of initiatives, including sponsorship of student and academic projects, scholarship programs for UPRM students funded by organizations such as the Dr. Armando Riesco Fund, Ángel Ramos Foundation, Ceiba Foundation, Sargent & Lundy, INQU, Dr. Carmen Vega, ROTC General Escribano, Alumni Office, Oberto Marini, among others. Additionally, the department seeks support for the UPR and UPRM Endowment Fund, the UPR and UPRM Annual Fund, infrastructure improvement projects for buildings and sports facilities, and various other forms of assistance to benefit the university community and UPRM graduates.

The proposal Submission Unit within the **Research and Development Center (CID)** department introduced a total of 182 proposals which represents an increase of 2.9% versus the previous fiscal year. With a funding amount of \$141.290 million the funds were distributed by deanship as shown in the following figure:

Proposal Per Deanship

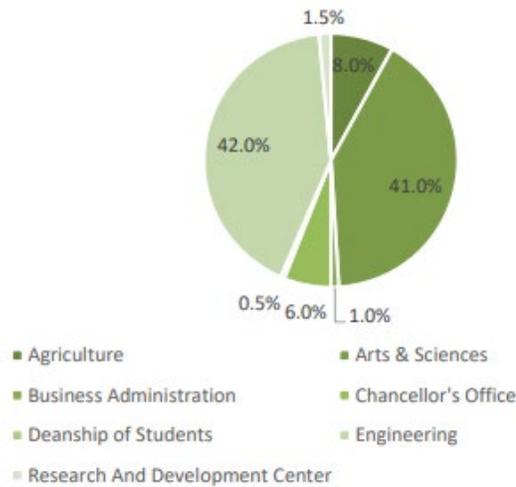


Figure 21 Proposals Distribution per Deanship

In addition, out of the 182 submitted proposals, 24 were awarded in the 2022-2023 fiscal year. The following table includes the sponsors' funding distribution, noting that 52% of the sponsors are Federal.

Table 23 CID Sponsors' Funding Distribution

Sponsor Name	Sponsor Type	Requested Funds	%Requested Funds
Department of Commerce [DOC]	FED	\$492,957.00	0.35%
Department of Defense [DOD]	FED	\$199,647.00	0.14%
Department of Energy [DOE]	FED	\$10,153,535.00	7.20%
Department of Health and Human Services [HHS]	FED	\$8,853,321.00	6.26%
Department of Homeland Security [DHS]	FED	\$499,995.00	0.35%
Department of Justice [USDOJ]	FED	\$499,991.00	0.35%
Department of Transportation [DOT]	FED	\$25,500.00	0.02%
Geological Survey [DOI-USGS]	FED	\$699,756.00	0.49%
National Aeronautics and Space Administration [NASA]	FED	\$327,967.00	0.23%
National Endowment for the Humanities [NEH]	FED	\$199,950.00	0.14%

National Institutes of Health [HHS-NIH]	FED	\$11,294,671.00	7.99%
National Science Foundation [NSF]	FED	\$34,198,488.00	24.19%
Office of Naval Research [DOD-ONR]	FED	\$208,025.00	0.15%
DTOP	State	\$49,999.00	0.04%
Subawards/Others	Subawards/Others	\$73,586,878.00	52.02%
Grand Total		\$141,290,680.00	100.00%

Objective 6: Impact Our Puerto Rican Society

6.1 Use of university's expertise to care for the needs of the country

Deanship of Student Affairs

To impact our Puerto Rican society this year the **Social and Cultural Activities Department** accredited around 200 active student organizations. As part of their social responsibility, many of these groups, including sororities and fraternities, carry out community work such as blood donations, visits to homes for the elderly and children, giving free food, among others.

Also, **Financial Aid Office** offered orientations in person and/or through the "Google Meets" platform to both public and private high schools in the town of Mayagüez and neighboring towns. In these activities, students are motivated to continue their university studies and are informed of the financial aid available through our department and private entities. Our department has made its personnel available virtually through the "Google Meets" platform and in person to promote activities such as "FAFSA DAY". In these activities incoming freshman and active students of the campus are assisted in completing their FAFSA application.

In addition, one of the primary objectives of the **Department of Medical Services (DSM)** has always been to spread the message of prevention in health throughout all the islands. The DSM understands information about prevention, managing, and treatment in the fields of health are in high demand among our Puerto Rican society, especially during this time of pandemic. Based on the mission of fomenting healthy lifestyles, identifying possible health risks, and contributing to the general wellbeing of each human, this year the DSM presented updated health subjects of interest accessible to the general population through virtual platforms, developed educational material, and performed prevention activities, also allowing for the participation of the general population outside of the UPRM campus. One example of this is the initiative for Mano Amiga Colegial, in which the DSM employs committed students as coordinators of the program to educate and orient both the university and adjacent communities about the many aspects of health and wellbeing primarily for the benefit the UPRM students.

Another service facilitated by the DSM for both the local and international community are the health insurance services contracted by the UPR for those students that don't have health insurance plans whose coverage does not extend to Puerto Rico. It is a fact the UPRM has foreign students who maintain a family coverage for their health insurance which covers their spouses and children if they are also in Puerto Rico.

The foreign population's satisfaction and participation of DSM services was utilized to measure the impact on the DSM-UPRM's international community. The DSM hopes to increase its international participation during this 2023-24 year and continue to offer all services to the international students of the UPRM.



The **ROTC Army** is focused on creating better citizens. We enforce the Army values in all the cadets in the program. Discipline within the self is very important and a must to be successful. We encourage them to live by the Army values - on and off duty – that make the cadets overall better citizens. The ROTC Army wants and trains well- rounded and grounded individuals with the highest morals and values.

6.2 Projects developed to care for the needs of the community

As a part of the DSM's strategies, the university community participated in all the activities offered or sponsored in the DSM during the 2022-23 year. Some of these activities were: Vaccination Clinics and Health and Prevention Clinics specially aimed at UPRM student community. The DSM maintains availability of diagnostic test for COVID-19, Mycoplasma, and Influenza throughout the entire year, ensuring the students had easy and fast access to the diagnostic test for their most pressing health concerns.

Most of the health services offered at the DSM-UPRM are free of cost for all students, including the international students enrolled at the UPRM. As a departmental strategy, the DSM includes in all its health and wellbeing activities the organizations and departments who work directly with international students to guarantee their participation and benefit from the services offered. Additionally, as a part of the DSM's strategic plan to maintain the health personnel at the vanguard of the health field during this year, the clinical psychologist participated in various activities with international resources and attended seminars in foreign countries on the latest studies and resources for mental health. The medical faculty and nursing personnel attended training lectures and workshops for a range of health topics sponsored by the Department of Health and other agencies.

The Department of Counseling and Psychological Services provide information and support services to the university community through activities, media, research, collaborations, and community initiatives.

Example of some of the activities for the general community are: Dialogue on Human-Animal Bond, Loss and Grief by radio WKJB710 on August 12, 2022; Self-care in psychology professionals during the Spring 2023 to the Psychology Students Association; Sensitivity to the LGBTQ+ community on September 1, 2022 to Deans and Directors, and Vocational decisión on June 20, 2023 to the high school students enrolled in the Pre-engineering camp.

Through the Work-Study Program, students from our campus are assigned to community service areas. Examples of this are, Record Keepers, Tutors, Small Ruminants and Summer Camp.

The **General Library** offered a variety of workshops and conferences available to our community about ethics in academia, information literacy, intellectual property, writing skills, data analysis and information dissemination platforms. Some examples of these activities, offered online and face-to-face, where titled "Jornada sobre la Integridad Academica", "Propiedad Intelectual y la Academia", "¿Dónde publico? Factores a considerar antes de someter tu manuscrito", "Mastering

the Art of Abstract Writing: A Workshop on Crafting Effective and Compelling Abstracts” and “Taller Patentes lo que todo inventor debe saber”. Over 22 of these workshops focused on Academic Honesty and were offered to a wide variety of individuals in order to promote the values of ethics and honesty at UPRM and schools. Other workshops and conferences were offered to public and private schools, including Escuela Superior Eugenio Maria de Hostos and CROEM in Mayaguez and Escuela Superior de Jardines in Ponce in topics related to cultural heritage and traditions (sponsored by our Puerto Rican Collection) and development of information literacy led by the Center for the Development of Bibliographic and Information Research Skills (CEDIBI) librarian.



6.3 Participation in community initiatives

The **Financial Aid Department** has participated in the following community initiatives: For the Student Services Fair on July 11 - 22, 2022, the resources Esther Olivencia, Enid D. Mora Horta, Fernando Vélez and the Financial Aid Officials impacted the Incoming Freshmen & High School Students communities guiding incoming freshmen through the FAFSA and other processes.

The **Band and Orchestra** ensembles, wherever they perform, whether it's within our campus or outside in community activities, convey a message through music. They let people know about the great talent that exists in Puerto Rican youth. They show that there is hope for our nation and that we have future professionals who love their island and proudly represent it wherever they perform, whether in Puerto Rico or abroad. An example of this was Chorium's participation in the Fourth Edition of the International Peace Choral Festival in Costa Rica, and the Marching Band's participation in the Rose Parade in California.

The **Office of Immigration Affairs** promote that intercultural experiences, knowledge of several languages, and international collaborative relationships strengthen our impact within the university community and therefore Puerto Rican society. We currently have two hundred eighty-four (284) international students at UPRM. They actively participate in research and lectures through assistantships and on-campus employment which has a direct positive impact on our local students.

Local associations and individuals have given themselves the task of continuing to sponsor international students with purchases, meals, and groceries in various communities. This direct contact with the communities is of the utmost importance. It creates an experiential bond between international students and Puerto Ricans. The CIU, international student association, continues to impact the local sphere through the international university community, giving a new dimension to the institution's endeavors in the communities by involving our international students in local initiatives.



6.4 Promote ethic, justice and honesty values

We seek to promote the values of justice, honesty and ethics in employees and students through orientation, lectures, workshops, interviews, training and positive reinforcement. Staff is encouraged to attend conferences or workshops on topics related to these values, both on and off campus. Emphasis is placed on compliance with the contact hours required by the **Office of Government Ethics**. Last but not least, at the administrative level, we strive to be a role model for our colleagues and the university community in general.

The **Quality of Life office** activities and initiatives are framed within ethical principles, human rights, and social justice, which are integrated into all discussions. In this regard, the office has been involved in local and international celebrations on issues that affect the general welfare, such as gender-based violence, racial discrimination, homophobia, and sexually transmitted diseases. Every activity, initiative, participation is communicated through social media for immediate awareness within the community.

In order to enrich initiatives focused on overall well-being, safety, alcohol and drug prevention, and sexual harassment prevention, the Quality-of-Life Office has established relations with various offices, departments, agencies and community-based organizations. These actions represent an enhancement in terms of educational materials, products, and professional resources. Some of the agencies or organizations affiliated with the Office of Quality of Life include internal as well as external resources: Procuraduría Estudiantil, Servicio de Extensión Agrícolas y Siempre Vivas, Administración de Servicios de Salud y Contra la Adicción (ASSMCA), Colectivo Ilé and Colegio de Profesionales del Trabajo Social de Puerto Rico, among others.

The **Office of Immigration Affairs** promote a policy of inclusion and equity that we have seen flourish in recent years. The collaboration between the international university community and the communities close to the UPRM is a positive contribution to the multicultural affirmation of the UPRM. Civil society is nourished and strengthened as they engage in interactions with young people who come to Puerto Rico with academic and personal dreams and goals, very similar to ours, despite coming from different cultures.

The following excerpt from the press article shows how the values promoted by the university positively inspire students:

Kevin Varela Valentín: An inspiring story of overcoming By Mariam Ludim Vélez,

<https://www.uprm.edu/portada/2023/06/10/kevinvarelaunahistoriadesuperacion/>



Rosa



His determination and perseverance have been key to overcoming the challenges he faced on the road to academic success. He was born with the diagnosis of cerebral palsy, which affects his mobility, but not his fighting spirit to pursue what he proposes.

The young man from Aguadilla began his high school studies at the University of Puerto Rico (UPR), in Aguadilla, then transferred to the RUM to finish his bachelor's degree and now his master's degree.

"When you adjust to the rhythm of the school, you realize that you are educated to excel. Upon entering this University, I realized that they honor their mission: to prepare professionals of excellence. So, I was able to prove myself, because when you have the right mindset, every

obstacle teaches you something. This is the RUM, a difficult institution at the moment, but at the end of the day it teaches you more than you thought," he said.

The following graphs were taken from the Reasonable Modification Participant Report for the academic year 2022-2023. Figure 21 summarizes the number of students who applied and completed the process to have services in the Office. The number is divided into new cases and renewal cases for semesters 2022V2 to 2023V1. Figure 22 presents the total number of applications received per semester and how many completed the process and how many did not. It shows how values are promoted within the institution to do justice and care for the needs of the individuals.

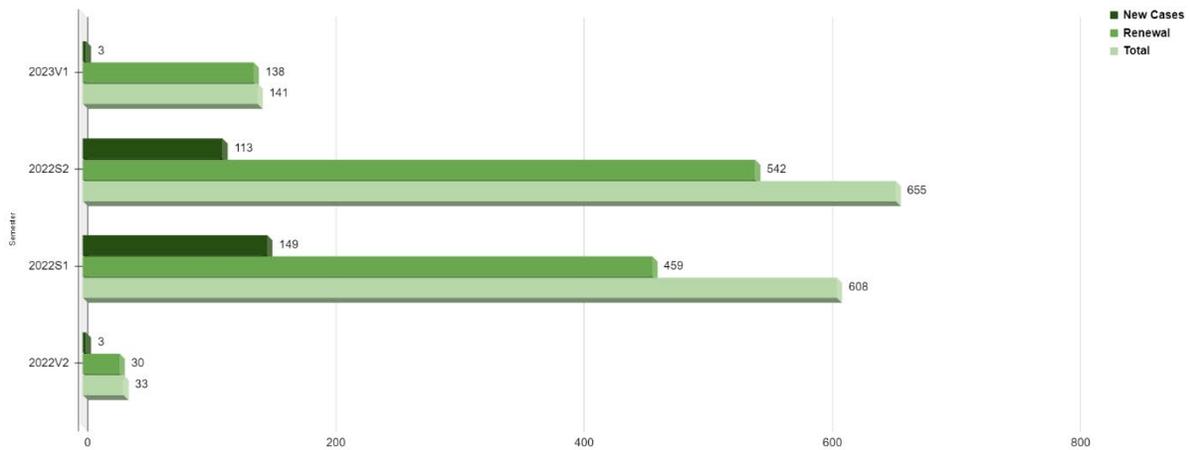


Figure 22 OSEI Applications per Semester

Graph 1-B: Students who applied for service as a new case and renewal by academic semester

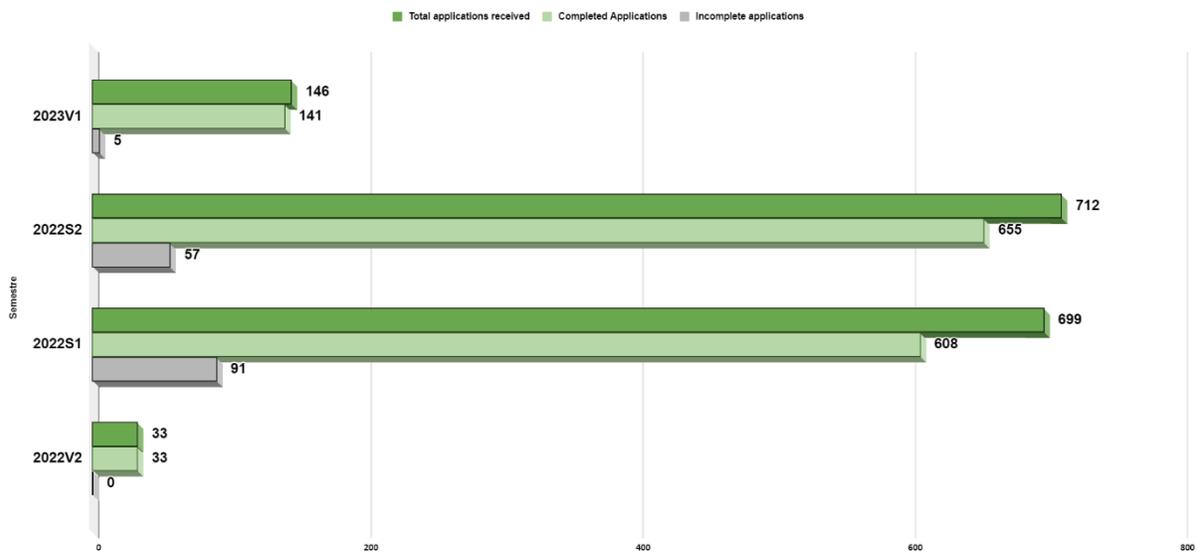


Figure 23 New Cases and Renewals by Academic Semester

6.5 Promotion of entrepreneurship mind and leadership

The Volunteer Taxpayer Assistance Center (VITA Center) filled out federal income tax returns free of charge at the University of Puerto Rico Mayagüez Campus (RUM). It celebrated 20 years of uninterrupted service, thanks to the efforts of hundreds of volunteers, mainly students, professors, and accounting professionals. The first volunteer center was established in a high school in Puerto Rico, Epicentro Tax Center, located in the Golden High School E. Quiles Claudio – Guánica PR. UPRM VITA Center operates in our building and three satellite locations: Guánica, Juana Díaz, and Ponce. In 2022-2023, VITA RUM worked 297 income tax forms, Epicentro Tax Center – High School 2, Juan Díaz Cooperative Site 8 and Ponce Cooperative Site 7 for a total of 314 income tax filed.

Below is a list of examples of different activities that were coordinated during the academic year, which serve to encourage the leadership and professional mentality:

- Accenture Info-Session
- Corporate Relations Seminar
- Information table
- Trivia Day
- Resume Workshop
- Meeting of Partners
- Workshop: Stress and Anxiety Management
- PwC at CBA
- HTML workshop (web design)
- Resume and Interview Workshop
- Cloud Coach Plant Tour
- Plant Tour: Thermo Fisher Scientific
- Interview Webinar: Chick-Fil-A
- Tech Talk - Bank of America
- Public Speaking Workshop
- Labor Law and Human Resources
- Driven Info-session
- Professional Picture Day
- Tech Talk- Bank of America
- Corporate Relations Seminar
- Company Night
- ADEM Associations Fair
- Branding
- Research Workshop
- Taxes 101 in Puerto Rico
- Info-Session Surgent CPA Review
- Pant Tour: Thermo Fisher Scientific
- Accounting in Popular

During the semester, a series of events and seminars were held to promote entrepreneurial mentality and leadership among students, some of them are included:

- Open House PG & BEDC: This "Networking" activity took place on September 7, 2022, at the facilities of our Perspectivas Globales (PG), intending to present the different resources in the West's entrepreneurship ecosystem.

- On November 16, 2022, the BDEC organized the E-Ship Meetup 2022. This activity aimed to strengthen knowledge of the university community's entrepreneurship ecosystem in the western area, providing a space for connecting students and specialists with experienced entrepreneurs.

- On December 6, 2022, we participated in the Boricua Empeñe Fest. The BE Fest is an annual event organized by Colmena66. The business movement in Puerto Rico educates about business growth and development at all levels and industries and fosters a diverse and collaborative business community in Puerto Rico.

- On October 18, 2022, the BEDC organized the Business Colloquium: Women Breaking Barriers. It was a conversation with women entrepreneurs who shared their experiences when undertaking in non-traditional areas for women.



On April 1, 2023, the Sports Management program received the visit of Mr. Luis Omar Tapia from ESPN.

· The BEDC and CRECEN participated in radio interviews and different business fairs, offering services and publicizing the subject of entrepreneurship, motivating hundreds of future entrepreneurs.

Objective 7: Strengthen the Sense of Belonging and "College Pride".

7.1 Provide excellent support services and infrastructure to our students and the university community in general.

Strengthening OGS facilities and acquiring specialized equipment:

- Room for oral examinations, meetings, and seminars.
- Equipped room for completing and submitting documents electronically and offering workshops that require the use of technology.
- Monitor OGS announcements and promotion of our graduate programs.
- Facilitating an exclusive meeting room for the General Council of Graduate Students at UPRM.

The Band and Orchestra strengthen the college pride and sense of belonging in the students by making improvements in their infrastructure. These improvements include the exterior painting of the department's building. Also, they started the construction of a terrace at the back of the building, equipped with tables and benches for the students to relax, study and socialize

The Placement Office had different services to support students, which included Correction sessions for students' resumes were scheduled through Google forms. The Student Organizations team collaborated with 35 academic student groups, assisting them in job fairs and related employment events during the fall semester's Student Organizations Showcase. Alumni were also able to benefit from resume editing services upon request and were granted access to all job fairs organized by the university. Additionally, there were plans to renovate individual interview rooms located on the 6th floor of the Students Center Building, with remodeling set to commence in the first semester of 2023-2024.

Planning, Research and Continuous Improvement Office (OPIMI)

Remodeling of the Department of Counseling and Psychological Services - Project funded with a federal grant through project EAI-P938T180068. It was completed in 2023, and its objective is to provide a good environment to offer our students emotional support and counseling services.

Remodeling of the first three floors of the Hotel Colegial - Project financed with a federal grant through project EAI-P938T180068. This project was awarded this year and is currently under construction. The objective is to enable all rooms on the first three floors of the Hotel Colegial as temporary accommodation for students in extreme economic need.

In addition, OPIMI is in the process of contracting, bidding, and preparing documents for the following projects:

- Improvements to the athletic track and field
- Improvements to the restrooms of the old athletic field restrooms, Stefani Building and Nursing Department Building
- Replacement of the Chiller at Biology Building
- Partial paving of the "White Area" parking lot
- Modernization of the Student Center cargo elevator

Information and Technology Center (CTI)

Updating the campus network infrastructure with funds from CARES, CRRSAA. This project includes upgrading all the campus buildings network Fiber Optic uplinks and the installation of 500 WiFi Access Points across campus.

Conversion of classrooms into hybrid education classrooms as part of the Virtual Classrooms project. This is the continuation of the project from previous years. The project impacts 144 classrooms throughout the campus.

Collaboration with CAPSTONE academic projects of the Faculty of Engineering where students implement technological solutions that impact the institution and/or external entities.

Press Office

As previously mentioned for the strategy of Impacting Puerto Rican society, we send press releases to the media to both publicize and impact the community with the positive information that arises from the UPRM, as well as to strengthen the sense of belonging and UPRM pride among alumni of the institution. All student endeavors are disseminated with the use of social networks. Our official Facebook page, at the time of this report, has 115,745 followers an organic increase of 4,022 as compared to the 111,723, on the fiscal year 2021-2022. We are the University within the UPR System with the largest number of followers on Facebook. Our growth is organic, which means it is based on the unique preference of fans to follow us. Throughout the past six years we have had an annual growth of approximately 10%, except for 2015 in which the FB company cleaned up all the accounts, and in our case about five thousand were removed.

Student Ombudsman

During this academic year the project of module creation was updated and changes were incorporated to the following:

Instructional module on the Procedure for the Claim of Notes with the objective that students know and have at hand the steps to follow to make a claim of notes.

Facebook Page Update The administration of the Office of the Student Ombudsman Facebook page continues with the aim of disseminating information related to academic regulations and services offered to the university community. www.facebook.com/ProcuradoraRUM.

FAQ Tuesday campaign was initiated. Every Tuesday, frequently asked questions to our office were published with their answers. In this way we tend to keep our student community informed and ensure an easy and quick search for the information provided.

7.2 Strengthen effective communication and trust among different sectors of the university community.

Associations such as NAFSA: International Educators Association, the Interuniversity Alliance for International Education in Puerto Rico and the International University Community of RUM (International Students Association) also contribute to the integration of international students into the university community and promote an educational environment of excellence by participating in symposiums, conferences, panels, round tables and conversations.

7.3 Encourage student participation in student organizations.

The Department of Social and Cultural Activities at the university played a crucial role in supporting student organizations, ensuring the success of various events. They sponsored activities like the American Chemical Society's participation in the Annual Chemistry Festival, donated funds to the UPRM Dance Team and Chorium (UPRM chamber choir) for their respective events. In total, 543 events were authorized, promoting them widely through Vida Colegial mailing and official UPRM social networks. These events were held across different facilities, with the Student Center hosting

80 events, Salón Tarzán accommodating 63, Figueroa Chapel hosting 53, and 347 events taking place in other facilities.

Throughout the first semester of 2022, a diverse range of social and cultural events took place. These included the Freshman Welcome, college tours, conferences, and street markets showcasing handmade products by UPRM students. Accreditation for 140 student organizations occurred, along with competitions like the BAE Systems Think Tank II, which offered \$11,000 in awards. Various awareness events and concerts were organized, including initiatives like the Breast Cancer Awareness Week and the "Bombazo Colegial" music concert. In the second semester of 2022 and into 2023, the university continued hosting events such as Valentine's Day celebrations, dance spectacles, virtual campaigns, international women's day exhibitions, and graduation-related activities, ensuring a vibrant and engaging campus life.

In addition to sponsored events, the university supported student organizations in diverse ways, leading to a total of 543 authorized events. These events were extensively promoted through official channels, facilitating a wide range of activities across different facilities. The events included academic conferences, cultural celebrations, awareness campaigns, and student group performances, fostering a lively and inclusive campus environment throughout the academic year.

7.4 Strengthen connections with alumni and surrounding communities, encouraging their participation as collaborators in academic endeavors.

ALUMNI Office

Through the media used by the Alumni and Philanthropy Office, the most outstanding achievements of student teams representing the Campus and Puerto Rico in international competitions, as well as members of the university community and alumni who have distinguished themselves with different merits and whose actions were highlighted by local and national press, are highlighted.

