

# ACADEMIC CATALOG 2022-2024



#### IMPORTANT NOTICE

The data presented in this Catalog are valid for the 2022-2024 academic year. The University of Puerto Rico at Cayey reserves the right to modify any information and data contained in this Catalog regarding the calendar, academic and graduation requirements, tuition and related fees, regulations, study programs, or others that occur due to changing future circumstances or by the disposition of the corresponding university authorities.

The University of Puerto Rico at Cayey has a policy of non-discrimination based on race, sex, origin, color, age, religious and political beliefs, or physical disability.

University of Puerto Rico at Cayey P.O. Box 372230

Cayey, Puerto Rico 00737-2230

Phone Box: (787) 738-2161

www.cayey.upr.edu

www.facebook.com/UPRCayey

www.instagram.com/uprcayeyviva/

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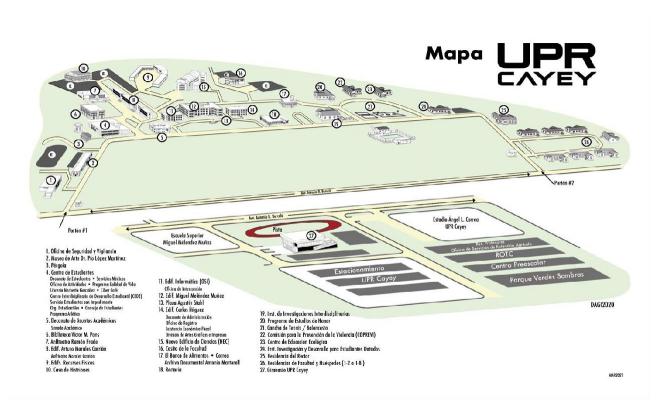
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# PREAMBLE

The University of Puerto Rico at Cayey is a four-year public institution, which is part of the eleven campuses of the UPR system. Founded in 1967 as a regional college on the site of a former military camp, it became a university college in 1969 and acquired autonomy on April 2, 1982, by resolution of the Council of Higher Education. It is located on 200 acres of subtropical land, nestled in the green hills of Puerto Rico's Central Mountain Range. The University of Puerto Rico at Cayey is the campus that serves the largest number of students in the southwest and central region of the Island, providing them with a high-quality education.

The University of Puerto Rico at Cayey offers 24 bachelor's degrees and is ranked 13th nationally as a source institution for Hispanic Doctorates in natural and social sciences (2007-2011; NSF 2014). The Science Foundation's Survey of Earned Doctorates (NSF, 2011) places the University of Puerto Rico at Cayey among the top 41 U.S. high school institutions from which Hispanic students completed a doctorate in science and engineering (2005-2010). The 2017 American *Medical College Application Service* (AMCAS) report also places the University of Puerto Rico at Cayey as the third institution in Puerto Rico from which the majority of Puerto Ricans apply to medical school programs and the 21st within the United States. The mission of the University of Puerto Rico at Cayey emphasizes providing an education of excellence that integrates the interdisciplinary approach, research, and community engagement into the academic experience of students. The general education component focuses on content and skills from an interdisciplinary approach, seeking to prepare the student population by enriching their academic experience in a diversity of fields.

The University of Puerto Rico at Cayey offers students the opportunity to participate in several educational activities that support the academic, social, and cultural experience, making the University of Puerto Rico at Cayey a vibrant campus with 29 accredited student organizations. The student body is 100% Hispanic, with an average time of five years to earn a degree and 70% of this student body is female. Retention and graduation rates are among the highest within the University of Puerto Rico system. Graduates of the University of Puerto Rico at Cayey continue graduate studies in a high percentage.

To support the Institution in fulfilling its mission, the University of Puerto Rico at Cayey has highly qualified staff and full-time faculty members, including faculty and non-faculty (i.e., researchers, librarians, psychologists, and counselors). The faculty is highly experienced, many with PhDs from some of the world's most prestigious institutions. The cultural diversity of the faculty is also a strength, teachers from India, France, Germany, Spain, Chile, Colombia, Cuba, and the continental United States, among other countries. His diverse qualifications reflect the interdisciplinary nature of teaching, research, and creating projects and services at the University of Puerto Rico at Cayey.

Students and faculty at the University of Puerto Rico at Cayey work together through the interdisciplinary curriculum in a stimulating, research-based framework. The institution welcomes great talent and trains critical thinkers to continue to make a mark on discovery, innovation, and design in the sciences, entrepreneurship, arts, and education.

# **VISION, MISSION, GOALS AND GENERAL OBJECTIVES**

# Vision<sup>1</sup>

To be an educational model of intellectual and social transformation for undergraduate students through the integration of research, artistic creation, and community service.

## Mission

The University of Puerto Rico at Cayey is committed to offering an interdisciplinary education between the Humanities, Social Sciences, Natural Sciences and Professional Schools. It promotes the formation of ethical, autonomous, critical, and socially responsible citizens. We affirm our academic excellence, through research, community service, and artistic creation.

## Goals and Objectives<sup>2</sup>

- 1. To provide an undergraduate education of excellence.
  - Maintain varied and up-to-date programs that include Natural and Social Sciences, Humanities, Education, and Business Administration.
  - To offer a diverse, innovative curriculum that is up to technological advances, of social relevance, international and interdisciplinary perspective, which provides students with a solid foundation of knowledge and skills from which they can expand their training in any field of knowledge and professional performance.
  - Develop relevant and innovative programs, activities, and co-curricular experiences of study, research, exchange, creation, training, professional practice, and service.
  - To promote synthesis and continuity in the organization of knowledge, as well as in learning experiences.
  - To provide the student with a vision of the interrelationship between general education, the knowledge of the specialty, and their living environment.
  - To contribute to the training of people with a broad, integrative, dynamic, and innovative cultural vision of knowledge, of the human being, and of the teaching and learning process.
  - To enable students to function in a multicultural, international, and interdependent world.
  - To strengthen the development of complex thinking, which favors independent learning, critical discernment, the generation of new knowledge, and a creative attitude.
  - To develop in the student the strengthening and full appreciation of their vernacular language.
  - To expand students' ability to communicate effectively and properly.
  - To train the student in the use of diverse sources of information and in research.
  - To relate students to the creative use of technologies as tools both in their training and in their specialty.
  - Sensitize students to various forms of artistic and corporal expression through formative and participatory experiences inside and outside the classroom.
  - To cultivate students' self-esteem and self-confidence, initiative and leadership, independence of judgment and prudence in decision-making, enabling them to make ethical judgments, anticipate problems,

<sup>&</sup>lt;sup>1</sup> Certification 15, 2018-2018, Academic Senate.

<sup>&</sup>lt;sup>2</sup> Certification 89, 2005-2006, Academic Senate.

to perceive opportunities and propose constructive changes, thus promoting the integral and balanced development of the person.

- 2. To cultivate in all sectors of the university community the commitment to the execution of excellence in accordance with the academic project that promotes the unity of institutional purpose.
  - •To promote continuous retraining of all members of the university community: students, professors, and teaching support staff.
  - •To provide support services to students to facilitate their integration into university life.
  - •To support the faculty in the enrichment of broad cultural training, the updating of the knowledge of their specialty, and the improvement of their teaching capacities.
  - •To develop knowledge of the work of the University and its values in the support staff, and to contribute to their professional and personal development.
  - •Recognize merit in university performances.
  - •Adapt the budget distribution to the work plan that recognizes institutional priorities.
  - •Integrate appraisal to enrich the teaching and learning process.
  - •Promote the appraisal, evaluation, and review of academic and administrative processes and schemes so that they respond agilely and flexibly to the academic project that gives meaning to our existence.
- 3. To make the University of Puerto Rico at Cayey one of the main centers of academic and cultural activity in Puerto Rico.
  - To promote a climate of encounter and exchange between scholars, researchers and creators from the country and the world, as well as dialogue between academic disciplines and between the various sectors of the community.
  - To offer continuing education to people who aspire to improve professionally, change careers, or enrich their quality of life.
  - Strengthen ties with academic and cultural institutions inside and outside Puerto Rico.
  - Maintain an extensive program of artistic, scientific, professional, and athletic activities that complement academic programs and serve the community.
  - To disseminate in the community the advances in the various branches of knowledge.
  - To enrich and disseminate the values of Puerto Rican culture.
- 4. To promote the development of a sense of social responsibility based on respect for human beings and their natural environment.
  - To train students with the knowledge and skills necessary to understand social, cultural, economic, political, and environmental phenomena in Puerto Rico and the world.
  - To promote attitudes that lead to respect, diversity, and the overcoming of prejudices that threaten human dignity.
  - To foster a commitment to justice and the search for peaceful solutions to common problems.
  - Promote the preservation and improvement of the environment.
  - Maintain a campus environment that ensures respect for dissenting opinions and the rights of others.
  - Affirm university autonomy.

The Declaration of Mission, Goals, and General Objectives of the University of Puerto Rico at Cayey, conceived with the broadest participation of all sectors of the academic community, crystallizes the feeling of this academic community about what the University of Puerto Rico in Cayey is and what it should be. Unanimously approved by the Academic Board on March 5, 1993, it was endorsed by the Council of Higher Education, which, through Certification 94-002, repealed the last mission issued before granting autonomy to Cayey and included it in its Certification 57 series.

1979-80. On February 23, 1994, it obtained the unanimous support of the University Board. It was updated on May 4, 2006, through Certification 89 series 2005-06 of the Academic Senate.

## Accreditation

The University of Puerto Rico at Cayey has been accredited by the *Middle States Association of Colleges and Secondary Schools, Commission on Higher Education* on March 22, 1975, March 13, 1980, July 1, 1985, June 21, 1995, June 22, 2005, April 2017 and reaffirmed its accreditation on June 27, 2019. In addition, the University of Puerto Rico at Cayey is licensed by the Puerto Rico Board of Education (CEPR) now the Puerto Rico Department of State's Board of Postsecondary Institutions. It also has accreditations from the Accreditation Council for Business Schools and Programs (ACBSP), the Association of College Research Libraries (ACRL), and the International Council on Archives (IACS).

Licensed by the Council of Puerto Rico since 1997 Renewal: Certification 2007-097 PRCHE, Certification 2018-210.

# **INSTITUTIONAL PROFILE**

#### **OFFICIAL NAME**

University of Puerto Rico at Cayey University of Puerto Rico at Cayey Article 4, Act No. 1 of 1966 Certification. 103 and 103A (1999-2000), Governing Board

#### FOUNDATION

• Founded in 1967

#### INSTITUTIONAL ACCREDITATION AND LICENSING.

- Accredited by the Middle States Commission on Higher Education (MSCHE) since 1967 and reaffirmed in 2019
- License granted by the Puerto Rico Board of Education in 2018. (2018-210 Certification)

#### **PROFESSIONAL ACCREDITATIONS**

- The National Council for the Accreditation of Teacher Education (NCATE/CAEP) desde 2010 Standards of Professional Accreditation (SPA)
- Association for Childhood Education (ACEI) desde 2009
- National Association for Sports and Physical Education (NASPE) desde 2009
- *Council for Exceptional Children* (CEC) desde 2009
- Accreditation Council for Business Schools and Programs (ACBSP) desde 2011
- International Association of Counseling Services (IACS) desde 2012

#### **CARNEGIE CLASSIFICATION 2015**

Baccalaureate Colleges Arts & Sciences Focus

#### **COMPARABLE INSTITUTIONS**

CUNY Medgar Evers College United States Military Academy United States Naval Academy University of Science and Arts of Oklahoma

DATA OF THE INSTITUTE 2021-2022	5
Faculty:	140
Teaching Staff:	128
Female	65
Male	63
Faculty with PhD:	121
Administrative Staff:	248
New Students:	577
Total Enrollment:	2,559
Full-time	2,275
Part-time	284
Female	1,735
Male	824
Full-time students	2,674
Degrees awarded 2022:	435
Retention Rate:	77%
Graduation Rate:	47%
Pell Grant Students	82%
Hispanic Students:	100%
Related: Reach	

# ACADEMIC DEGREES

The code and title of the program or concentration and the number of certifications that authorize the twenty-eight programs offered by the University of Puerto Rico at Cayey and two Articulated Transfer Programs are identified, in this order.

order.		
Baccala	aureate and Program Codes	
Bachel	or of Business Administration	
0301	Business Administration*	CES 143, 1997-98
0305	Management	CES 143, 1997-98
0302	Accounting	CES 143, 1997-98
0321	Office Administration	CES 035-1999-00, ESC 177, 2004-05
0322	Office Systems*	CES 035-1999-00, ESC 177, 2004-05
Bachel	or of Science	
1201	Natural sciences	CES 143. 1997-98
1202	Biology	CES 143. 1997-98
1204	Chemistry	CES 143. 1997-98
1205	Mathematics	CES 143. 1997-98
7202	Biology (Hybrid Modality)	JIP 190, 2021-22
Pachol	or of Arts	
0902	Humanities	CES 143. 1997-98
0906		CES 143. 1997-98
0907	English	CES 143. 1997-98
0909	Hispanic Studies	CES 143. 1997-98
1602	Social sciences	CES 143. 1997-98
1605	Psychology	CES 143. 1997-98
1613	Psychology and Mental Health	CES 143, 1997-98
1606	Sociology	CES 143, 1997-98
1000	Sociology	
Bachel	or of Arts in Elementary Education	
0420	English	CES 143. 1997-98
0423	Natural sciences	CES 143. 1997-98
0424	Mathematics	CES 143. 1997-98
0426	Spanish	CES 143. 1997-98
0446	Special Education	CES 079, 1999-00, CES 162, 2003-04
	or of Arts in Secondary Education	
0401	Natural sciences	CES 143. 1997-98
0404	Mathematics*	CES 143. 1997-98
0409	Physical education	CES 143. 1997-98
0413	History*	CES 143. 1997-98
0414	English	CES 143. 1997-98
0415	Spanish	CES 143. 1997-98
*Progra	ms in moratorium.	

# EMBLEMS OF THE UNIVERSITY OF PUERTO RICO AT CAYEY

The Shield<sup>3</sup>



"Shield cut, in blue, over the whole a four-tiered portico mounted on a window, gold; at the base, silver, bull gules, at the top of the mountain of three hills, green."

The blue color of the part of the shield invokes the name of Cayey, which means, according to the most authoritative opinion of experts, "place of water". It also means the always blue of Cayey, this being the predominant color, which gives its own personality to the entity represented.

The golden portico reproduces the characteristic relief of the entrances of the main buildings of the Institution, where gold signifies the imperishable value of the teaching received and the academic excellence achieved. The open wings of the door mean that the University of Puerto Rico at Cayey is open to all who want to benefit from the academic opportunities it offers. The window refers to the clear vision that students receive of the knowledge acquired by teachers with a view, likewise, to the future. The four grades indicate the four-year academic program leading to the baccalaureate degree.

The silver (or white) change at the bottom of the shield indicates the honesty of the academic community's efforts.

The red bull, together with the green morning, are taken from the coat of arms of the town of Cayey, adopted by the Honorable Municipal Assembly through Municipal Ordinance number 2, Series 01971-72 dated June 15, 1972. The bull refers to the peak called EI Torito, with which we honor the original tradition of the Institution that began to use the stylized form of the bull in the form used, as well as the sports equipment that is called "Los Toritos de Cayey". The three hills are by El Torito, El Gato and La Santa hill, which indicate the location of the University of Puerto Rico Cayey among the green mountains of Cayey due to the river and aquatic richness of the area. We used three hills instead of three peaks to distinguish the Institutional coat of arms of the town of Cayey.

The location of the Cayey heraldic symbols modified at the base indicates that the College is located in Cayey.

## The seal

"The whole surrounded by a double circle with the inscription UNIVERSITY OF PUERTO RICO IN CAYEY, in base 1967, sable, outer circle formed by chain links". Placed in the circle described, it constitutes the seal of the University of Puerto Rico in Cayey, where 1967 indicates the date of its foundation. The black color (saber) of the letters and the date indicates the seriousness and formality of the academic work carried out in the



Institution. The outer circle surrounded by chain links refers to the common effort of all members of the academic community in the administration, faculty, students, and administrative operation and maintenance staff.

The shield serves to identify the Institution, while the seal is used to authenticate documents issued by

<sup>&</sup>lt;sup>3</sup> Certificación 14, 1974-75, Junta Colegial

the University of Puerto Rico in Cayey. His designs, created by Dr. J. J. Santa-Pinter, a member of the Faculty and the Académie Internationale d'Héraldique, in collaboration with Mr. Santiago Nieves, were adopted by the Collegiate Board through its Certification 14, series 1974-75.

The flag



The official flag of the University of Puerto Rico at Cayey consists of three horizontal stripes: red, white, and green, in this order, located in the center of the coat of arms of the University of Puerto Rico at Cayey. The whole is bordered by the usual yellow fringes, its size is the regulation in the proportion of 3 high by 5 wide. Creation of Dr. J. J. Santa-Pinter, Professor and member of the "North American Vexillological Association", it was adopted by the Collegiate Board through its Certification 23, series 1978-79. The colors red, white and green are the colors that have been used since the beginning of our Alma Mater, especially in sports activities and uniforms. Such colors were also adopted

to form part of the tincture of the coat of arms and seal of the College. Red signifies love for the Homeland and studies; the white sincerity and honesty, and the green, the Cayey atmosphere and hope as a symbol of faith in the future of our youth.

## The anthem

The melody of the Anthem of the University of Puerto Rico in Cayey was composed in 1973 by the composer César Concepción. On February 2, 1979, the University of Puerto Rico at Cayey convened a contest to provide the music with adequate lyrics, which was selected on April 4, 1979 by a jury of five members, made up of professors from the Department of Hispanic Studies and the musician, critic and musicologist Dr. Bartolomé Bover and premiered on May 10, 1979 during the End of Course Concert offered by the University of Puerto Rico. Polyphonic Choir of the University of Puerto Rico at Cayey under the direction of Prof. Salvador Ruiz Cordobés.

Anthem of the University of Puerto Rico in Cayey It

is a pride of my people, of my beautiful Borinquén my College, mountain and sky, the most precious Eden,
Free in thought, students to fight!
The truth is our breath, forward, until we triumph! It is a pride of my people, of my beautiful Borinquén my Colegio de Cayey is the most precious Eden.
Free in thought, students to fight!
The truth is our breath, forward, until we triumph! Mith your reason I rise, I walk firmly in freedom.

# UNIVERSITY OF PUERTO RICO SENIOR OFFICIALS

#### President

Governing Board CPA Ricardo Dalmau Christians Dr. Margarita Villamil Torres Atty. Héctor L. Martínez Valldejuli Atty. Eliezer Ramos Parés Dr. Mayda Velasco Bonilla Dr. Hermán Cestero Aguilar Eng. Emilio Colón Beltrán Atty. Antonio Monroig Malatrassi Dr. Jorge Valentín Asencio Dr. Leonardo Valentín González Dr. Eneida Rodríguez Rossy Mr. Juan José De Jesús Oquendo Mr. Delvin Caraballo Rodríguez

#### Dr. Luis A. Ferrao Delgado

President Cloister Representative – Secretary AAFAF Representative Acting Secretary of Education

Cloister Representative Student Representative – Graduate Student Representative – Baccalaureate

Dr. Carmen L. Quiroga Rodríguez

#### Principal Officials University of Puerto Rico at Cayey

Chancellor

Special Assistant to the Chancellor Interim Dean of Academic Affairs Interim Associate Dean for Academic Affairs Interim Dean of Students Interim Dean of Administration **Department of Business Administration Department of Humanities Department of Social Sciences Department of Hispanic Studies English Department** Department of Biology **Department of Mathematics-Physics** Department of Chemistry Department of Pedagogy **Natural Sciences Program Honors Studies Program** Continuing Education and Professional Studies (DECEP) Extended University (UnEx) Office of Distance Education **General Education** Víctor M. Pons Gil Library Pío López Martínez Museum Register Admissions **Financial Assistance** 

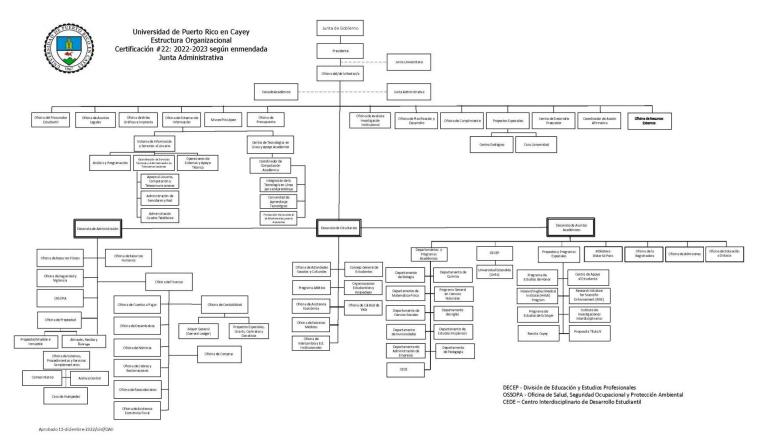
Dr. Juan A. Santana Palacio Dr. Elisa Rodríguez Dr. Rochellie Martínez Vivas Mr. Carlos Rosas Muñiz Dr. Xiomara Santiago Rodríguez Dr. Juan A. Santana Palacio Dr. Luis Galanes Valldejuli Dr. Alejandro I. Carpio Rovira Dr. Nellie Vázquez Rivera Dr. Belinda Román Avilés Dr. Mayteé Cruz Aponte Dr. Dalvin D. Méndez Hernández Prof. Efraín Colón Rivera Dr. María de Jesús Burgos Dr. Olga I. Colón González Mr. Jesús Martínez Martínez Mr. Jesús Martínez Martínez Dr. Clary Enid Ramos Dr. William Ríos Vázquez Prof. Aíxa León Nogueras Prof. Jonathan Berríos Domínguez Ms. Daisy Ramos Quintana Ms. Elsandra Rivera Rivera Mr. Pedro Ayala Viera

- Cultural Activities Planning & Development Budget Finance Human resources Security and Surveillance Office of Institutional Appraisal and Research Student Procurator Preschool Development Center
- Ms. María M. Santiago Morales Ms. Glorimar Ortiz Rodríguez Ms. Enérida Rodríguez Matos Mr. Luis López Rivera Ms. Olga Sierra Flores Prof. Efraín Colón Rivera Ms. Carmen B. Berrios Báez

# ORGANIZATIONAL STRUCTURE OF THE UNIVERSITY OF PUERTO RICO AT CAYEY

The internal structure of governance and decision-making at the University of Puerto Rico at Cayey can be understood as jointly academic and administrative. Through its academic aspect, curricular initiatives originate, channel, and approve or transfer for approval by organizations at the level of the University of Puerto Rico System. Through its administrative aspect, initiatives to support the quality of academic management and to serve the collegiate university community are originated, channelled and approved or transferred for approval by bodies at the system level.

The bodies and officials in which one or another type of decision originates or is approved are, from the level of grouping by discipline of study to the institutional level, the following: academic departments with their student representation, department directors, faculty with their student representation, deans, ad hoc committees between deans, the Academic Senate, the Administrative Board and the Chancellor. The University has a structure framed in the constitution of three deanships, which answer to the Chancellor: Academic Dean's Office, Dean's Office of Administration and Dean's Office of Students. The Chancellor is the highest academic and administrative authority. In the exercise of its functions, it guides and supervises the university staff in the teaching, research, administrative and technical functions carried out in the institution.



At the University of Puerto Rico at Cayey there is only one faculty, equivalent to the faculty. The faculty is constituted in its meetings by the Chancellor, the Deans, the professors and the student representatives. On March 18, 1988, the Senate approved the Internal Regulations of the Faculty of the University of Puerto Rico at Cayey. This regulation was amended in September 2007. The regulations provide for the roles and responsibilities of the Faculty, its officers and five standing committees, namely: the Faculty Personnel Committee, the Faculty Curriculum Committee, the General Education Committee, the Faculty Research, Planning and Assessment Committee and the Student Support Committee.

The Academic Senate is the official forum of the academic community. Through it, the faculty participates in institutional processes and the establishment of academic standards. It consists of the Chancellor -who presides over it- the Deans, the director of the Library, the representation of the teaching staff of each department and of the library, plus two professors elected in a meeting of the senate, and the student representation. It receives the proposals submitted by the faculty regarding the creation and review of courses, on which it makes a final decision, and regarding academic programs, which, if approved, it transfers to the consideration of the university Board. It is responsible for determining the general orientation of the teaching programs and the approval of the academic calendar, the general requirements for admission, promotion, and graduation of students, the general rules for recruitment, tenure, promotion, and licenses of professors, to hear consultations for the appointment of the Chancellor and deans, and to make recommendations to the University Board or the Board of Trustees on the creation or reorganization of dependencies, on the General Regulations of the University and on the Student Regulations.

The Administrative Board is composed of the Chancellor -who presides over it-, the deans, the director of the Library, four department directors, two representatives elected by the Academic Senate who are not *ex officio* and the student representation. The functions and powers of the Administrative Board are established by the University Law. Advises the Chancellor in the exercise of his functions, prepares projects and development plans, approves the draft budget submitted by the Chancellor. The Board grants, at the proposal of the Chancellor, the licenses, academic ranks, permanence of the staff and the promotions in rank of the teaching staff. Approves the internal rules regarding the evaluation of non-teaching staff and the internal rules concerning administrative services and procedures.

## **Office of the Chancellor**

The Chancellor is the principal academic and administrative authority of the University of Puerto Rico at Cayey. He is nominated by the president of the University, after consulting the university community through the Academic Senate, and confirmed by the Governing Board.

Its specific attributions and responsibilities are delineated by law and regulations: in Article 7 of the University Law, in Sections 19.3 of the General Regulations of the University of Puerto Rico, and in Section 7.1 of the Faculty Regulations of the University of Puerto Rico at Cayey.

Among the main ones are presiding over the Senate, the Academic Senate and the Administrative Board; to appoint, after consultation, the deans and directors of academic departments, as well as the office directors and all the staff of the University of Puerto Rico at Cayey; to direct the formulation of the draft budget, the annual report of the work of the University of Puerto Rico at Cayey and other institutional documents of similar importance.

The Chancellor's Office is responsible for directing and coordinating the multiple and diverse academic and administrative procedures inherent to university work, including the advancement of institutional priorities, support for academic activity, protection of rights and the expansion of opportunities for members of the university community. It is also the responsibility of the Chancellor to represent the University of Puerto Rico at Cayey before university authorities and the external community, to promote good relations between the various sectors of the university community, and to elucidate claims and controversies that have not been resolved at other levels.

The Chancellor's Office implements accreditation activities and institutional planning, as well as projects of special interest, such as Visiting Professors, Resident Artists and others. Activities of international projection are also sponsored.

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In the exercise of his functions, the Chancellor is assisted by the Dean of Academic Affairs, the Dean of Administration and the Dean of Students. The offices attached to the Chancellor are:

- 1. Academic Senate
- 2. Board of Directors
- 3. Office of Student Advocate
- 4. Office of Legal Affairs
- 5. Office of Graphic Arts and Printing
- 6. Information Systems Office
- 7. Pío López Museum
- 8. Budget Office
- 9. Office of Assesment and Institutional Research
- 10. Office of Planning and Development
- 11. Office of Compliance
- 12. Special Projects
- 13. Preschool Development Center
- 14. Affirmative Action Coordinator
- 15. Office of External Resources

# **Dean of Academic Affairs**

The Dean of Academic Affairs brings together, under the coordination of the Office of the Dean, academic departments and programs, learning resource centers, teaching support programs and projects, special academic projects, the Registrar's Office, the Division of Continuing Education and Professional Studies, the Extended University.

The Dean of Academic Affairs is responsible for the development of the Campus's academic programs and policies: He directs and coordinates the activities of the associate deans, department directors, coordinators and directors of academic programs and projects, of the Division of Continuing Education and Professional Studies, as well as those of the Library; advises on matters related to teaching staff, promotes excellence in the fulfilment of their duties and continuous development in teachers; implements the agreements on academic matters approved by the Academic Senate and other university authorities; it attends to the creation, review and programming of courses and the updating of the programs generated by the faculty; coordinates academic counseling activities carried out by departments and the transdepartmental components of general education and teacher preparation; participates in the activities of the Administrative Board, the Senate and the faculty committees and in the development of the academic budget; provides address to the Registry; coordinates with the Admissions Office; serves as a liaison with the office of the Vice Presidency of Academic Affairs of the Central Administration and with the accrediting agencies; recommends the appointment of principals and the actions of teaching staff, after consultation with the corresponding bodies; assists the Chancellor in all matters related to academic matters and represents him in its absence. It works in integration with the Deans of Administration and Students.

# Departments and Academic Programs

The department is the academic and administrative unit in charge of offering programs and courses toward academic degrees in the various disciplines in the day program and coordinates with the Division of Continuing Education and Professional Studies the offerings in the evening and Saturday programs. Each department is made up of the professors and researchers attached to it. The department director is the chief executive and administrative officer of each department.

The academic departments of the University of Puerto Rico at Cayey are grouped into three areas, as follows: Arts

- Department of Social Sciences
- Department of Hispanic Studies
- Department of Humanities
- Department of English

Natural sciences

- Department of Biology
- Department of Mathematics-Physics
- Department of Chemistry

**Professional Schools** 

- Department of Pedagogy
- Department of Business Administration

Special Projects and Institutes and other academic programs:

- Institute for Interdisciplinary Research
- Ecological Education Center
- Honors Studies Program (PREH)
- Women's Studies Program
- Military Science Program (ROTC)

The following research projects and teaching support programmes complement the work of the departments:

- Research Initiative for Students and Enhancement (RISE)
- Howard Hughes

The objectives and programs of study of the departments are described in the Academic Programs section of this catalog.

The offices attached to the Office of the Dean of Academic Affairs are:

- 1. Division of Continuing Education and Professional Studies (DECEP)
- 2. Extended University (UNEX)
- 3. Registrar's Office
- 4. Admissions Office
- 5. Víctor M Pons Gil Library
- 6. Office of Distance Education
- 7. Interdisciplinary Student Development Center

## **Dean of Administration**

The coordination of this Deanship is the responsibility of the Dean of Administration, who reports directly to the Chancellor. The following offices are involved in the fulfilment of their mandate:

- 1. Physical Resources
- 2. Office of Security and Safety
- 3. Health, Occupational Safety
- 4. Environmental Protection (OSSOPA)
- 5. Property Office
- 6. Office of Systems and Complementary Services (Internal Mail, Central Archive, Guest House), Office of Human Resources
- 7. Finance Office (Accounts Payable Office, Disbursement Office, Payroll Office, Collection and Claims Office, Collection Office, Tax Economic Assistance Office)
- 8. Accounting Office (General Ledger, Special Projects, Grants, Contracts and Donations)
- 9. Purchasing Office

The Dean of Administration responds to external bodies in terms of compliance with rules and procedures, budgetary controls and filing of reports required by law or regulation. Among these are the Office of the Comptroller of Puerto Rico, auditors from the University, external auditors hired by the Office of the President of the University, auditors from federal and state agencies that sponsor programs at the College, labor organizations, and federal environmental control and employment safety agencies.

It is the commitment of the Dean of Administration to carry out all the tasks observing the current regulations, making the most effective use of the available resources, and attentive to the goal of cultivating in all sectors of the university community the commitment to the execution of excellence in accordance with the academic project that promotes the unity of institutional purpose.

# **Dean of Students**

The Dean of Student Affairs has the responsibility to effectively and efficiently develop and deliver support services to students. The Dean's Office is committed to the integral development of students in accordance with the student profile set forth in the Mission of the University of Puerto Rico in Cayey. For this purpose, the academic activities of the institution are complemented with other extracurricular activities that facilitate the integration of students into university life, encourage the spirit of Alma Mater and provide for the maximum development of the potential of each student.

The Dean of Student Affairs and its service offices collaborate in the coordination of activities of the General Student Council, the Graduating Class, student organizations, institutional student groups such as the Choir, Musical Band, Flag Bearers, Repertory Theater and Athletes, and student representatives of the departments that request it. The service offices attached to the Dean's Office are:

The functions of the Dean of Students are:

- Expand the educational dimensions and social development of students by providing and promoting cultural, athletic, and social activities and programs.
- To provide or facilitate the offer of those services that the student needs for his or her full development as a university student.

- To coordinate student participation in the university community through the annual constitution of the General Student Council, student representation in all academic departments, in the permanent committees of the Faculty and other committees and bodies of the university community; as well as to stimulate the organization of student groups of an academic, cultural, technical, sports, social and fraternal nature.
- To maintain an extensive program of cultural and athletic activities for students and the community in general, which enliven the good taste for the different manifestations of the arts and sports, thus creating a dynamic that tends to strengthen our culture.
- To offer a program of social activities that facilitate and serve the adjustment of the university student and complement the academic programs.
- Provide opportunities to enrich the educational experience through study abroad programs and trips.
- To help each student achieve a better understanding of themselves that facilitates an adequate adjustment to university life and the society in which they live.
- Manage the programmatic phase of Financial Assistance programs.
- Serve as a liaison with the Veterans Administration to facilitate tuition fees for all veterans and dependents who attend the College.
- Offer guidance to students about jobs, agencies, and companies that offer job opportunities.
- To keep information up to date and provide guidance on graduate and professional study programs and scholarships.
- To serve as a mediator in problems that may arise between hosted students and owners of lodging.
- Provide general medical services to students.
- Mediate disciplinary actions related to students.
- To promote healthy and safe lifestyles in students and the community.
- Update the School's Student Handbook and the Internal Student Regulations.
- Disseminate information related to campus safety in the university community.

## Student representation

The University of Puerto Rico at Cayey encourages student participation in university affairs as a way to better respond to their needs, as well as encourage leadership. Student participation is established in a representative manner in Article 10 of the University of Puerto Rico Law of 1966, as amended by Certification 45 series 1972-73 of the Council of Higher Education, incorporated into the General Student Regulations in Certification 14 of 1974-75, and by Certification 117 of the Academic Board and incorporated into the Internal Regulations of the Faculty.

Student representation has a voice and vote in department and faculty meetings, in the Academic Senate, the Administrative Board, as well as in the University Board, in the Faculty committees (except the Personnel Committee), as well as in special committees on discipline and in other university committees and bodies. Student participation with voice and vote at the departmental level will not exceed 10 percent of the number of cloisterers that make up the department, but in no case will there be less than two student representatives. The student representation with voice and vote at the level of the Faculty is constituted by the student representatives at the departmental level, but in no case, the total of that representation will exceed 10 percent of the number of cloisterers who belong to the faculty. On eligibility and election procedures, see the Student Regulations.

# General Student Council

The General Student Council is the body that represents the student body at the University of Puerto Rico at Cayey. Created by certification, it facilitates the expression of the student body, provides the means to exercise their own governance, facilitates participation within the framework of their responsibilities and provides the channeling of the contribution of ideas for the proper functioning of the Institution. The General Student Council will be made up of four representatives from each year elected by secret vote annually. Once elected, they elect the board of directors.

# Student Organizations

Various student organizations, duly certified, contribute to university life in its academic, cultural and extracurricular phases. They are described below:

- Flag Bearers University of Puerto Rico at Cayey
  - Purpose: The Flag Bearers proudly represent and care for the colors of the University of Puerto Rico at Cayey. They demonstrate a positive attitude, aware that red, white, and green are worthy of respect.
  - E-Mail: abanderadas.cayey@upr.edu
- American Medical Student Association (AMSA)
  - Purpose: To motivate students who aspire to study a career in health. To guide members to clearly identify
    the right profession for each one and promote interdependence. In addition, it provides the tools for
    members to grow professionally and personally.
  - E-Mail: amsa.cayey@upr.edu
- Association "Professionals of the Clinical Laboratory TMED
  - Purpose: To train its enrollment with skills and techniques that allow them to stay at the forefront of the sciences. In addition, they promote interdisciplinary integration and participatory activity in a fun and enjoyable environment that allows them to develop professionally.
  - E-Mail: tmed.cayey@upr.edu
- Christian University Association (CONFRA)
  - Purpose: To provide a space for spiritual refreshment to all who come without distinction of person. Proclaim the gospel, moved by the firm conviction that it is God's will.
  - E-mail: confra.cayey@upr.edu
- Accounting Association (AEC)
  - Purpose: To promote student leadership, through conferences and seminars, thus providing theoretical and practical knowledge for their future work. In addition, they promote moral and ethical values that will help create strong relationships among their peers.
  - E-Mail: aec.cayey@upr.edu
- Psychology Student Association (Psy-Chi)
  - Purpose: The Psychology Student Association wishes to encourage the aspiration of our members for psychology, for a better academic and professional entrepreneurship.
  - E-Mail: psy-chi.cayey@upr.edu
- Honors Studies Program Association (AProEsH)
  - Purpose: It seeks to be a vehicle to promote the integration of its members. This is based on the flourishing
    of innovative ideas, which arise from the initiatives of the students themselves for their full development as
    critical thinkers and leaders with a high sense of civic responsibility.
  - E-Mail: APROESH.cayey@upr.edu
- Student Association of Administrative Professionals (AEPA)
  - They provide students in the Office Technology and Administration program with the opportunity to belong to a dynamic student association. This to complement their knowledge according to the changes and demands in the business world.
  - E-Mail: aepa.cayey@upr.edu

- Café Teatro
  - Purpose: It is a student theater organization of the University of Puerto Rico at Cayey that lays its foundations
    in the promotion of the theater arts, in order to achieve social transformation. They promote social and
    artistic research, for the use in theoretical exposition and practical performance, the arts are the forced foot.
    - E-mail: cafeteatro.cayey@upr.edu
- Puerto Rico Chamber of Commerce, UPR-Cayey University Chapter (CCPR)
  - Purpose: To guide and familiarize young students of university institutions on the principles and practices of free enterprise and entrepreneurship.
  - E-Mail: cuccpr.cayey@upr.edu
- Circle of Future Education Professionals (CIRPE)
  - Purpose: To activate and unify the students and professors of its Department so that with a previous administrative structure, activities that promote academic, personal and professional growth are scheduled, carried out and disseminated.
  - E-Mail: cirpe.cayey@upr.edu
- Mathematics Circle (CIMAT)
  - Purpose: The purpose of the Mathematics Circle is to assist in the development of undergraduate-level programs in the field of mathematics and its applications. The association provides information on different areas of research and study at both the undergraduate and graduate levels. Mathematical research, the development of their skills and participation in events related to mathematics are encouraged.
  - E-Mail: cimat.cayey@upr.edu
- Chemistry Circle
  - Purpose: To foster interest in chemistry and create cohesion among students of Natural Sciences, especially those in the Department of Chemistry
  - E-Mail: circuloquimica.cayey@upr.edu
- University Community Giving Support to the Deaf (CUDAS)
  - Purpose: It is a student organization that is dedicated to representing and advocating for the deaf
    community. They work to raise awareness about the needs of the deaf and break down the stigmas of their
    disability. In addition, they strive to transform our campus into an academic institution that welcomes the
    deaf student population. CUDAS is a family that fights for equality and inclusion for all.
  - E-Mail: cudas.cayey@upr.edu
- Student for University Students with Disabilities (ESPADA)
  - Purpose: Emphasis is placed on serving the community of students with functional diversity at the University of Puerto Rico at Cayey. He is committed to fighting to achieve a better educational future for this population, with dedication, commitment and dedication.
  - E-Mail: espada.cayey@upr.edu
- Fiesta VIII
  - Purpose: Youth-led program that brings a message about traffic safety and alcohol use to their peers.
  - E-Mail: fiesta8.cayey@upr.edu
- Future Pharmacists Association
  - Purpose: To conduct community work and involve anyone interested in the field of pharmacy to make members excellent candidates for the School of Pharmacy.
  - E-Mail: futurepharmacists.cayey@upr.edu

- Jasperi Pre-Vet
  - Purpose: To raise awareness about the animal world and provide guidance on the different branches that are based on animal care, conservation, behavior and health.
  - E-Mail: jasperi.cayey@upr.edu
- MED-Life
  - Purpose: To impact and help low-income families with medicine, education, and development to provide them with a better quality of life.
  - E-Mail: medlife.cayey@upr.edu
- NeuroBoricuas
  - Purpose: To raise awareness among its members about the importance of the scientific discipline of neuroscience in the student body of the University of Puerto Rico, Cayey Campus, and in the school community (K-12) of the central and eastern regions of Puerto Rico.
  - E-Mail: neuroboricuas.cayey@upr.edu
- Pop Culture
  - Purpose: It wants to bring together students who are interested in the subject of culture and popular art. In
    addition, to provide a space where different topics can be exposed, analyzed, and discussed openly and
    participate in activities related to them. They want their classmates to feel heard, and to have the experience
    of socializing with students with the same interests, giving them our confidence as a family.
  - E-Mail: popcultura.cayey@upr.edu
- Pre Law Association
  - Purpose: Wants to guide members during their preparation for the law school admissions process. In addition, they seek to provide enriching activities to our student community.
  - E-Mail: prelaw.cayey@upr.edu
- Propossanic
  - Purpose: To foster leadership through professional development and graduate studies in order to improve society. Educational and socialization activities are carried out that help to develop in any area of business.
  - E-Mail: prospanica.cayey@upr.edu
- Puerto Rico Pre-Dental Association
  - Purpose: To assist students interested in the area of dentistry by showing them methods and requirements for admission to a graduate school of Dental Medicine. To provide experiences that allow the student to reaffirm their vocation.
  - E-Mail: prpda.cayey@upr.edu
- QUIROS
  - Purpose: He wants to bring the message of chiropractic to the university community and grow as a student organization.
  - E-Mail: quiros.cayey@upr.edu
- SACNAS UPR-Cayey Chapter
  - Purpose: SACNAS, UPR-Cayey Chapter aims to provide the opportunity for our members to create these leadership spaces and learn about different opportunities in areas such as research, so that they can develop in their professional field.
  - E-Mail: sacnas.cayey@upr.edu

#### • Sigma Tau Delta

- The Society strives to: Confer distinction for high achievement in English language and literature in undergraduate, graduate, and professional studies; provide, through its local chapters, cultural stimulation on college campuses and promote interest in literature and the English language in surrounding communities; foster all aspects of the discipline of English, including literature, language, and writing; promote exemplary character and good fellowship among its members; exhibit high standards of academic excellence; and serve society by fostering literacy.
- E-Mail: sigmataudelta.cayey@upr.edu

# FACULTY

- 1. Acevedo Loubriel, Suzette. Professor. B.A., M.A., and Ph.D. University of Wisconsin- Madison.
- 2. Alom Alemán, Antoinette. Assistant Professor. Bachelor's degree from the University of Havana and Ph.D. from the UPR Río Piedras.
- 3. Alonso Costa, José L. Professor. B.S. UPR Río Piedras, M.S. y Ph.D. University of Massachussets.
- 4. Arana Cacho, Rebecca. Associate Professor. B.A. UPR Río Piedras, M.A. Universidad Sagrado Corazón, and Ph.D. UPR Río Piedras.
- 5. Bansal, Vibha. Professor. B.A., M.A. Padjap University, Chandigarh y Ph.D. Indian Institute of Technology.
- 6. Barrionuevo Diestra, Danilo G. Assistant Professor. B.S. National University of Trujillo, M.S. UPR Mayagüez, and Ph.D. UPR Río Piedras.
- 7. Bauzá Vargas, Yadmilla. Professor. B.A. University of the Sacred Heart. M.A., and Ph.D. State University of New York at Buffalo.
- 8. Becerra Pulido, Janette. Professor. B.A., M.A., and Ph.D. UPR Río Piedras.
- 9. Borrás Osorio, Lesbia. Associate Professor. B.Ed. UPR Río Piedras, M.Ed. Teachers College, Columbia University, and Ph.D. Penn State University.
- 10. Bruckman San Miguel, Walter H. Associate Professor. B.A. UPR Río Piedras, and M.A. UPR Río Piedras.
- 11. Cabrera Pérez, José A. Researcher. M.A. University of Havana.
- 12. Caraballo Bonilla, Awilda M. Associate Professor. B.A. UPR Bayamón and M.A. Universidad Interamericana.
- 13. Caraballo Resto, Juan F. Assistant Professor, B.A. UPR in Río Piedras, M.A., and Ph.D. University of Aberdeen.
- 14. Carpio Rovira, Alejandro I. Assistant Professor. B.A. and Ph.D. UPR Río Piedras
- 15. Casanova Izaguirre, Carlos. Associate Professor. B.A. and M.A. UPR Río Piedras, and Ph.D. Autonomous University of Barcelona.
- 16. Castro Santiago, Raúl J. Professor. B.S. and Ph.D. UPR Río Piedras.
- 17. Chiesa Chiesa, Ricardo. Professor. B.S., M.S., and Ph.D. UPR Río Piedras.
- 18. Collazo Núñez, Evelyn. Associate Professor. B.A. University of Puerto Rico at Cayey and M.A. Penn State University.
- 19. Colón Rivera, Efraín. Assistant Professor. B.A. University of Puerto Rico at Cayey and M.A. Interamerican University.

- 20. Cruz Aponte, Mayteé. Professor B.S. UPR Humacao, M.S. University of Iowa, Iowa City, and Ph.D. Arizona State University.
- 21. Dávila Cosme, Sonia de la Cruz. Librarian III. B.A. and M.L.S. UPR Río Piedras.
- 22. De Jesús Burgos, María I. Associate Professor. B.A. UPR in Bayamón and Ph.D. UPR Medical Sciences.
- 23. Delgado Imbert, María del Pilar. Professor. B.A. UPR Río Piedras, M.A. University of Bridgeport, and Ph.D. University of Valladolid.
- 24. Delgado Olortegui, Moisés R. Associate Professor. B.S. Universidad Nacional Trujillo, M.S. UPR Mayagüez and Ph.D. UPR Río Piedras.
- 25. Delgado Sally, J. Associate Professor. B.A. Liverpool University, M.A., and Ph.D. UPR Río Piedras.
- 26. Díaz Meléndez, Segundo. Professor. B.S. University of Puerto Rico at Cayey and M.S. UPR Río Piedras.
- 27. Figueroa Sifre, Samuel. Associate Professor. B.A. and M.A. UPR Río Piedras.
- 28. Flores Torres, Edwin. Associate Professor. B.A. University of Puerto Rico at Cayey, M.A, and Ph.D. Interamerican University.
- 29. Fornerín Cedeño, Miguel A. Professor. B.A. Dominican World University, M.A., and Ph.D. Center for Advanced Studies of Puerto Rico and the Caribbean.
- 30. Galanes Valldejulli, Luis R. Professor. B.B.A. Interamerican University., M.A., Louisiana State University, M.A. University of Navarra and Ph.D. Union Institute University.
- 31. Godreau Santiago, Isar. Researcher. B.A. UPR Río Piedras and Ph.D. University of California.
- 32. Grafals Soto, Rosana. Associate Professor. B.A. UPR in Río Piedras, M.S., and Ph.D. Rutgers University, New Jersey.
- 33. Hernández Pereira, Lino. Clinical Psychologist III. B.A. University of Puerto Rico at Cayey, M.A., and Psy.D. Carlos Albizu University.
- 34. Hernández Tirado, Harry A. Associate Professor. B.A. UPR Río Piedras and M.A. Autonomous University of México.
- 35. León Nogueras, Aixa. Librarian IV. B.A. University of Puerto Rico at Cayey and M.L.S. UPR Río Piedras.
- 36. Lizardi Sierra, David. Associate Professor. B.A. UPR-Cayey, M.A., and Ph.D. UPR Río Piedras.
- 37. López de Victoria, Patria C. Associate Professor. B.A. UPR Río Piedras and Ph.D. Pennsylvania State University.
- 38. López Encarnación, Juan M. Associate Professor. B.A. UPR Río Piedras and Bachelor's Degree from the Autonomous University of Santo Domingo.

- 39. López Rivera, Stacey. Associate Professor. B.A. UPR Río Piedras, M.S. Hunter College and Ed.D. Inter American University of Puerto Rico.
- 40. Lozada Troche, Chad. Associate Professor. B.A., M.A., and Ph.D UPR Mayagüez.
- 41. Luciano Núñez, David H. Assistant Professor. B.A. Inter American University, M.A. Catholic Pontiífica University and Ph.D. UPR Río Piedras.
- 42. Lugo Amador, Luis A. Assistant Professor. B.A. UPR Mayagüez, M.A. UPR in Río Piedras, and Ph.D. Complutense University of Madrid.
- 43. Malavé Lebrón, Sarah M. Professor. B.A., M.A. Interamerican University, Ph.D. Caribbean Center for Postgraduate Studies.
- 44. Malavé Núñez, Humberto. Professor. B.B.A. University of Puerto Rico at Cayey and M.B.A. UPR Río Piedras.
- 45. Maldonado Ríos, Gertrudis. Psychologist II. B.A., M.A., and Ph.D. UPR Río Piedras.
- 46. Marrero Rodríguez, Carlos A. Associate Professor. B.B.A. and M.B.A. UPR Río Piedras, and Ph.D. Inter-American University.
- 47. Martínez Vivas, Rochellie. Associate Professor. B.Ed. UPR Río Piedras, M.Ed. New York University, and Ph.D. UPR Río Piedras.
- 48. Medina Cabán, Mario. Professor. B.A. and M.A. UPR Río Piedras and Ph.D. Indiana University of Pennsylvania.
- 49. Méndez Hernández, Dalvin D. Assistant Professor. B.S. Metropolitan University, Ph.D. Arizona State University and Post-Doctorate at Yale University.
- 50. Mercado Cruz, Ruth N. Counselor III. B.A., M.A. UPR in Río Piedras, and Ph.D. University of Iowa.
- 51. Mestey Villamil, Vivian. Professor. B.S. and M.S. UPR Río Piedras, and Ph.D. Michigan State University, East Lansing, Michigan.
- 52. Molina Cotto, José A. Professor. B.S. University of Puerto Rico at Cayey, and Ph.D. Wayne State University.
- 53. Montes Pizarro, Errol L. Professor. B.A. UPR Río Piedras, M.S., and Ph.D. Cornell University.
- 54. Morera González, Edwin. Professor B.S. University of Puerto Rico in Cayey, M.S. and Ed.D. UPR Río Piedras.
- 55. Mucher Serra, Walter. Associate Professor. B.A. UPR Río Piedras and Ph.D. State University of New York at Stony Brook.
- 56. Negrón Rios, Luis M. Assistant Professor. B.S. and Ph.D. UPR Río Piedras.
- 57. Noboa Ortega, Patricia L. Professor. B.A. University of Puerto Rico in Cayey, M.A, and Ph.D. UPR Río Piedras.

- 58. Ortiz García, Ángel. Auxiliary Professor. B.B.A. UPR Río Piedras, M.B.A. Metropolitan University, and D.B.A. Walden University.
- 59. Pagán Ortíz, Mayra. Professor. B.S. University of Puerto Rico at Cayey and Ph.D. UPR Río Piedras.
- 60. Pantojas Rodríguez, Víctor. Professor. B.A. UPR Río Piedras. M.S., and Ph. D Rensselaer Polytechnic Institute.
- 61. Pérez Caraballo, Carilú. Professional Counselor II. B.A. UPR Mayagüez, M.A. Universidad Interamericana, and Ph.D. Carlos Albizu.
- 62. Pérez Pelay, José A. Assistant Professor. B.A., M.A., and Ph.D. UPR Río Piedras.
- 63. Pérez Sandoz, Raúl. Professor. B.S., M.S., and Ph.D. UPR Río Piedras.
- 64. Pietri Meléndez, Ruth. Assistant Professor. B.S., M.A., and Ph.D. UPR Mayagüez.
- 65. Quiroga Rodríguez, Carmen Lucila. Professor. B.A. UPR Río Piedras, M.A. Columbia University, New York, and Ph.D. New York University.
- 66. Ramos García, Gladys. Assistant Researcher. B.A. University of Puerto Rico at Cayey and M.A. UPR Río Piedras.
- 67. Resto Otero, Wilfredo. Professor. B.S. University of Puerto Rico at Cayey, M.S., and Ph.D. University of Florida at Gainsville.
- 68. Reyes Pérez, Elba. Professor. B.A., M.S., and Ph.D. UPR Río Piedras.
- 69. Ricart Morales, Carlos M. Professor, B.S. Pontifical Catholic University, M.S., and Ph.D. University of Colorado at Boulder.
- 70. Ríos Vázquez, William. Assistant Professor. B.A. UPR Río Piedras, M.Ed. UPR Río Piedras, and PhD. Center for Advanced Studies of Puerto Rico and the Caribbean.
- 71. Rivera Rivera, Edfel J. Associate Professor. B.B.A. University of Puerto Rico at Cayey, M.B.A. UPR Río Piedras.
- 72. Rivera Serrano, Vilma R. Associate Professor. B.A. Interamerican University, M.B.A. New York University, and Ph.D UPR Río Piedras.
- 73. Rodríguez Borrero, Enrique. Assistant Professor. B.S., M.S., and Ph.D. UPR Río Piedras.
- 74. Rodríguez Maldonado, Elisa E. Assistant Professor. B.A., M.A., and Ph.D UPR Río Piedras.
- 75. Rodríguez Rivera, Ángel. Assistant Professor. B.A., M.A. UPR Río Piedras, and Ph.D. Purdue University.

- 76. Román Avilés, Belinda. Professor. B.S., M.S. UPR Mayagüez, and Ph.D. Michigan State University.
- 77. Román Briganti, Gabriel J. Assistant Professor. B.A. University of Puerto Rico at Cayey, M.A. Iowa State University, and Ph.D. United Status Sports Academy.
- 78. Roque Peña, Joan. Assistant Professor. B.S. University of Puerto Rico at Cayey, M.Ed., Westminster College, and Ph.D. North Carolina State University.
- 79. Rosa Rodríguez, María del Mar. Associate Professor. B.A. UPR Río Piedras and Ph.D. Emory University.
- 80. Rosa Sanz, Adalberto. Assistant Professor. B.B.A. UPR Río Piedras and M.B.A. Inter American University, C.P.A.
- 81. Rosado Rodríguez, José A. Professor. B.A. UPR Río Piedras, M. A., and Ph.D. Brown University.
- 82. Rosario Pérez, Glorivee. Professor. B.A. University of Puerto Rico at Cayey and Ph.D. UPR Medical Sciences Campus.
- 83. Ross III Grant, Robert G. Professor. B.S. M.S. Memphis State University, and Ph.D. University of Oklahoma.
- 84. Rovira Millán, