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Talent in Puerto Rico

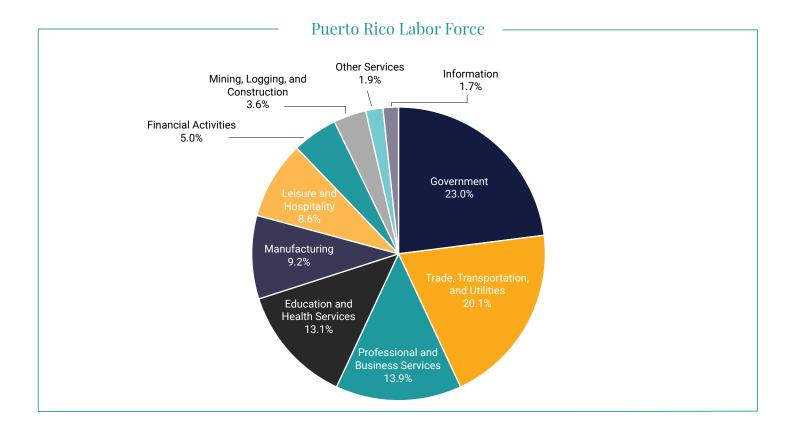
Puerto Rico boasts a highly talented workforce, with especially strong concentrations in technical, engineering, and BioScience professions. While recent natural disasters have caused an outmigration to the mainland, the growth of key sectors of the economy, an enthusiastic & engaged diaspora community

of Puerto Ricans, available workforce development resources, and strong academic centers have all contributed to the growing pool of skilled workers that are eager to participate in the local economy in the years since.

| Puerto Rico's Economy | | | |
|-------------------------------|-----------------------------|--|--|
| Job Growth (FY20-21) | 1.2% | | |
| Unemployment Rate (June 2021) | 8.1% | | |
| Jobs (June 2021) | 980,300 | | |
| Annual Mean Wages (May 2020) | \$30,750 (\$56,310 in U.S.) | | |

Companies in Puerto Rico not only benefit from the technical prowess of the local labor force, but also from the bicultural and bilingual reality of the Island. With over 50% of the Island capable of operating in either English or Spanish, businesses are able to easily reach customers around the world and even use Puerto Rico as

the jumping off point to expand operations into the mainland U.S. or the rest of Latin America. The Puerto Rico labor force is highly skilled, bilingual, and wages are on average 40% lower than the U.S. national average. This makes the local workforce among the most competitive in the world.



According to data from the Bareu of Labor Statistics (BLS), there are about 22,000 direct jobs in tech-related fields. Puerto Rico specializes in industrial (LQ=4.9) & electrical engineering (1.8), computer operators (3.74) and programmers (1.15). As an added benefit to the high skilled and concentrated talent in Puerto Rico, the local average wages for these roles are about 40% lower than the national average.

Puerto Rico's diaspora over the past decade has created an enthusiastic and supportive community of nearly 5 million Puerto Ricans living on the mainland U.S. Local talent retention, and attraction group ConPRmetidos has identified around 30,000 individuals across the U.S. that are interested in coming back to the Island. To harness the potential of these individuals and link them with local companies, ConPRmetidos has launched El Comeback, an initiative to collect the resumes of skilled workers on the mainland and connected them with companies in Puerto Rico that are eager to grow. Invest Puerto Rico is confident that businesses can find the talent needed in Puerto Rico, as well as have access to more talent if needed.

Puerto Rico's Incentive Code (Act 60) also confers credits to employers who have a hard time filling roles, enabling companies to attract difficult-to-recruit talent to the Island. Check out Act 60 here.

The Workforce Development Program at the Department of Economic Development and Commerce (DDEC) administers training and employment funds. Through the federal Workforce Innovation and Opportunity Act (WIOA) program, the Workforce Development Program provides a wide variety of workforce development activities to support job applicants, displaced workers, and young people gain access to meaningful employment, education, training, and support services.

Mostly administered by local municipalities, Workforce Innovation and Opportunity Act (WIOA) operations take place in 16 career centers around Puerto Rico. For 2020, Puerto Rico received:

- \$29.7 million to support adult activities
- \$28.6 million for youth activities
- \$76.2 million for displaced worker activities
- \$6.4 million for the Employment Service (Wagner-Peyser Act)

You can access the WIOA State Unified Plan for 2020-2023 through the DDEC's website or by clicking here.

Eligible entities can also access up to \$40,000,000 in congressionally administered Community Development Block Grant (CDBG) funds to support existing job training programs. For more information about these funds and who can access them, check out the Puerto Rico Department of Housing's page.

Thanks to decades of growth and development in highly technical fields, like medical device and pharmaceutical manufacturing, as well as supportive service industries like architecture, design, and construction, local human resources and recruiting agencies can help companies find specialized talent. Check out some of the talent-related service providers in Puerto Rico.

Talent Highlights

In 2019



Local universities graduated

26,500 STEM Degrees

including health sciences professionals

60% of university graduates hold a STEM degree



6X more than the highest states

Puerto Rico



6th Highest

availability of scientists and engineers in the world, according to the World Economic Forum's Global Competitiveness Report

In Latin America & the Caribbean, the Island is



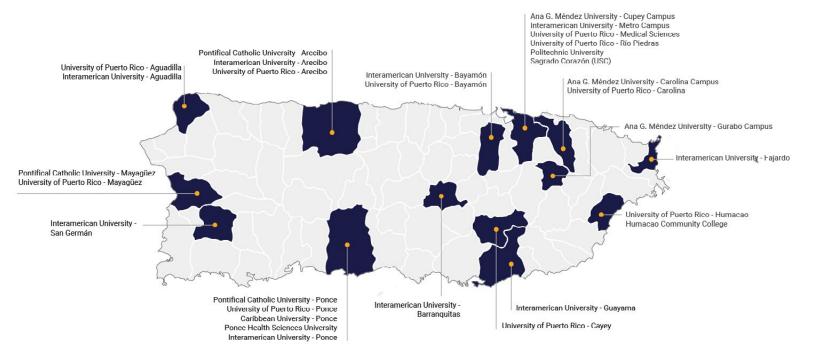
1st in rates of higher education

2nd in rates of digital skills amongst the population

Academic Assets

Puerto Rico is home to over 100 accredited universities and colleges around the Island, with courses and study programs available in a wide range of different fields.

Many of these institutions are nationally renowned for their high concentrations of technical degree programs and for awarding STEM majors.



Public University

The public University of Puerto Rico (UPR) is the oldest and largest university system on the Island. It spans 11 campuses and nearly 60,000 students. University of Puerto Rico's 11 campuses include a Medical Science Campus in San Juan and the nationally recognized research institutes at Río Piedras and Mayagüez. The University of Puerto Rico system is accredited by the Middle States Commission on Higher Education, though branch campuses tend to have additional areas of specialty for which they are accredited.

University of Puerto Rico (UPR) - Campuses

| University | Students | Graduates in 2019 | Focus Areas |
|--|--|--|---|
| UPR - Río Piedras | 14,932 | 2,467 (1,817 bachelors, 384 masters, 253 doctorates) | Biomedical and Biogical Sciences Communications, Journalism, and Public Relations Psychology Accounting Physical Sciences (Chemistry, Biology) Architecture and Urban Planning Liberal Arts (Law and Social Work) |
| UPR - Mayagüez | 12,954 (12,099 undergraduates) | 1,895 (1,701 bachelors, 181 masters, 13 doctorates) | Engineering (Mechanical, Chemical, Electrical, Computer, Civil, and Industrial) Biological and Biomedical Sciences (Industrial Biotechnology and Microbiology) Nursing and Pre-Veterinary Sciences |
| University of Puerto Rico Medical Sciences Campus | 2,207 (329 undergraduates, 1,878 graduates students) | 712 (257 masters, 238 doctorates, and 72 postgraduate certificates) | Biomedical Sciences, Medicine, Pharmacy, Physical and Occupational Therapy, Dentistry, and Nursing |

| University | Students | Graduates in 2019 | Focus Areas |
|-----------------|----------|---|---|
| UPR - Aguadilla | 2,762 | 495 (66 associates and 429 bachelors) | Biology (Bioinformatics, Biomedicine, Genetics, Quality Systems Evaluation) Marketing, Accounting, and Human Resources Education Electrical, Environmental, and Communications Technology |
| UPR - Arecibo | 3,545 | 672 (84 associates and 588 bachelors) | Business, Management, and Marketing Microbiology Radio and Television Broadcasting Technology Health Professions |
| UPR - Bayamón | 3,937 | 496 (13 associates and 483 bachelors) | Accounting Biological and Biomedical Sciences |
| UPR - Carolina | 3,014 | 621 (44 associates and 577 bacherlos) | Forensic PsychologyCriminal JusticeAdvertisingHotel Management (and other business degrees) |
| UPR - Cayey | 2,885 | 493 (all bachelors) | Biology and Biological Sciences Psychology Accounting Education |
| UPR - Humacao | 3,218 | 605 (64 associates and 541 bachelors) | Social WorkNursingBiology, Microbiology, Marine BiologyDigital CommunicationsBusiness Degrees |
| UPR - Ponce | 2,540 | 429 (25 associates and 404 bachelors) | Biological and Biomedical Sciences Elementary Education and Teaching Psychology (including Forensic) Business Degrees |
| UPR - Utuado | 675 | 127 (92 associates and 35 bachelors) | Agricultural Operations and Sciences Accounting Natural and Social Sciences |

University of Puerto Rico Highlights

UPR -Río Piedras Only Puerto Rican institution certified as a Doctoral Research-Intensive University and is the largest public research university in Puerto Rico. Recognized as a "very high research activity" by Carnegie Educational Foundation

UPR -Medical Sciences Campus

The Pharmacy School at the University of Puerto Rico Medical Sciences Campus is ranked 9th out of 130 U.S. schools based on how many graduates passed NAPLEX on their first attempt. UPR had a 2019 passing rate of 97.5%

UPR -Mayagüez Rated best university in Puerto Rico and #1 in the Caribbean

Accreditation Board for Engineering and Technology, National League for Nursing, and American Chemical society accreditations, amongst others

#1 in graduating Hispanic engineers

#1 in graduating chemical engineers

#2 in graduating women engineer

11th in granting chemical engineering master's degrees

14th in awarding computer engineering degrees

15th of top 20 chemical engineering schools in the U.S.

UPR -Cayey Research centers include the Environmental Education Center, Institute for Interdisciplinary Research, and the Howard Hughes Project

UPR -Humacao Space observatory and microbial observatory funded by National Science Foundation

Private Universities

While the University of Puerto Rico is the most prominent university system on Island, there are also several accredited private university systems in Puerto Rico that offer a wide range of specialties, from business administration to technical and engineering fields.

| University | Students | Graduates in 2019 |
|--|--|--|
| Universidad del Sagrado Corazón | 4,751 (4,448 undergraduates and 303 graduates) | 1,037 (866 bachelors and 128 masters) |
| Pontifical Catholic University of Puerto Rico | 9,212 (6,893 undergraduates, 2,319 graduates) | 1,394 (921 bachelors, 220 masters, and 253 doctorates) |
| Ponce Health Sciences University | 1,248 | 301 (168 masters and 108 doctorates) |
| Polytechnic University of Puerto Rico | 4,360 (3,690 undergraduates, 670 graduates) | 517 (5 associates, 348 bachelors, and 163 masters) |
| Inter American University of Puerto Rico | Over 40,000 | Approx. 6,000 |
| Universidad Ana G. Méndez (Cupey, Gurabo, Carolina) | Approx. 30,000 | Approx. 7,700 |

Private Universities Highlights

Polytechnic University of Puerto Rico The institute offers Mechanical Engineering, Software Development, Engineering in Supply Chain and Logistics, Biomedical Engineering, Chemical, Civil, Computer, Electrical, Environmental, and Industrial Engineering, Computer Science, and Construction Management

Plasma Engineering Laboratory

Inter
American
University of
Puerto Rico

The institute offers dozens of academic programs in Natural, Eenvironmental, and Health Sciences, Engineering, Math, Information Technology, and Business Administration

Universidad de Ana G. Méndez

Includes School of Health Sciences; School of Science and Technology; School of Technical Studies

Next Generation of Puerto Rican Tech Professionals

As an emerging tech hub, Puerto Rico is home to various alternative education programs to encourage the development of STEM skills, including coding and software development, machine learning, IoT, robotics, and more. As an example, New Horizons is a computer learning center in San Juan that offers trainings and certifications on a diverse set of software and technical skills.

Polytechnic University of Puerto Rico houses the Center for Information Assurance for Research and Education (CIARE) in San Juan, which specializes in advancing and promoting information assurance and cyber defense. Atlantic University College has courses in UX/UI and specialized programs in digital technology, including animation, graphic design, and interactive programming.

The Holberton School is another option for students looking to learn world class computer science and software development, while offering career placement support for its graduates.

The Escuela Elemental at the UPR-Río Piedras is the first school in Puerto Rico to be admitted into Microsoft's Innovative Schools program as an Associate Showcase School. This title recognizes the successful implementation of technology in the classroom and promotion of STEM education.

Engine-4 is a regional hub for tech skills training and development. Based in the northern city of Bayamón, Engine-4's coworking space houses robotics labs, Al and code training for high schoolers, and the IOTeen Eco Technology and Business Education Project; a collaborative effort to bring tech workshops to teenagers. Engine-4 also works with IBM, Intel, Microsoft, AT&T, and Hewlett-Packard to fund additional data projects, trainings, and hackathons. The facility in Bayamón also houses Puerto Rico's Internet of Things Lab.

Research Centers

In addition to Puerto Rico's extensive list of university assets, there are several applied research centers that provide academic space to address real world challenges. In 2019, research institutes in Puerto Rico received a total of \$83 million in federal funding through the National Science Foundation (NSF) and the National Institutes of Health (NIH). While this is considerably smaller than most U.S. jurisdictions, the funding supported dozens of research partnerships and about 120 specific research projects.

NSF Funding

- In 2019, 14 Puerto Rican institutions received \$19.4 million for 30 projects
- 12 awards went to UPR-Mayagüez (\$3.74 million); 9 awards went to UPR-Río Piedras (\$5.18 million)
- This is slightly down from \$19.5 million in 2018
- Projects included \$2 million for UPR-Río Piedras' study on genomic logic;
 \$3.7 million for UPR's Center for the Advancement of Wearable Technologies;
 Over \$12 million from 2019 on STEM engagement in higher education

NIH Funding

- In 2019, 13 Puerto Rico's institutions received \$63.6 million for 102 projects. This is up from 89 awards worth \$52 million in 2018
- 48 awards went to Medical Sciences (\$28

- million); 13 to UPR-Río Piedras (\$10.7 million); 10 to Ponce School of Medicine (\$12.3 million); 8 to Comprehensive Cancer Center (\$2.2 million)
- Projects included \$4 million for Center for Collaborative Research in Minority Health and Health Disparities; \$2.9 million for UPR's Institute of Neurobiology; \$2 million for Phase 2 at UPR's Center for Neuroplasticity

With support from federal funds, research centers across Puerto Rico contribute to groundbreaking work in technology, science, and medicine:

Puerto Rico Science, Technology, and Research Trust (PRSTRT)

- Advanced Research Grants Program
- · Catalyzer Research Grant Program
- Science City and the Science District (in development)
 - » Research and facilities, labs, business initiatives, academic resources
- Puerto Rico Consortium for Clinical Investigation formed by PRSTRT in 2016 to improve clinical research speed
 - » 19 research sites around Puerto Rico

Bioprocess Development and Training Complex (BDTC) in Mayagüez

 Part of the Technoeconomic Corridor (PRTEC) and the Guanajibo Research and

Research Centers

Translational Molecular Research Center (MSRC) at the UPR

- Materials Characterization Center offers R&D solutions for on-Island manufacturing; 300 researchers
- Confocal and multiphoton microscopy, mass spectrometry and chromatography, nuclear magnetic resonance, sequencing and genotyping, surface microscopy and spectroscopy, x-ray diffraction

Center for Collaborative Research in Health Disparities at UPR Medical Sciences Campus

 NIH-funded center that promotes research in minority populations and provides initial funding for basic behavioral and clinical research to close health disparities

Caribbean Genomic Center at UPR - Mayagüez

 This is a next-generation sequencing research center that works with the biology department at the UPR-Mayagüez campus to study evolution in various species

Pharmaceutical Engineering Research and Training Center

 Supports the research and development behind optimizing pharmaceutical manufacturing processes, including through the training of students and professionals

UPR Comprehensive Cancer Center in San Juan

- Designed to be part of UPR's Science District with inpatient and outpatient facilities
- Dedicated to cancer treatment and prevention

FDA's San Juan Laboratory

 One of eight in the country, with specialization in pharmaceutical analysis and chromatography

Ponce Research Institute (PRI) and Ponce Health Science University

- Studies cancer, neuroscience, infectious diseases, woment's health, communitybased research, and e-health initiatives
- Leaders in clinical research in southwestern Puerto Rico, having participated in over 275 Phase 1-4 clinical trials

Caribbean Primate Research Center at the UPR

 Acrossfourfacilities in Puerto Rico, this NIHfunded research center improves scientific knowledge of primate biology and behavior, critical to human health and welfare. It has been in operation for over 75 years

Science and Technology Research Development Center (CDICTP) in Ponce

 Programs support STEM education, university-level research, and global research collaboration

Sustainable Energy Research Center and Microgrid Laboratory at UPR - Mayagüez

 One of eight in the country, with specialization in pharmaceutical analysis and chromatography

Center of the Advancement of Wearable Technology (CWAT) at UPR

- Studies cancer, neuroscience, infectious diseases, woment's health, communitybased research, and e-health initiatives
- Leaders in clinical research in southwestern Puerto Rico, having participated in over 275 Phase 1-4 clinical trials

Due to Puerto Rico's favorable geography and weather, the Island is home to nationally unique research centers including the only truly tropical agricultural research station in the U.S.

Center for Teaching and Research in Agricultural Biotechnology (CEIBA)

 In coordination with the Pontifical Catholic University of Puerto Rico in Ponce, the Center conducts research to control plant diseases and protect crop quality

UPR - Mayagüez has several agricultural research centers around Puerto Rico:

- Center of Excellence for Quarantine and Invasive Species
- Pesticide Research Center
- Entomology and Tropical Biodiversity Museum
- Tropical Agricultural Research Station
- One of three USDA tropical/subtropical research centers
 - » Conducts research to develop solutions to agricultural problems of high national priority
- Plague and Plant Disease Diagnostic Clinic
- Experimental Dairy Farm Station
- Central Analytic Laboratory
- Animal Molecular Biotechnology Laboratory
- Food Innovation Hub
- Water Quality Laboratory
- Environmental Chemistry Laboratory
- Phytopathology and Tissue Culture Laboratory
- Experimental Agricultural Station Library
- Botanical Gardens in San Juan

Appendix

May 2020 State Occupational Employment and Wage Estimates

| Occupation Title | Employment | Location Quotient | Mean Hourly Wage | Annual Mean Wage |
|--|------------|----------------------|---------------------|---------------------|
| Chief Executives | 2,940 | 2.46 | \$59.14 | \$123,010 |
| Pharmacists | 1,760 | 0.95 | \$44.55 | \$92,660 |
| Financial Managers | 4,060 | 1.05 | \$40.17 | \$83,550 |
| Computer and Information Systems Managers | 1,490 | 0.55 | \$38.86 | \$80,820 |
| General and Operations Managers | 6,100 | 0.44 | \$38.07 | \$79,190 |
| Purchasing Managers | 480 | 1.15 | \$36.14 | \$75,160 |
| Human Resources Managers | 1,330 | 1.45 | \$32.09 | \$66,750 |
| Computer Systems Analysts | 1,220 | 0.36 | \$26.10 | \$54,290 |
| Compliance Officers | 3,800 | 1.97 | \$23.79 | \$49,480 |
| Network and Computer Systems Administrators | 1,000 | 0.5 | \$22.96 | \$47,750 |
| Computer Programmers | 1,250 | 1.19 | \$22.81 | \$47,440 |
| Computer Occupations, All Other | 710 | 0.33 | \$22.51 | \$46,810 |
| Agricultural and Food Science Technicians | 260 | 2.02 | \$17.96 | \$37,360 |
| Registered Nurses | 19,250 | 1.09 | \$17.05 | \$35,450 |
| Computer User Support Specialists | 3,740 | 1 | \$15.76 | \$32,780 |
| Insurance Claims Processor | 1,180 | 0.83 | \$12.67 | \$26,350 |
| Call Center Representatives | 16,680 | 1.00 | \$11.33 | \$23,560 |

To read or download all May 2020 State Occupational Employment and Wage Estimates Puerto Rico from all industry sectors, visit the Bureau of Labor Statistics $\underline{\text{here}}$

In addition to the BioScience research institutes across the Island, there is a burgeoning tech scene that will position Puerto Rico at the forefront of industrial technological advancements. In the efforts to restore telecommunications infrastructure, at least three companies have rolled out 5G and two companies have provided Puerto Rico with new LORAWAN networks to connect IoT devices. There are now two 5G test beds in Puerto Rico that focus on cost-effective, industry-facing tech applications:

T-Mobile 5G and NB-IoT Lab at Engine-4

Engine-4 and T-Mobile's lab is bringing together a diverse group of public, private, and nonprofit partners to focus on emerging applications of 5G and the Internet of Things. Together in Bayamón, these leaders and students of all ages are developing new tools and services in agriculture, manufacturing, health, and entertainment.

Puerto Rico 5G Zone

This initiative with the National Spectrum Consortium will connect the University of Puerto Rico with three other Labs Across America. Puerto Rico's 5G Zone will focus on resiliency, manufacturing & logistics, and other business-facing industrial applications for 5G as well as the broader wave spectrum. This test bed will enable companies to explore cost-effectively new technologies that promise to enhance everyday operations.

Reach out to our Business Development experts to learn more about the talent and academic assets in Puerto Rico.

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