We have the new alumni registry, which allows alumni to register in our database to stay up to date with Campus activities and invite them to support our institution.

Collaborative agreements have been established or are in the process of being established with several organizations that group Campus alumni, namely:

- Association of Dominican Republic Alumni from CAAM (ADECAAM)
- Association of CAAM Student Parents (APCAAM)

A Committee of Alumni Activities was established, consisting of graduates who volunteered their time to support fundraising efforts and activities of the Alumni Office.

Efforts are underway to obtain ownership of the former residence of Puerto Rican patriot José De Diego, known as 'Casa Solariega'. This property was expropriated by the Municipality of Mayagüez to be transferred to UPRM and its Alumni and Philanthropy Office, which will continue to strengthen "Collegiate Pride."

Alumni ID Card: we created an Alumni ID Card, as a fund-raising initiative to strengthen the pride and identity of our alumni that keep the ID as a valuable remembrance of its Alma Mater.

Our alumni have a deep and constant commitment with their Alma Mater, the most donations activities presented in prior item G. To impact our Puerto Rican Society, involve alumni participation through their own donations or companies.

Principal alumni donations during this year for a total of \$1,699,665, described as follows:

Donation agreement with Fundación Ceiba, founded by alumni and philanthropist Dr. Fernando Colón Osorio who agreed to donate \$1,320,000 in a 10-year scholarship program to engineering students

Donations from Fundación Vega Olivencia, founded by alumni and professor Dr. Carmen Vega Olivencia, donate annually \$6,000 to support chemical students.

A total of 35 additional donations from alumni where registered in a total amount of \$379,66

College of Business Administration

On October 20, 2022, forty (40) companies and organizations participated in the Autumn Job Fair for the College of Business Administration.

The Continuing Education and Business Services Unit promotes the opportunity for the human resources offered by our courses to be an active part of our university community and graduates of our Campus.

On February 19, 2023, the XXVI Ceremony of Exaltation to the Collegiate Sports Pavilion was held. On this occasion, Mr. William Meadows Marques, ESOR - ADEM RUM, who belonged to the class of 1985, was recognized.

The Continuing Education and Business Services Unit promotes the opportunity for the human resources who offer our courses to be an active part of our university community, as well as graduates of our campus.

7.5 Establish the presence of our college pride "far and wide" across the country.

The Quality-of-life office through the student programs, the office promoted group cohesion, a sense of belonging to the institution, and offers activities aimed at developing soft skills for personal and professional success. In addition to this, the office has strengthened relationships with external organizations and professional associations. The objective of this action is to gain visibility outside the institution, establish connections, identify resources, and engage in discussions addressing contemporary issues that affect students' wellbeing.

Administration Deanship

To strengthen our Campus spirit, pride, and identity the Administration Dean Office and its units have carried out the following initiatives and/or activities:

- Participated in events such as Job Fair and other activities.
- Labeling the official vehicles such as the garbage truck, and 20 vans which provide transportation services for students and professors of academic laboratories, as well as for athletes and staff of the Athletic Activities Department.

• Celebrated our public service officials in their corresponding weeks, by providing them with training, motivational movies, or professional development talks. For some celebrations inspired by our Campus pride, we encourage the participants to dress in the white and green colors which represent our Campus.



- Participated in awareness campaigns at our Campus, such as marches in support of breast cancer, health fairs, graduation ceremonies, and volunteer work, among other activities.

Deanship of Business Administration

The College of Business Administration implemented several initiatives to strengthen the sense of belonging and college pride within the academic community, including Improvement in services, student organization activities, Alumni Engagement, Community Engagement, and Infrastructure Improvements.

Improvement in Services:

Extended Opening Hours: The Student Lounge and meeting areas in the Lobby were extended to provide students with more opportunities for social interaction and collaboration.

Computer Center Access: The Computer Center maintained regular operating hours throughout the academic year, offering a conducive environment for students to work on projects, exams, and training sessions.

Cybersecurity Measures: The College installed the CrowdStrike Falcon program to enhance cybersecurity, reducing the risk of viruses and ransomware programs affecting student and faculty devices.

Student Services Fairs: The College organized both Fall and Spring Student Services Fairs, providing students with information about various services and resources available on campus.

Professional Development Support: The deanship provided free Coursera Academy and Certiport certifications and courses to enhance students' skills. Additionally, the project CRECEN subsidized EDUCON and DECEP certifications and courses.

Career Support: PIPC (Professional Integration and Career Planning) introduced new services such as interview practice, resume evaluation, professional photo sessions, workshops, pre-job fair activities, and access to professional clothing through El Ropero. Students continued to use Handshake, an online platform, to assist in their job search activities.

Student Organization Activities:

Scholarships and Donations: Individual students, such as Daniela Vélez from the ACM-BA Student Association, received scholarships and donations from companies like Nagnoi, fostering financial support and recognition for student achievements.

Initiation Ceremonies: Student organizations like APICS, AEC, and ADEM Student Council held initiation ceremonies, celebrating the induction of new members into their respective associations.

Conferences and Events: Various student organizations organized conferences, such as the Mitos y Realidades de Cobol conference by ACM-BA, and industry visits, like the one conducted by the APICS Student Association to Medtronics.

Community Engagement: Student organizations actively engaged with the community through activities like the lunch delivery coordinated by AMA Student Association and UPRM Alpha Delta Kappa, promoting social responsibility and community service.

Alumni Engagement:

Job Fairs: Alumni were encouraged to participate in job fairs, connecting them with potential employers and career opportunities within the university community.

Workforce Development: Alumni received workforce development emails and were provided access to Handshake accounts, enabling them to engage in job search activities and stay updated on relevant career opportunities.

Community Engagement:

Informative Sessions: The College organized informative sessions, such as the Facebook Live event by CNDE (Center for Business Development and Entrepreneurship), offering valuable information on business aid to the wider community.

Conferences and Workshops: Community members benefited from conferences on topics like cyber security by Dr. Fernando Osorio and orientations on available programs by the Department of Economic Development and Commerce.

University Community Engagement:

Guest Lectures: Distinguished speakers like Dr. John Williams, President of the New York Reserve Bank, delivered lectures to the university community, enriching students' academic experiences.

Campus Events: The College actively participated in events like the ADEM Student Services Fair, where students were oriented about various office functions and accreditation benefits.

College Pride Campaign: Prior to the Justas LAI 2023, the College of Business Administration conducted a College Pride campaign, fostering a sense of unity and pride among students, faculty, and staff members.

These activities collectively contributed to a vibrant and engaged university community, promoting a strong sense of belonging and pride among students, alumni, and the wider community.

UPRM Open House

This event took place on November 10, 2022, and attracted approximately 3,200 visitors, including 2,900 students. All Faculties were represented as well as the academic programs. High school students had the opportunity to engage with and receive guidance from directors, professors, graduate students, and staff regarding the faculty's programs, extracurricular activities, employment opportunities, and graduate studies.

The SUMM: Students Experience Summit 2022. This special event was held on November 30 and December 1, 2022, at the Puerto Rico Convention Center. The Faculty of Agricultural Sciences actively participated with representatives from the departments of Agricultural Economics and Rural Sociology,

Agricultural and Biosystems Engineering, and Animal Science. The primary objective of the activity was to offer students dynamic experiences where they could interact with professionals from various careers related to their interests and academic aspirations.

Open House-4H Clubs. In collaboration with the Agricultural Extension Service, the Faculty of Agricultural Sciences organized an open house on February 10, 2023, specifically aimed at young individuals affiliated with 4-H Clubs. The objective of the event was to provide guidance to high school students regarding potential career paths in the field of agricultural sciences. Approximately 170 students from elementary, middle, and high schools attended the open house.

Graduate Studies Fair. On March 17, 2023, in coordination with the UPRM Graduate Studies Office directors, professors, graduate students, and staff from the Faculty of Agricultural Sciences provided comprehensive information about the master's programs and opportunities (internships, financial aids, among others) offered by the faculty of the College of Agricultural Science.

Athletic Activities

The year 2022-2023 was one of great growth and challenges for our department. Looking for ways to increase sponsorships for the program we achieved the collaboration agreement with MPress Corp., for the manufacture of the uniforms of our sports teams. Despite the difficulties that arose

our sports program complied with the established LAI programming reaching the second place in the Luis F. Sambolin Cup. Again, and for the fourth consecutive year champions of the Women's Global Cup and we achieved third place in the Men's Global Cup. The LAI recognized our student swimming athlete, Luis Ortiz Flores, with its Cosme Beitía Award, the league's highest award. We must highlight the performance of the student athlete Yanielys Torres Ríos, who broke the LAI mark in hammer throw with a record of 60.95m.

During this year we hosted several competitions of the "Justas LAI", these were: Athletics; hammer, discus, javelin, and shot-put events held at the Synthetic Track, Swimming at the Swimming Complex and Judo at the Rafael A. Mangual Coliseum. The trip to the NCAA DII Track and Field Championship was achieved with the participation of five student-athletes who made the required marks.

Our teams showed great sporting quality, dedication, and collegiate pride, despite so many limitations encountered. Also, the staff of the Athletic Department went the extra mile without giving up in the face of so much pressure and the achievements were present.

Positive aspects during this year: MPress Collaborative Agreement, the competitive level was maintained and was able to comply with the sports calendar, we maintained the recruitment of athletes with good performance, the games and competitions for NCAA compliance were resumed. Areas that we need attend: the lack of personnel in the department such as a Physical Education Assistant and at least two Athletic Trainers, improve some sports facilities because we have students doing their training outside the Campus, the need for the Angel Espada Gym for training and activities for the university community and seek to increase the salary of coaches and look for assistants.

MUSA (UPRM's Museum)

MUSA in the Community Program (MUSA en tu Comunidad). MUSA was more visible than ever in the community thanks to Angel Ramos Foundation sponsorship. The outreach effort continued in fiscal year 2022-23 with exhibitions and educational programming in UPRM Library and the Municipality of San Germán.

In September 2022 the NEH granted MUSA \$10,000, to support a conservation assessment of 14 outdoor sculptures spread over the campus gardens. Among the strengths and active assets of UPRM permanent collection is this unique sculpture garden, including 17 small, mid and large-scale sculptures/installations throughout the campus.

RLA Conservation are a team of professionally trained conservators and artisans specializing in the care of sculpture, historic architecture, and artifacts. Trained in the U.S., Latin America, and Europe, the company provides emergency response services, conditions assessments, stabilization, conservation, maintenance, repair, restoration and long-term management of cultural heritage objects and structures. They have expertise in modern and contemporary art, monumental outdoor sculpture, Twentieth century buildings, and Latin American art.

The assessment will provide a detailed condition report for each work, approximate costs for treatment, as well as a priority list that will be incorporated into the Museum's mid and long-range preservation plan. To raise public awareness about preventive care and conservation, the grant will also support a lecture as part of the assessment that focuses on the practice of conservation and its interdisciplinary academic approach. The talk will cover topics on conservation and its application in outdoor artworks using UPRM permanent collection as reference.

The support from the NEH: Preservation Assistance Grants for Smaller Institutions will help the museum give continuity to our mission of ensuring that each object is treated, restored, and maintained employing the best practices. Funding from this grant will help MUSA leap forward with stewardship work. These large sculptures/installations are exposed to environmental conditions and have a variety of moderate to significant condition issues including paint loss, rust, algae growth, and accumulations of grass clippings, among others.

Deanship of Academic Affairs

The university's various departments and offices have implemented several initiatives to strengthen the sense of belonging and college pride among students, faculty, and staff members:

The Admissions Office emphasized institutional prestige and achievements of professors and students during orientations. Also, regularly updated the Admissions Office's Facebook page with information highlighting university achievements, fostering a sense of pride and identity.

The Air Force ROTC students created a logo and artwork sign identifying AFROTC Detachment 756, promoting a sense of ownership and pride within the program.

The Army ROTC adopted the university's mascot as the "Bulldog Battalion," representing the university nationwide and enhancing campus pride.

The Continuing Education and Professional Studies Division (DECEP) initiated the remodeling of the main customer service office, enhancing facilities and services for students and visitors.

The General Library organized exhibitions, conferences, and live broadcasts, promoting cultural awareness and celebrating events such as Women's Day and Library Week.

Engaged in virtual and in-person activities, workshops, and orientations, fostering skill development and community discussions.

Updated equipment in library instruction rooms and the Electronic Resource Center (CRE), improving facilities for students.

The Office of Graduate Studies established communication channels with graduate students to create a Graduate Student Association, encouraging student involvement and pride in their academic community.

The Office of Immigration Affairs organized research, lectures, conferences, and cultural activities for international students, promoting diversity, inclusion, and a sense of belonging. Also, collaborated with consulates and international graduates, strengthening bonds and promoting school pride among international communities.

The Resource Center for Distance Education (CREAD) remodeled rooms for mixed population courses, creating a technologically advanced environment for both face-to-face and distance learning.

RUMex offered courses during different hours to support students' diverse schedules, adapting to their needs and fostering a sense of inclusivity.

The Teacher Preparation Program (PPM) organized social events, recognitions, and initiatives to engage students and alumni, strengthening connections and pride within the education community. In addition, it collaborated with educational institutions and government offices, adapting programs to new regulations and fostering partnerships to enhance teacher preparation.

The Professional Enrichment Center launched a new webpage with sections for faculty and students, promoting collaboration and idea sharing, enhancing the sense of community within the university.

These initiatives collectively promote a strong sense of belonging, pride, and identity among students, faculty, and staff members, fostering a vibrant and engaged university community.

International Activity

The international activities across various departments of the college contributed significantly to establishing the presence of college pride across the country in several ways:

Diverse International Student Body: The Department of Chemistry, Economics, English, Geology, Kinesiology, Marine Sciences, Math Sciences, and Physics all have a considerable number of international students and faculty members. This diversity showcases the college's global reach, fostering a sense of pride among students and staff.

Participation in International Events: The departments participate in international events, conferences, seminars, and symposiums, presenting their research and expertise on a global platform. This not only enhances the reputation of the college but also promotes its values and academic excellence internationally.

Global Collaborations: Collaborations with international institutions and organizations (such as the participation in the EPOS International Conference and the Latin American Association of Volcanology) demonstrate the college's active engagement in global academic networks, reinforcing its standing as a respected institution in the academic community.

Research Contributions: In the Department of Physics, international collaborations in research projects such as NANO, DUNE, and CMS highlight the college's active involvement in cutting-edge research. This involvement strengthens the college's research profile and competitiveness on an international scale, instilling pride in the academic achievements of the institution.

Promoting Cultural Exchange: Study abroad programs, international student exchanges, and collaborative initiatives with various countries (e.g., the participation of students in programs in Spain, Portugal, Peru, and El Salvador) promote cultural exchange. These experiences broaden the horizons of students, fostering a sense of pride in their institution's global outlook.

Faculty Engagement: The involvement of international faculty members in teaching and research within the college enriches the academic environment. Their diverse perspectives and expertise enhance the overall learning experience for students, promoting a sense of pride in the quality of education offered by the institution.

In summary, these international activities showcase the college's commitment to global education, research, and cultural exchange. By actively participating in international events, collaborating with renowned institutions, and fostering a diverse and inclusive learning environment, the college strengthens its reputation and presence both nationally and internationally, instilling a sense of pride in its students, faculty, and the broader community.

Himno del Colegio

*Entonemos compañeros
un himno rudo y marcial
el poema de optimismo
que levanta el corazón
es el canto del Colegio
Hecho de un astral fulgor
y la música divina
que un rayo le rubricó...
Alma Mater colegial
epopeya del saber
norte de nuestro deber
este canto llevará
a la cumbre nuestra grey
que en marcha está.*

Autores

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