

**Puerto Rico Occupational Licenses Analysis Project**  
**University of Puerto Rico**

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# **Review of PR’s licensing requirements for occupations under the scope of the dataset from the Knee Center for the Study of Occupational Regulation**

## **Technical Report. Version: 1**

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## Note

Due to the dual language nature of the systems and processes this report analyzes, Spanish words, such as the agencies regulating the licenses and the names of the licenses are not identified as being a different language from the main text. For example, they are not italicized nor placed inside quotations.

## Abstract

This report was developed under an agreement between the University of Puerto Rico and Puerto Rico's Departamento de Estado (DE). The agreement is aligned with the Ease of Doing Business division of Puerto Rico's Financial Oversight & Management Board for Puerto Rico. This report provides an analysis of the licensing requirements in Puerto Rico as compared to the figures publicly available in the dataset from West Virginia University's Knee Center for the Study of Occupational Regulation.

## List of Agencies

CJ	Comisión de Juegos	Gaming Commission
CT	Compañía de Turismo	Department of Tourism
DACO	Departamento de Asuntos del Consumidor	Department of Consumers Affairs
DH	Departamento de Hacienda	Department of the Treasury
DE	Departamento de Estado	State Department
DF	Departamento de la Familia	Department of Family Affairs
DRD	Departamento de Recreación y Deportes	Department of Sports and Recreation
DRNA	Departamento de Recursos Naturales y Ambientales	Department of Natural and Environmental Resources
DS	Departamento de Salud	Health Department
DSP	Departamento de Seguridad Pública	Department of Public Safety
NTSP	Negociado de Transporte y Otros Servicios Públicos	Office of Transportation and other Public Services
OCIF	Oficina del Comisionado de Instituciones Financieras	Office of the Commissioner of Financial Institutions
OCS	Oficina del Comisionado de Seguros	Office of the Commissioner of Insurance
PJ	Poder Judicial	Department of Justice

## List of Acronyms

CH: Continuing education contact hours

Col.: Membership to a professional organization (“Colegio”)

CPA: Certified Public Accountant

CE: Continuing education

EMT: Emergency Medical Technician

EX: Examination requirements

FF: First time license fees

GA: Government Agency

GL: Education (grade level) requirements

HS: High School degree

KCSOR: West Virginia University’s Knee Center for the Study of Occupational Regulation

LTW: Institute’s for Justice License to Work: A National Study of Burdens from Occupational Licensing

MD: Medicine Doctor

PR: Puerto Rico

PTA: Plantas de Tratamiento de Aguas

R1: Review of PR’s occupations under the scope of the US Institute for Justice License to Work National Study of Burdens from Occupational Licensing

R2: Characterization of PR’s Occupational Licenses

RF: Renewal fees

RR: Renewal rate

US: United States

XR: Experience/apprenticeship requirements

%L: Extent to which an occupation licensed in Puerto Rico is licensed in the 51 US jurisdictions

## List of Licenses

GA	English name	Spanish name
DE	Architect	Arquitecto
DE	Barber	Barbero y Estilista en Barbería
DE	Cosmetologist	Especialista en Belleza
DE	CPA	Contador Público Autorizado
DE	Electrician (Apprentice)	Perito Electricista, Ayudante de
DE	Electrician (Journeyman)	Perito Electricista
DE	Engineer	Ingeniero
DE	Geologist	Geólogo
DE	Interior Designer	Diseñador-Decorador de Interiores
DE	Land Surveyor	Agrimensor
DE	Landscape Architect	Arquitecto Paisajista
DE	Water Treatment Operator (L1)	Operador de PTA 1
DE	Water Treatment Operator (L2)	Operador de PTA 2
DE	Water Treatment Operator (L3)	Operador de PTA 3
DE	Water Treatment Operator (L4)	Operador de PTA 4
DE	Plumber (Apprentice)	Plomero, Aprendiz de
DE	Plumber (Journeyman)	Plomero, Oficial
DE	Plumber (Master)	Plomero, Maestro
DE	Real Estate Appraiser	Bienes Raíces, Evaluador Profesional de
DE	Real Estate Broker	Bienes Raíces, Corredor de
DE	Real Estate Salesperson	Bienes Raíces, Vendedor de
DE	Social Worker	Trabajador Social
DRD	Athletic Trainer	Entrenador Deportivo
DS	Acupuncturist	Acupunturista
DS	Audiologist	Audiólogo
DS	Chiropractors	Quiropráctico
DS	Dental Hygienists	Asistente Dental
DS	Dentists	Dentista
DS	Dietitian and Nutritionist	Nutricionista y Dietista
DS	Embalmer	Embalsamador
DS	Emergency Medical Technician (EMT)	Técnico de Emergencias Médicas
DS	Massage Therapist	Terapeuta del Masaje
DS	MD Physician-Surgeon	Médico Cirujano en Puerto Rico
DS	Nurse (Advanced Practitioner)	Enfermera/o Especialista en Práctica Avanzada
DS	Nurse (Anesthetists)	Enfermera/o Especialista en Anestesia
DS	Nurse (Obstetrics)	Enfermera/o Obstétrica
DS	Nurse (Practitioner)	Enfermera/o Práctica/o
DS	Nurse (Specialists)	Enfermera/o Especialista
DS	Occupational Therapist	Terapeuta Ocupacional
DS	Occupational Therapist Assistant	Asistente de Terapeuta Ocupacional
DS	Opticians	Óptico
DS	Optometrist	Óptometra
DS	Pharmacist	Farmacéutico

GA	English name	Spanish name
DS	Physical Therapist	Terapeuta Físico
DS	Physical Therapist Assistant	Asistente de Terapia Física
DS	Podiatrists	Podiatra
DS	Professional Counselors	Consejero Profesional
DS	Psychologist	Psicólogo
DS	Radiologic Technologists	Tecnólogo en Radiología
DS	Respiratory Therapist	Técnico de Cuidado Respiratorio
DS	Speech Language Pathologist	Patólogo del Habla-Lenguaje
DS	Speech Language Therapist	Terapeuta del Habla-Lenguaje
DS	Veterinarian	Médico Veterinario
DS	Veterinarian Technician	Técnico Veterinario
NP	Private Investigators	Detective Privado
OCIF	Mortgage Broker	Originador de Préstamos Hipotecarios
OCS	Insurance Producer	Productor
PJ	Attorney	Abogado

## 1.Introduction

The following report presents the results of research and analysis aimed at characterizing how the licensing requirements of the Commonwealth of Puerto Rico compare to those in the United States. This work builds on the report titled *Review of PR's occupations under the scope of the US Institute for Justice License to Work National Study of Burdens from Occupational Licensing* (hereinafter referred to as R1), and uses the information described in the report *Characterization of PR's Occupational Licenses* (hereinafter referred to as R2). Both of these reports (R1 and R2) were completed in 2021 as part of the agreement between the University of Puerto Rico and Puerto Rico's Departamento de Estado (DE).

This study analyzes a set of 58 occupational/professional licenses required in PR that have benchmarking information in a dataset publicly available from West Virginia University's Knee Center for the Study of Occupational Regulation (KCSOR)<sup>1</sup>. The dataset contains information regarding the licensing requirements of 51 US jurisdictions (50 states and the District of Columbia). The information in the database includes the type of regulation associated with each occupation and the burdens associated with the regulation. Our analysis considers the following factors that appear in the database: the extent of regulation across the jurisdictions, education and experience requirements, examinations, initial fees, renewal periodicity, continuing education requirements, and renewal fees. It is noted that eight of the licenses analyzed in this report were also part of those analyzed in R1 and consolidation of these analysis will be included in the final report.

It is important to mention that this report is based on the KCSOR's data as available<sup>2</sup> and was not verified by our research team. Proposals for licensing reform based on the analysis presented next, for example the modification of requirements or a plan to eliminate a license, should consider data validation for those specific licenses. Finally, while there are jurisdictions in

<sup>1</sup> From West Virginia University – John Chambers College of Business and Economics. More information on: <https://csorwvu.com>

<sup>2</sup> Accessed November 2021

the US not covered by KCSOR's database, for example the US Virgin Islands, for the purpose of this study we consider this data to represent the US as a whole.

## 2. Methods

Research was conducted during the years 2021-2022 to characterize Puerto Rico's occupational licensing requirements and the results described in R2 (and associated database). Puerto Rico's occupational licenses were reviewed and characterized in terms of the processes/burdens associated with initially obtaining and maintaining the license. The KCSOR's database has benchmark information for 58 of PR's occupational/professional licenses. Other licenses in PR, for example those related to gambling, are not in the KCSOR's database, thus not included in this report. The data from R2 is compared to the data from KCSOR along eight variables of analysis as described next.

1. **Extent to which an occupation licensed in Puerto Rico is licensed in the 51 US jurisdictions (%L).** It is relevant to note that the data from KCSOR includes other forms of regulation, for example registration and certifications. Our study, which follows an approach similar to LTW<sup>3</sup>, only evaluates licenses<sup>4</sup>. The evaluation is based on the percent of jurisdictions that have a licensing requirement.
2. **Education (grade level) requirements (GL).** The data in KCSOR, for the most part, includes the required grade with professional certifications/programs not described in a standardized quantitative form. The comparison value used is Grade. Grade is a numerical value, in most cases high school (12), associate (14), undergraduate (16), master (18) and doctor (20). In case the data specified a one-year technical program, a value of 13 is used.
3. **Experience/apprenticeship requirements (XR).** The data in KCSOR had this information presented in different scales (hours, days, months, years). All data was converted into a single comparison value: experience days based on the methods used in LTW. The conversion follows this structure:
  - If presented in hours (value is less than 30), divide by 6.
  - If presented in hours (value is 30 or more), multiply by 7/30.
  - If presented in contact days, multiply by 7/5.
  - If presented in months, multiple by 30.
  - If presented in years, multiply by 365.
4. **Examination requirements (EX).** The number of exams. Multi-section exams are considered one exam.
5. **First time license fees (FF).** Relates to fees incurred the first time the individual is obtaining the license. The scope of the fees in the KCSOR's database is, for the most part, limited to application dues, but in some occupations, it includes exam fees. In line with this configuration, the data developed for PR under R2 was reviewed and separated into three elements: all fees, direct application fees and exam fees, noting

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<sup>3</sup> LTW: **Institute's for Justice** License to Work: A National Study of Burdens from Occupational Licensing. More information on: <https://ij.org/report/license-to-work-2/>

<sup>4</sup> When referring to licenses we include certification or registrations that are a requirement to perform an occupation.

that all fees include the direct application fees, the exam fees and other varied fees (all fees = direct application fees + exam fees + varied application fees).

6. **Renewal rate (RR)**. This is how often an individual needs to perform actions, submit documents and/or pay for the right to perform an occupation for those licenses that are not permanent/nonrenewable. The renewal frequency is documented in years, and typically it ranges from 1 to 3 years, with exceptions having 4- or 5-year cycles.
7. **Continuing education contact hours (CH)**. Renewing licenses often includes a requirement of contact hours in continuing education. As to consider different renewal periods across the jurisdictions, this measure is normalized to contact hours per year. For example, if a license requires 30 contact hours per renewal cycle, and the renewal rate is 2 years, the value for this metric is 15 ch/yr.
8. **Renewal fees (RF)**. Most licenses require a renewal fee. As in the previous case, to consider the difference in renewal cycles, this metric is normalized to renewal fees per year. If the cost is \$400 each time the license must be renewed, and the renewal period is 3 years, the value for this metric is \$133.33/yr.

### 3. Analysis: Extent of Licensing

This section analyzes the extent of licensing requirements across the US for those PR licenses under the scope of the KCSOR's dataset. In other words, how many jurisdictions require it. This is variable %L. For example, if a license for Piraguero<sup>5</sup> existed (does not) and was required in New York, Florida, Virginia, Michigan, Georgia, Illinois and California (7 US jurisdictions), the value of %L would be 13.7% (=7/51). This section also examines the extent of the licensing requirement in states (10) with large Puerto Rican populations<sup>6</sup>. This column is labeled %L(PR). In this fictional situation, the Piraguero license would have a value of 40% given 4 of the 10 jurisdictions that have large PR populations (see footnote) require a license for the occupation. A detailed description of the analysis process is presented in Appendix 1.

Table 1 presents the extent of licensing for those managed by PR's Health Department (Departamento de Salud), while Table 2 presents the extent of licensing for those managed by other agencies. Both tables are ordered by the percent of the total jurisdictions that require a license. As can be noted in Table 1, 17 out of 31 DS licenses are required in all 51 jurisdictions (extent is 100%), while 14 licenses are not required in some of the jurisdictions, with 2 of these having less than half the jurisdictions requiring it (licenses for: Optician and Speech Language Therapist). 19 licenses out of 31 are required in all of the jurisdictions with large populations from PR. It is also interesting to note that the 2 licenses with %L below 50% have a higher extent of licensing percentage in the jurisdictions with large Puerto Rican populations.

The second column of Table 2 includes the agency that manages the license (GA). GA is used for Government Agency (see Agency List table). We observe in Table 2 that out of 27 licenses listed, only 4 are licensed in all jurisdictions (%L= 100%). However, this increases to 8 for the set of jurisdictions with large populations from PR. A relevant result is that 9 of the 27 licenses in

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<sup>5</sup> Street vendor who sells shaved iced drinks using a "traditional" method with a large block of ice housed in a pushcart.

<sup>6</sup> California, Connecticut, Florida, Illinois, Massachusetts, New Jersey, New York, Ohio, Pennsylvania and Texas.

Table 2 are regulated in less than half the jurisdictions. It is important to note that some licenses are based on levels, for example plumbers. Some states have a single type of plumbing license, while in PR there are three types based on knowledge/experience. Thus, while master plumber is licensed only in 23 jurisdictions, the journeyman plumber license, which is the more “basic” version, is licensed in 28 jurisdictions. It is noted that 32 jurisdictions have at least one type of plumbing license (63%), but still there is a significant number of jurisdictions (19) that do not require a plumbing license at the state level. It is worthwhile to note that some occupations may not be licensed at the state level, but instead be regulated at the county or city level.

**Table 1. Extent of licensing across all US jurisdictions and across jurisdictions with large Puerto Rican populations for licenses under the scope of the Departamento de Salud.**

<b>Name</b>	<b>%L</b>	<b>%L (PR)</b>
Audiologist	100%	100%
Chiropractors	100%	100%
Dental Hygienists	100%	100%
Dentists	100%	100%
EMTs	100%	100%
MD Physician-Surgeon	100%	100%
Nurse (Practitioner)	100%	100%
Occupational Therapist	100%	100%
Occupational Therapist Assistant	100%	100%
Optometrist	100%	100%
Pharmacist	100%	100%
Physical Therapist	100%	100%
Physical Therapist Assistant	100%	100%
Podiatrists	100%	100%
Psychologist	100%	100%
Speech Language Pathologist	100%	100%
Veterinarian	100%	100%
Massage Therapist	92%	100%
Nurse (Anesthetists)	92%	70%
Respiratory Therapist	92%	90%
Acupuncturist	90%	100%
Embalmer	80%	70%
Dietitian and Nutritionist	75%	70%
Nurse (Obstetrics)	75%	70%
Nurse (Advanced Practitioner)	73%	60%
Professional Counselors	73%	70%
Veterinarian Technician	73%	60%
Nurse (Specialists)	71%	60%
Radiologic Technologists	57%	50%
Opticians	39%	50%
Speech Language Therapist	29%	40%

**Table 2. Extent of licensing across all US jurisdictions and across jurisdictions with large Puerto Rican populations for licenses under the scope of other agencies.**

Name	GA	%L	%L (PR)
Barber	DE	100%	100%
Real Estate Broker	DE	100%	100%
Insurance Producer	OCS	100%	100%
Attorney	PJ	100%	100%
Cosmetologist	DE	98%	100%
CPA	DE	96%	100%
Land Surveyor	DE	90%	100%
Athletic Trainer	DRD	90%	80%
Engineer	DE	88%	90%
Real Estate Appraiser	DE	88%	70%
Mortgage Broker	OCIF	88%	70%
Real Estate Salesperson	DE	86%	90%
Social Worker	DE	84%	90%
Private Investigators	NP	78%	100%
Architect	DE	69%	80%
Landscape Architect	DE	63%	30%
Electrician (Journeyman)	DE	57%	30%
Plumber (Journeyman)	DE	55%	30%
Plumber (Master)	DE	45%	30%
Geologist	DE	43%	60%
Water Treatment Operator (L3)	DE	22%	40%
Water Treatment Operator (L1)	DE	20%	30%
Water Treatment Operator (L4)	DE	20%	40%
Water Treatment Operator (L2)	DE	16%	30%
Plumber (Apprentice)	DE	16%	20%
Electrician (Apprentice)	DE	14%	0%
Interior Designer	DE	8%	20%

There are no guidelines into what constitutes the appropriate extent of licensing. One guiding principle could be a majority of the jurisdictions. Therefore, an assessment of a licensing requirement should be made for any occupation that is licensed in less than half the total jurisdictions ( $\%L < 50\%$ ). There are a total of 11 licenses that fall under that criterion in the set of 58 licenses under study: Optician, Speech Language Therapist, Master Plumber, Geologist, Licensed Wastewater Operator (levels 1 to 4), Plumber Apprentice, Electrician Apprentice, and Interior Designer. Another guiding principle could be all jurisdictions. Therefore an assessment should be made for any occupation that does not have  $L\% 100\%$ . Following that principle, 37 out of 58 licenses considered in this report should be further analyzed.

#### 4. Analysis: Initial License Burdens

This section analyzes the burden of the initial processing of occupational licenses in PR. Table 3 presents all the analyzed licenses sorted by agency. The information in the table includes the average for all jurisdictions (US) and the value for PR's license (PR) for the grade (GL), experience (XR), exams (EX), and first-time fees (FF). A detailed description of the process and calculations described in this section are provided in Appendix 1. The cells shaded in orange indicate a case where PR's burden is larger than the average burden for that occupation in the US. There are 14, 14, 10, and 20 licenses with education (grade level), experience, examination, and fees that have a burden higher than the US average, respectively.

Table 4 presents for each license and each metric the percentage of US jurisdictions that have a requirement that is lower than PR's. This percentage is denoted as %US. A value of US%=100% indicates that all US jurisdictions which require that license have a lower requirement than PR (in other words, PR is the most burdensome), while a blank space (used instead of 0% to make the table less cluttered) means PR's requirement ties or is below all jurisdictions (PR is the least or ties in terms of being the least burdensome). Puerto Rico's licenses are the most burdensome (%US = 100%) in 6, 5, 2, and 3 cases for grade level, experience, examination, and first-time fees, respectively, while it is the least (or ties) burdensome (%US = 0%) in 44, 36, 39, and 5 licenses for grade level, experience, examination, and first-time fees, respectively.

**Table 3. Burdens per license for education (grade level), experience, examinations and fees; US average and PR's requirement.**

Name	GA	GL		XR		EX		FF	
		US	PR	US	PR	US	PR	US	PR
Architect	DE	16.2	16	1173	730	1.1	1	\$ 144	\$ 475
Barber	DE	10.7	0	334	0	1.7	2	\$ 116	\$ 285
Cosmetologist	DE	11.7	8	357	0	2.0	2	\$ 108	\$ 50
CPA	DE	16	16	437	365	1.1	1	\$ 167	\$ 266
Electrician (Apprentice)	DE	0	12	0	0	0.0	1	\$ 50	\$ 30
Electrician (Journeyman)	DE	0	12	1354	365	1.0	2	\$ 122	\$ 60
Engineer	DE	16	16	1476	730	2.1	1	\$ 128	\$ 350
Geologist	DE	16	16	1593	730	2.0	1	\$ 180	\$ 180
Interior Designer	DE	14	14	570.3	0	1.2	1	220.5	150
Land Surveyor	DE	16	16	1214	730	2.9	1	\$ 145	\$ 350
Landscape Architect	DE	16	16	856	730	1.2	1	\$ 183	\$ 475
Water Treatment Operator (L1)	DE	12	12	658	365	1.0	1	\$ 122	\$ 50
Water Treatment Operator (L2)	DE	12	13	548	365	1.0	1	\$ 90	\$ 50
Water Treatment Operator (L3)	DE	12.5	14	708	365	1.0	1	\$ 130	\$ 50
Water Treatment Operator (L4)	DE	13.1	16	1004	365	1.0	1	\$ 117	\$ 50
Plumber (Apprentice)	DE	12	0	111	0	0.4	0	\$ 69	\$ 30
Plumber (Journeyman)	DE	0	12	1384	0	1.0	3	\$ 107	\$ 120
Plumber (Master)	DE	14	12	737	1460	1.0	0	\$ 211	\$ 140
Real Estate Appraiser	DE	13.1	16	302	0	1.0	1	\$ 380	\$ 250
Real Estate Broker	DE	12.2	12	823	0	1.3	1	\$ 175	\$ 200
Real Estate Salesperson	DE	12.4	12	9	0	1.3	1	\$ 157	\$ 200
Social Worker	DE	16.4	16	54	0	1.0	0	\$ 163	\$ 200
Athletic Trainer	DRD	16	0	0	0	1.2	0	\$ 158	\$ 75
Acupuncturist	DS	18	20	446	0	1.2	0	\$ 314	\$ 100
Audiologist	DS	19.1	20	171	365	1.1	1	\$ 175	\$ 60
Chiropractors	DS	20	20	0	0	1.6	1	\$ 316	\$ 200
Dental Hygienists	DS	14	14	0	0	2.8	1	\$ 160	\$ 5
Dentists	DS	22	22	0	0	2.7	1	\$ 382	\$ 325
Dietitian and Nutritionist	DS	16	16	141	365	1.0	1	\$ 150	\$ 145
Embalmer	DS	14.1	14	346	365	2.0	1	\$ 183	\$ 30
EMTs	DS	13	13	9	0	1.5	1	\$ 64	\$ 50
Massage Therapist	DS	12.5	13	134	0	1.1	1	\$ 173	\$ 30
MD Physician-Surgeon	DS	22	22	515	365	1.0	1	\$ 509	\$ 600
Nurse (Advanced Practitioner)	DS	18	18	3	117	1.0	1	\$ 132	\$ 139
Nurse (Anesthetists)	DS	18	18	10	467	0.9	1	\$ 140	\$ 139

Name	GA	GL		XR		EX		FF	
		US	PR	US	PR	US	PR	US	PR
Nurse (Obstetrics)	DS	18	18	10	187	1.0	1	\$ 143	\$ 139
Nurse (Practitioner)	DS	13	13	63	0	1.0	1	\$ 134	\$ 115
Nurse (Specialists)	DS	18	18	12	117	0.6	1	\$ 135	\$ 139
Occupational Therapist	DS	18	18	108	0	1.3	1	\$ 147	\$ 155
Occupational Therapist Assistant	DS	14	14	53	0	1.3	1	\$ 126	\$ 125
Opticians	DS	12.2	14	283	0	2.2	1	\$ 134	\$ 175
Optometrist	DS	22	19	12	365	2.5	2	\$ 338	\$ 340
Pharmacist	DS	22	22	340	350	2.0	2	\$ 225	\$ 244
Physical Therapist	DS	22	20	0	0	1.6	1	\$ 186	\$ 60
Physical Therapist Assistant	DS	14	14	0	0	1.6	1	\$ 151	\$ 45
Podiatrists	DS	22	20	336.4	365	1.3	1	\$ 405	\$ 75
Professional Counselors	DS	18	18	641	117	1.2	1	\$ 191	\$ 35
Psychologist	DS	20	18	635	88	1.7	1	\$ 464	\$ 75
Radiologic Technologists	DS	14	14	0	0	1.0	1	\$ 117	\$ 50
Respiratory Therapist	DS	14	14	2	105	1.2	1	\$ 143	\$ 50
Speech Language Pathologist	DS	17.7	18	152.6	365	1	1	\$ 162	\$ 50
Speech Language Therapist	DS	14.9	16	14	365	0.2	1	\$ 115	\$ 25
Veterinarian	DS	22	22	0	0	1.7	1	\$ 289	\$ 412
Veterinarian Technician	DS	13.9	14	0	0	1.4	1	\$ 107	\$ 150
Private Investigators	NP	12.9	0	800	0	0.7	1	\$ 348	\$ 50
Mortgage Broker	OCIF	12	0	519	0	0.2	1	\$ 958	\$ 130
Insurance Producer	OCS	0	0	0	0	0.7	1	\$ 82	\$ 525
Attorney	PJ	19	19	0	0	3.8	1	\$ 618	\$ 265

**Table 4. Percentage of US jurisdictions that have a requirement that is lower than PR's per type of initial burden.**

Name	GA	%US			
		GL	XR	EX	FF
Architect	DE				100%
Barber	DE			37%	96%
Cosmetologist	DE			10%	22%
CPA	DE				88%
Electrician (Apprentice)	DE	100%		100%	29%
Electrician (Journeyman)	DE	100%	17%	97%	14%
Engineer	DE				98%
Geologist	DE		9%	5%	52%
Interior Designer	DE				25%
Land Surveyor	DE		2%		93%
Landscape Architect	DE		25%		100%
Water Treatment Operator (L1)	DE		30%		20%
Water Treatment Operator (L2)	DE	100%	25%		25%
Water Treatment Operator (L3)	DE	88%	18%		18%
Water Treatment Operator (L4)	DE	71%	40%		30%
Plumber (Apprentice)	DE				25%
Plumber (Journeyman)	DE	100%		100%	63%
Plumber (Master)	DE		78%		39%
Real Estate Appraiser	DE	98%		4%	17%
Real Estate Broker	DE				66%
Real Estate Salesperson	DE				72%
Social Worker	DE				68%
Athletic Trainer	DRD				15%
Acupuncturist	DS	100%			2%
Audiologist	DS	47%	76%	6%	6%
Chiropractors	DS				14%
Dental Hygienists	DS				
Dentists	DS				53%
Dietitian and Nutritionist	DS		100%		53%
Embalmer	DS		17%	2%	3%
EMTs	DS			2%	45%
Massage Therapist	DS	100%			
MD Physician-Surgeon	DS				71%
Nurse (Advanced Practitioner)	DS		100%		62%
Nurse (Anesthetists)	DS		100%	6%	60%
Nurse (Obstetrics)	DS		97%		57%
Nurse (Practitioner)	DS				56%
Nurse (Specialists)	DS		97%	39%	61%
Occupational Therapist	DS				65%
Occupational Therapist Assistant	DS				61%
Opticians	DS	90%		5%	74%
Optometrist	DS		98%	6%	61%
Pharmacist	DS		16%		61%
Physical Therapist	DS				6%
Physical Therapist Assistant	DS				4%
Podiatrists	DS		18%		4%
Professional Counselors	DS				
Psychologist	DS				6%
Radiologic Technologists	DS				3%
Respiratory Therapist	DS		100%		4%
Speech Language Pathologist	DS	6%	92%	6%	2%

Name	GA	%US			
		GL	XR	EX	FF
Speech Language Therapist	DS	50%	100%	80%	
Veterinarian	DS				80%
Veterinarian Technician	DS	3%			81%
Private Investigators	NP			35%	5%
Mortgage Broker	OCIF			82%	
Insurance Producer	OCS			27%	100%
Attorney	PJ				12%

#### 4.1 Education (grade level)

The educational requirements for PR's licenses are, for the most part, in line with those reported for all US jurisdictions per the KCSOR's data (44 out of 58 are at or below the average). There are 14 licenses that have a requirement above the average, with 10 of these having a grade level requirement that is higher in PR than in more than half the US jurisdictions. The information for those 10 licenses is presented in Table 5. The table includes the agency, the average for the US jurisdictions that license the occupation, PR's requirement, and the percent of instances where PR's requirement is higher than the US jurisdictions.

**Table 5. Licenses where PR's educational requirement is above the US average and higher than at least half the US jurisdictions (%US > 50%).**

Name	GA	GL		
		US	PR	%US
Electrician (Apprentice)	DE	0	12	100%
Electrician (Journeyman)	DE	0	12	100%
Water Treatment Operator (L2)	DE	12	13	100%
Water Treatment Operator (L3)	DE	12.5	14	88%
Water Treatment Operator (L4)	DE	13.1	16	71%
Plumber (Journeyman)	DE	0	12	100%
Real Estate Appraiser	DE	13.1	16	98%
Acupuncturist	DS	18	20	100%
Massage Therapist	DS	12.5	13	100%
Opticians	DS	12.2	14	90%

The differences in these 10 licenses are defined by the academic degrees that are required. These differences in requirements are outlined next:

- Three licenses in PR have a grade requirement equivalent to a high school (HS) degree, but no such requirement seems to exist in the US jurisdictions. These three licenses are Electrician (Apprentice), Electrician (Journeyman) and Plumber (Journeyman). Further research may be required to validate this data from KCSOR.
- Three out of the four levels of the Water Treatment Operator license have requirements that are higher in PR than in most of the US jurisdictions. While level 2 in PR requires 30 credits of academic work (comparable to one year of education, therefore grade = 13), most US jurisdictions only require a HS degree. For level 3, a license in PR requires an associate degree, while in a majority of US jurisdictions the requirement is still a HS

diploma (and various levels of experience at level 2), although in some cases an associate degree is required. A similar situation occurs at level 4, where a license in PR requires a bachelors' degree, but in the US only a handful require it, many still allowing HS graduates with experience to perform the occupation.

- The Real Estate Appraiser license in PR requires a bachelor's degree (grade = 16). However, for most US jurisdictions there is no such requirement, instead a high school diploma and a set of courses specific to perform the occupation are required. This is estimated to represent about a year of education (typical grade = 13).
- The educational requirements for the Acupuncturist license in PR are higher than the requirement for the US jurisdictions; in PR it requires a medical doctor degree (an MD license) to work as an acupuncturist, while in the US the requirement is a master level degree.
- The Massage Therapist license in PR requires an academic program of approximately one year of duration, while in all of the US jurisdictions that regulate the occupation the requirement is six months or less. However, further research maybe required to verify the educational programs in the US.
- An Optician license in PR requires an associate degree, while in most US jurisdictions it only requires a HS diploma.

## **4.2 Experience**

There are 14 licenses in PR that have an experience requirement that is above the US average, with three of those having insignificant differences. Eleven licenses have requirements that are higher than at least half the jurisdictions, and those are presented in Table 6. The table includes the agency, the average for the US jurisdictions that license the occupation, PR's requirement, and the percent of instances where PR's requirement is above the US jurisdictions. It is noted that 10 of the 11 licenses in the table are from DS. It is also worth mentioning that there are five licenses in Table 6 with the value of %US equal to 100%, indicating experience requirements that are higher than all US jurisdictions that require a license.

**Table 6. Licenses where PR’s experience requirement is above the US average and higher than at least half the US jurisdictions (%US > 50%).**

Name	GA	XR		
		US	PR	%US
Audiologist	DS	171	365	76%
Dietitian and Nutritionist	DS	141	365	100%
Nurse (Advanced Practitioner)	DS	3	117	100%
Nurse (Anesthetists)	DS	10	467	100%
Nurse (Obstetrics)	DS	10	187	97%
Nurse (Specialists)	DS	12	117	97%
Optometrist	DS	12	365	98%
Respiratory Therapist	DS	2	105	100%
Speech Language Pathologist	DS	152.6	365	92%
Speech Language Therapist	DS	14	365	100%
Plumber (Master)	DE	737	1460	78%

Table 6 presents the experience requirements in calendar days, but typically, they are defined in other units. The following describes the differences in these licenses.

- The Audiologist, Dietitian and Nutritionist, Optometrist, Speech Language Pathologist, and Speech Language Therapist have a one year of practice in public service requirement, which significantly exceeds the typical experience requirement in the US jurisdictions.
- The Respiratory Therapist and the four nursing licenses listed in Table 6 require 450 hours (Respiratory Therapist), 500 hours (Nurse (Specialists), Nurse (Advanced Practitioner)), 800 hours (Nurse (Obstetrics)), and 2000 hours (Nurse (Anesthetists)) of experience, while only a handful of US jurisdictions require experience for these occupations. For example, out of the 47 jurisdictions that have licenses for Respiratory Therapist, only Georgia requires experience (90 days).
- The Plumber (Master) license requires 4 years of experience in PR, while in most other jurisdictions a similar license requires two years (experience once the individual has the “general” type).

### 4.3 Examinations

There are 10 licenses that have examination requirements above the average, with five of those having insignificant differences. Five licenses have an examination requirements that are higher than at least half the jurisdictions, and those are presented in Table 7. The table includes the agency, the average for the US jurisdictions that license the occupation, PR’s requirement, and the percent of instances where PR’s requirement is above the US jurisdictions.

**Table 7. Licenses where PR’s examination requirement is above the US average and higher than at least half the US jurisdictions (%US > 50%).**

Name	GA	EX		
		US	PR	%US
Electrician (Apprentice)	DE	0.0	1	100%
Electrician (Journeyman)	DE	1.0	2	97%
Plumber (Journeyman)	DE	1.0	3	100%
Speech Language Therapist	DS	0.2	1	80%
Mortgage Broker	OCIF	0.2	1	82%

Licenses evaluate concept/theoretical knowledge related to the occupation via multiple choice or essay type exams. Some licenses also require additional exams focused on the ethics and regulations of the occupation, while some licenses require practical/“hands on” type of exams. Some notes about the differences in examinations for the licenses in Table 7 are presented next.

- The Electrician (Apprentice) requires one exam, while none of the US jurisdictions require an exam (%US = 100%).
- The Electrician (Journeyman) license requires a theoretical and a practical (“hands on”), while there is only a theoretical exam in most of the US jurisdictions that require a license (%US = 97%).
- The Plumber (Journeyman) license requires 3 exams in PR, but for the US jurisdictions is almost without exception only one.
- The remaining two licenses in Table 7 are cases where only one exam is required, the issue is that a majority of the US jurisdictions do not require an exam.

#### **4.4 First time fees**

There are 20 licenses in PR that have first time fees that are higher than the US average, all of them having fees that are higher than at least half the jurisdictions. Those are presented in Table 8. The table includes the agency, the average for the US jurisdictions that license the occupation, PR’s requirement, the percent of instances where PR’s requirement is above the US jurisdictions, and an indication if the licenses require membership to a professional organization (Colegio). This additional column (Col.) is included as these organizations require dues that are included as part of the overall initial application fees.

**Table 8. Licenses where first time fees are above the US average and higher than at least half the US jurisdictions (%US > 50%).**

Name	GA	FF			Col.
		US	PR	%US	
Architect	DE	\$ 144	\$ 475	100%	y
Barber	DE	\$ 116	\$ 285	96%	y
CPA	DE	\$ 167	\$ 266	88%	y
Engineer	DE	\$ 128	\$ 350	98%	y
Land Surveyor	DE	\$ 145	\$ 350	93%	y
Landscape Architect	DE	\$ 183	\$ 475	100%	y
Plumber (Journeyman)	DE	\$ 107	\$ 120	63%	y
Real Estate Broker	DE	\$ 175	\$ 200	66%	
Real Estate Salesperson	DE	\$ 157	\$ 200	72%	
Social Worker	DE	\$ 163	\$ 200	68%	y
MD Physician-Surgeon	DS	\$ 509	\$ 600	71%	y
Nurse (Advanced Practitioner)	DS	\$ 132	\$ 139	62%	y
Nurse (Specialists)	DS	\$ 135	\$ 139	61%	y
Occupational Therapist	DS	\$ 147	\$ 155	65%	y
Opticians	DS	\$ 134	\$ 175	74%	y
Optometrist	DS	\$ 338	\$ 340	61%	y
Pharmacist	DS	\$ 225	\$ 244	61%	y
Veterinarian	DS	\$ 289	\$ 412	80%	y
Veterinarian Technician	DS	\$ 107	\$ 150	81%	
Insurance Producer	OCS	\$ 82	\$ 525	100%	

As mentioned in Section 2 (Methods), the first-time fees data from KCSOR only included application related dues for most licenses. Only in a few cases it included examination payments. The comparisons were matched appropriately. Next are explanations regarding the first-time fees for the licenses listed in Table 8 with significant differences.

- The application fee for Architect and Landscape Architect is \$175, which is not much higher or below the average for the US jurisdictions for those occupations. However, when the Colegio fee of \$300 is included (given it's a requirement of being licensed), the initial licensing fees are substantially above the average for all US jurisdictions. The fees in PR for these two licenses are actually higher than all US jurisdictions (%US=100%).
- While the basic application fee for the Barber license is low (\$25), the other required costs, which are exams (\$160) and Colegio fee (\$100), result in a total initial cost that is more than double the average for all US jurisdictions (KCSOR included exam fees). Only Alaska and Delaware have higher initial licensing fees.
- The CPA license in PR is one case where the Colegio is the main agent in the licensing process. The initial Colegio fee of \$266 is higher than the fees of most US jurisdictions as reported in the KCSOR's data.

- The application fee for the Engineer license is \$150, not significantly higher than the US average, but when the Colegio fee of \$200 is added, the initial fees for licensing are more than double the US average.
- The application fee for the Land Surveyor license is \$150, which is very close to the average for US jurisdictions, but the Colegio fee of \$200 makes the overall fee more than double the average.
- The Real Estate Salesperson license is a case of regular fees that are “slightly” higher than the average and unrelated to exams or Colegio fees.
- The Optician license is above the average by 30%, noting that out of the \$175 of initial fees, \$100 is related to the Colegio fee.
- The two basic fees for the Veterinarian license add up to \$150, which is significantly lower than the average of \$289, but when the Colegio fee of \$262.5 is included, the initial licensing fees are significantly above the average.
- The Veterinarian Technician license is 41% above the average, and there are no Colegio fees.
- The Insurance Producer license fee is six times the average. The value of %US equals 100%, therefore PR’s fee is higher than all US jurisdictions.

## 5. Analysis: Renewal burdens

This section evaluates the renewal burden of PR's licenses. Table 9 presents the relevant information. The information in the table includes the average for all US jurisdictions and the value for PR's license for the renewal rate (RR), the continuing education contact hours (CH), and the renewal fees (RF). PR's requirement that are above the average US burden are shaded in orange. A row that is shaded in blue indicates a license that is permanent in PR and does not require renewal. It is noted that while in most cases the renewal process is managed by a government agency, there are a few licenses where the renewal process solely involves the Colegio (PR specific professional association). These are occupations where, by law, licenses are only valid if the individual has an active standing at the Colegio, which means having paid their dues and completed their continuing education requirements. It is further noted, that in some cases the renewal fee is paid annually, but the continuing education requirement is based on multiple years. In such cases, the renewal rate is set to one year. In the presented data, there are 4 licenses that have renewal rates lower than the average (as a lower value in this case is more burdensome due to more frequent activities required to maintain the license), 2 of them cases where the renewal is managed by a Colegio and where fees are due annually. There are 12 licenses with higher continuing education contact hours than the US average, and 24 licenses with renewal fees higher than the US average.

**Table 9. Burdens per license for renewal rate, continuing education, and renewal fees; US average and PR's requirement.**

Name	GA	RR		CH		RF	
		USA	PR	USA	PR	USA	PR
Architect	DE	1.8	5	11.4	12	\$ 71	\$ 335
Barber	DE	1.7	3	2.5	0	\$ 43	\$ 108
Cosmetologist	DE	1.9		4.4		\$ 32	
CPA	DE	1.7	3	61.0	40	\$ 91	\$ 341
Electrician (Apprentice)	DE	1.6	2	6.2	0	\$ 26	\$ 15
Electrician (Journeyman)	DE	2.2	1	6.5	8	\$ 44	\$ 125
Engineer	DE	1.9	5	13.9	10	\$ 63	\$ 236
Geologist	DE	1.7	5	13.3	0	\$ 81	\$ 35
Interior Designer	DE	1.8	3	6.5	15	\$ 123	\$ 123
Land Surveyor	DE	1.9	5	12.1	10	\$ 69	\$ 236
Landscape Architect	DE	1.7	5	12.6	12	\$ 107	\$ 335
Water Treatment Operator (L1)	DE	1.8	1	6.0	0	\$ 33	\$ 25
Water Treatment Operator (L2)	DE	1.7	4	4.8	9	\$ 52	\$ 89
Water Treatment Operator (L3)	DE	1.8	4	5.1	9	\$ 114	\$ 113
Water Treatment Operator (L4)	DE	1.7	4	17.9	14	\$ 213	\$ 45
Plumber (Apprentice)	DE	2.0	4	10.3	6	\$ 87	\$ 59
Plumber (Journeyman)	DE	1.9	4	10.6	4	\$ 73	\$ 100
Plumber (Master)	DE	1.9	1	17.0	12	\$ 54	\$ 100
Real Estate Appraiser	DE	1.7	3	11.3	0	\$ 65	\$ 17
Real Estate Broker	DE	1.8	3	11.6	0	\$ 38	\$ 17
Real Estate Salesperson	DE	1.6	3	13.8	0	\$ 66	\$ 17
Social Worker	DE	1.8	3	12.3	0	\$ 39	\$ 17
Athletic Trainer	DRD	1.5	2	24.8	0	\$ 80	\$ 38
Acupuncturist	DS	1.8	3	20.6	25	\$ 142	\$ 325
Audiologist	DS	1.8	3	12.3	0	\$ 81	\$ 25

Name	GA	RR		CH		RF	
		USA	PR	USA	PR	USA	PR
Chiropractors	DS	1.6	3	19.3	15	\$ 200	\$ 58
Dental Hygienists	DS	1.9	4	14.1	6	\$ 74	\$ 1
Dentists	DS	1.9	3	21.4	15	\$ 208	\$ 300
Dietitian and Nutritionist	DS	1.7	3	26.9	12	\$ 65	\$ 95
Embalmer	DS	1.6	3	6.7	6.7	\$ 105	\$ 10
EMTs	DS	2.4	3	17.5	10	\$ 25	\$ 100
Massage Therapist	DS	1.9	3	10.6	10	\$ 68	\$ 76
MD Physician-Surgeon	DS	1.8	3	34.4	20	\$ 228	\$ 325
Nurse (Advanced Practitioner)	DS	1.9	3	15.5	20	\$ 61	\$ 50
Nurse (Anesthetists)	DS	2.0	3	15.9	20	\$ 49.7	\$ 50
Nurse (Obstetrics)	DS	2.0	3	17.3	20	\$ 53	\$ 50
Nurse (Practitioner)	DS	2.0	3	12.2	7	\$ 51	\$ 50
Nurse (Specialists)	DS	1.9	3	17.8	20	\$ 60	\$ 50
Occupational Therapist	DS	1.8	3	12.8	11	\$ 67	\$ 135
Occupational Therapist Assistant	DS	1.8	3	12.2	8	\$ 55	\$ 108
Opticians	DS	1.5	3	9.1	12	\$ 104	\$ 125
Optometrist	DS	1.5	3	20.6	12	\$ 189	\$ 273
Pharmacist	DS	1.6	3	15.4	11.7	\$ 103	\$ 246
Physical Therapist	DS	1.7	3	16.9	10	\$ 72	\$ 7
Physical Therapist Assistant	DS	1.6	3	15.7	7	\$ 61	\$ 8
Podiatrists	DS	1.6	3	28.9	10	\$ 262	\$ 25
Professional Counselors	DS	1.6	3	21.9	15	\$ 112	\$ 10
Psychologist	DS	1.8	3	19.1	15	\$ 181	\$ 20
Radiologic Technologists	DS	1.7	3	13.1	10.0	\$ 51	\$ 10
Respiratory Therapist	DS	1.7	3	11.7	0	\$ 62	\$ 8
Speech Language Pathologist	DS	1.7	3	12.8	0	\$ 76	\$ 25
Speech Language Therapist	DS	1.9	3	9.9	8.3	\$ 55	\$ 25
Veterinarian	DS	1.6	3	16.9	10	\$ 140	\$ 279
Veterinarian Technician	DS	1.6	3	9.1	10	\$ 45	\$ 25
Private Investigators	NP	1.6	2	8.1	3	\$ 160	\$ 75
Mortgage Broker	OCIF	1.1	1	11.4	8	\$ 586	\$ 400
Insurance Producer	OCS	1.7	2	14.4	12	\$ 58	\$ 525
Attorney	PJ	1.2		18.0	12 <sup>7</sup>	\$ 253	

Table 10 presents for each license and each renewal metric the percentage of US jurisdictions that have a requirement that is less burdensome than PR's. As in Table 4, a value of 100% indicates that all US jurisdictions which require that license have a less burdensome requirement than PR (in other words, Puerto Rico is the most burdensome), while a blank space (0%) means PR's requirement ties or is below all jurisdictions (in other words, Puerto Rico is the least burdensome or ties for it). In overall terms, Puerto Rico's licenses have %US = 0% in 45, 20, and 13 licenses for renewal rate, continuing education contact hours, and renewal fees

<sup>7</sup> Abogados (lawyers) must complete 24 contact hours of CE every two years. However, this process is "transparent" as CE suppliers provide PJ the information "automatically" as courses are completed. There is no administrative per period renewal process associated with the continuing education requirement to be in good standing.

respectively, while they have %US = 100% (most burdensome) in 0, 3, and 4 cases for the mentioned measures.

**Table 10. Percentage of US jurisdictions that have a requirement that is lower than PR's (%US) per type of renewal burden.**

Name	GA	%US		
		RR	CH	RF
Architect	DE		13%	100%
Barber	DE	4%		98%
Cosmetologist	DE			
CPA	DE		8%	98%
Electrician (Apprentice)	DE			33%
Electrician (Journeyman)	DE	76%	60%	100%
Engineer	DE		8%	98%
Geologist	DE			5%
Interior Designer	DE		100%	75%
Land Surveyor	DE		24%	98%
Landscape Architect	DE		35%	100%
Water Treatment Operator (L1)	DE	67%		50%
Water Treatment Operator (L2)	DE		100%	84%
Water Treatment Operator (L3)	DE		100%	60%
Water Treatment Operator (L4)	DE		5%	3%
Plumber (Apprentice)	DE		4%	27%
Plumber (Journeyman)	DE			79%
Plumber (Master)	DE	84%	10%	94%
Real Estate Appraiser	DE			
Real Estate Broker	DE			10%
Real Estate Salesperson	DE			
Social Worker	DE			13%
Athletic Trainer	DRD	2%		16%
Acupuncturist	DS		66%	95%
Audiologist	DS			4%
Chiropractors	DS		35%	6%
Dental Hygienists	DS			
Dentists	DS		10%	82%
Dietitian and Nutritionist	DS		11%	83%
Embalmer	DS		71%	
EMTs	DS	12%	18%	96%
Massage Therapist	DS	2%	33%	67%
MD Physician-Surgeon	DS		10%	84%
Nurse (Advanced Practitioner)	DS		72%	42%
Nurse (Anesthetists)	DS	2%	74%	51%
Nurse (Obstetrics)	DS		71%	47%
Nurse (Practitioner)	DS	2%	15%	51%
Nurse (Specialists)	DS		63%	43%
Occupational Therapist	DS		28%	98%
Occupational Therapist Assistant	DS		9%	98%
Opticians	DS		75%	59%
Optometrist	DS		10%	73%
Pharmacist	DS		4%	96%

Name	GA	%US		
		RR	CH	RF
Physical Therapist	DS			
Physical Therapist Assistant	DS		4%	
Podiatrists	DS		4%	
Professional Counselors	DS		18%	
Psychologist	DS		30%	
Radiologic Technologists	DS		4%	
Respiratory Therapist	DS			
Speech Language Pathologist	DS			4%
Speech Language Therapist	DS	7%	23%	13%
Veterinarian	DS			94%
Veterinarian Technician	DS		65%	20%
Private Investigators	NP	6%		31%
Mortgage Broker	OCIF	7%		27%
Insurance Producer	OCS	2%	8%	100%
Attorney	PJ			

### 5.1 Renewal Rate

PR's renewal rate burden is significantly lower than the US average for most licenses in this study. Eighty three percent of the licenses (48 out of 58) in PR have a renewal rate of 3 years or more, plus there are two permanent licenses. In most cases, the licenses with rates of 3+ years exceed the US average by at least one full year. There are 5 licenses with a renewal rate of 2 years, and all are less burdensome than the average US counterpart. There are 5 licenses with a 1-year renewal rate, two of them being in line with the US average and typical for most jurisdictions. The remaining 3 licenses have requirements that are higher than at least half the jurisdictions, and those are presented in Table 11. The table includes the agency, the average for the US jurisdictions that license the occupation, PR's requirement, and the percent of instances where PR's requirement is above the US jurisdictions.

**Table 11. Licenses where PR's renewal rate requirement is above the US average and higher than at least half the US jurisdictions (%US > 50%).**

Name	GA	RR		
		US	PR	%US
Electrician (Journeyman)	DE	2.2	1	76%
Plumber (Apprentice)	DE	1.8	1	67%
Social Worker	DE	1.9	1	84%

The three licenses in Table 11 have values of %US above 50%, but none has a value of 100%, indicating that for all three licenses there are several US jurisdictions with the same rate (annual renewals). It is relevant to comment that the Social Worker license renewal is performed through the Colegio de Profesionales del Trabajo Social, the Electrician (Journeyman) license renewal is performed annually through the Colegio de Peritos Electricistas, and the Plumber (Apprentice) license renewal is performed annually through the DE.

## 5.2 Continuing Education Contact Hours

There are 12 licenses with continuing education contact hour requirements above the US averages, and of those, 11 have a requirement that is higher than 50% of the US jurisdictions. Those licenses are presented in Table 12. The table includes the agency, the average for the US jurisdictions that license the occupation, PR's requirement, the ratio of PR's requirement versus the average requirement in the US, and the percent of instances where PR's requirement is above the US jurisdictions (%US).

**Table 12. Licenses where PR's continuing education requirement is above the US average and higher than at least half the US jurisdictions (%US > 50%).**

Name	GA	CH			
		US	PR	PR/US	%US
Electrician (Journeyman)	DE	6.5	8	1.23	60%
Interior Designer	DE	6.5	15	2.31	100%
Plumber (Journeyman)	DE	4.8	9	1.87	100%
Plumber (Master)	DE	5.1	9	1.76	100%
Acupuncturist	DS	20.6	25	1.21	66%
Nurse (Advanced Practitioner)	DS	15.5	20	1.29	72%
Nurse (Anesthetists)	DS	15.9	20	1.26	74%
Nurse (Obstetrics)	DS	17.3	20	1.16	71%
Nurse (Specialists)	DS	17.8	20	1.12	63%
Optician	DS	9.1	12	1.32	75%
Veterinary Technician	DS	9.1	10	1.10	65%

Three of the licenses in Table 12 have PR/US ratios larger than 1.5, therefore PR's requirements are at least 50% higher than the US average. Next are explanations regarding the continuing education requirements for those three licenses.

- PR's Interior Designer license is renewed every three years and it requires 45 contact hours in CE (therefore 15 per year). By comparison, the four jurisdictions that regulate this occupation require 10 hours every 2 years, 20 hours every 2 years, 8 per year and 6 every 2 years, respectively. The renewal requirement of 6 hours every 2 years is set by the Council for Interior Design Qualification.
- Both Plumbing licenses in Table 12 are renewed every 4 years and require 36 contact hours (rate of 9 per year). Every jurisdiction in the US requires fewer hours, with Oregon and Minnesota being the "closest" jurisdictions with a rate of 8 hours per year for the Plumber (Journeyman) license, and Rhode Island at 7.5 hours per year for the Plumber (Master) license.

## 5.3 Renewal Fees

More than forty percent (24 out of 58) of the licenses in PR have renewal fees (in \$ per year) above the US average. These 24 licenses have a requirement that is higher than 50% of the US jurisdictions. Those licenses are presented in Table 13. The table includes the agency, the

average renewal fees for the US jurisdictions that license the occupation, PR's requirement, the ratio of PR's requirement versus the average requirement in the US, the percent of instances where PR's requirement is above the US jurisdictions (%US), and an indication if the license requires membership to a state professional organization (Colegio). This additional column (Col.) is included as, in many instances, renewal requires membership in the related professional association for the complete renewal period, and annual dues are paid to the organization to maintain membership, thus considered an element of the renewal fee.

**Table 13. Licenses where PR's renewal fee is above the US average and higher than at least half the US jurisdictions (%US > 50%).**

Name	GA	RF				Col.
		US	PR	PR/US	%US	
Architect	DE	\$ 71	\$ 335	4.73	100%	y
Barber	DE	\$ 43	\$ 108	2.54	98%	y
CPA	DE	\$ 91	\$ 341	3.76	98%	y
Electrician (Journeyman)	DE	\$ 44	\$ 125	2.86	100%	y
Engineer	DE	\$ 63	\$ 236	3.78	98%	y
Land Surveyor	DE	\$ 69	\$ 236	3.43	98%	y
Landscape Architect	DE	\$ 107	\$ 335	3.15	100%	y
Plumber (Journeyman)	DE	\$ 52	\$ 89	1.69	84%	y
Real Estate Salesperson	DE	\$ 73	\$ 100	1.36	79%	
Social Worker	DE	\$ 54	\$ 100	1.85	94%	y
Acupuncturist	DS	\$ 142	\$ 325	2.29	95%	
Dentist	DS	\$ 208	\$ 300	1.45	82%	y
Dietitian and Nutritionist	DS	\$ 65	\$ 95	1.47	83%	y
EMT	DS	\$ 25	\$ 100	3.97	96%	
Massage Therapist	DS	\$ 68	\$ 76	1.12	67%	
MD Physician-Surgeon	DS	\$ 228	\$ 325	1.43	84%	y
Nurse (Anesthetists)	DS	\$ 49.7	\$50	1.01	51%	
Occupational Therapist	DS	\$ 67	\$ 135	2.01	98%	y
Occupational Therapist Assistant	DS	\$ 55	\$ 108	1.97	98%	y
Optician	DS	\$ 104	\$ 125	1.21	59%	y
Optometrist	DS	\$ 189	\$ 273	1.44	73%	y
Pharmacists	DS	\$ 103	\$ 246	2.39	96%	y
Veterinarian	DS	\$ 140	\$ 279	2.00	94%	y
Insurance Producer	OCS	\$ 58	\$ 525	8.99	100%	

Renewal fees are a combination of fees paid to the agency that regulates the occupation and to the related professional organizations (Colegio) when membership is required to be licensed. Relevant general results:

- There are 12 licenses in Table 13 with renewal fees that are more than double the US average (PR/US  $\geq 2$ ). Nine of those twelve occupations require Colegio membership and is noted this represents the majority of the renewal costs.
- There are fifteen licenses in Table 13 where the %US is larger than 90%, basically indicating PR's renewal fees are in the top 10% in terms of burden.

## 6. Summary and Future Developments

The analysis presented in this report demonstrates the need to further evaluate occupational licenses in Puerto Rico. Table 14 presents the licenses in PR that have “counterparts” in less than half the US jurisdictions, therefore that have a low licensing extent. Based on this result, there should be further analysis on the need for these licenses and possible replacement by voluntary certifications or other approaches used in the US jurisdictions that do not require a license.

**Table 14. List of licenses that have “counterparts” in less than fifty percent of US jurisdictions.**

Name	GA	%L
Interior Designer	DE	8%
Electrician (Journeyman)	DE	14%
Plumber (Apprentice)	DE	16%
Water Treatment Operator (L2)	DE	16%
Water Treatment Operator (L1)	DE	20%
Water Treatment Operator (L4)	DE	20%
Water Treatment Operator (L3)	DE	22%
Speech Language Therapist	DS	29%
Optician	DS	39%
Geologist	DE	43%
Plumber (Master)	DE	45%

This examination demonstrates that multiple licenses in PR have burdens that are higher than the US average. Based on the data, a majority (53 out of 58) of the licenses in PR under the scope of this study have at least one metric that is above the average. Given that PR is the US jurisdiction with the lowest average income<sup>8</sup> and could be argued, worst economic situation, any burden that is above the average represents a significant cost to PR's workers. Table 15 organizes the licenses by degree of “overburdens”. The table includes the name of the license, the related managing agency, and the percentage of US jurisdictions that have a requirement that is lower than PR's (%US) for each of the metrics discussed in the previous sections. Cells that are blank represent the cases where the burden is less than or equal the average, or cases where is above the average, but %US is below 50%. Therefore, only cases with %US  $\geq 50\%$  and with a burden above the US average are presented. There are 5 licenses with no overburden metric, 29 licenses that have one or two areas of overburden, therefore a “small” problem, 20 licenses with three to four areas of overburden, therefore a “significant” problem, and finally, 4

<sup>8</sup> [https://en.wikipedia.org/wiki/List\\_of\\_U.S.\\_states\\_and\\_territories\\_by\\_income](https://en.wikipedia.org/wiki/List_of_U.S._states_and_territories_by_income)

licenses with five areas of overburden, which can be considered “major” problems. It is proposed this table can serve as a basis to prioritize further analysis in terms of looking at ways to reduce burdens. It is noted that first time fees and renewal fees are the most common areas of overburden.

**Table 15. List of all licenses grouped by the number of measures with an overburden and presenting the percent of US jurisdictions with a lower burden (%US).**

Name	GA	%US						
		GL	XR	EX	FF	RP	CE	RF
Electrician (Apprentice)	DE							
Professional Counselor	DS							
Psychologist	DS							
Dental Hygienists	DS							
Nurse (Practitioner)	DS							
<b>Overburden: 1 – 2 metrics (n = 29)</b>								
Cosmetologist	DE					100%		
Geologist	DE							98%
Water Treatment Operator (L1)	DE							82%
Water Treatment Operator (L4)	DE	71%						
Chiropractor	DS	98%						
Respiratory Therapist	DS		100%					
Podiatrist	DS		92%					
Physical Therapist Assistant	DS							96%
Architect	DE				100%			100%
Land Surveyor	DE				93%			98%
Engineer	DE				98%			98%
Plumber (Apprentice)	DE		76%			67%		
Plumber (Master)	DE		78%				100%	
Athletic Trainer	DRD				93%			98%
Embalmer	DS				72%			79%
EMT	DS				88%			96%
Massage Therapist	DS						100%	67%
Radiologic Technologists	DS				98%			98%
Audiologist	DS		76%				71%	
Dentist	DS				61%			82%
MD Physician-Surgeon	DS				71%			84%
Veterinarian	DS				80%			94%
Veterinary Technician	DS				81%		65%	
Physical Therapist	DS				81%		65%	
Speech Language Pathologist	DS		92%					67%
Nurse (Obstetrics)	DS		97%				71%	
Private Detective	NP				100%			100%
Mortgage Broker	OCIF			82%	66%			
Insurance Producer	OCS				100%			100%
<b>Overburden: 3 – 4 metrics (n = 20)</b>								
Landscape Architect	DE	88%			100%			100%
Barber	DE				96%	84%		98%
Real Estate Appraiser	DE	98%			100%			100%
Dietitian and Nutritionist	DS		100%		71%			83%
Pharmacist	DS		100%		61%			96%

Name	GA	%US						
		GL	XR	EX	FF	RP	CE	RF
Occupational Therapist Assistant	DS		98%		61%			98%
Optometrist	DS		98%		61%			73%
Nurse (Advanced Practitioner)	DS		100%		62%		72%	
Speech Language Therapist	DS	50%	100%	80%				
Attorney	PJ				100%	100%		100%
Social Worker	DE	100%			68%	84%		94%
CPA	DE		78%		88%		100%	98%
Real Estate Broker	DE			100%	66%		100%	84%
Real Estate Salesperson	DE	100%			72%		66%	79%
Electrician (Journeyman)	DE			97%		76%	60%	100%
Interior Designer	DE			97%		76%	100%	100%
Water Treatment Operator (L3)	DE	88%	97%		61%		63%	
Water Treatment Operator (L2)	DE	100%	100%				74%	51%
Occupational Therapist	DS	90%			65%		75%	98%
Nurse (Specialists)	DS		97%		61%		63%	98%
<b>Overburden: 5 metrics (n = 4)</b>								
Plumber (Journeyman)	DE	71%		100%	63%		100%	84%
Acupuncturist	DS	100%	100%		62%		66%	95%
Nurse (Anesthetists)	DS	50%	100%	80%			74%	51%
Optician	DS	90%	100%		74%		75%	59%

This report will serve as a basis for a final report, where the complete set of licenses in PR (currently 129), will be benchmarked versus the datasets from LTW and KCSOR, complemented by US jurisdictions' data gathered by the UPR team.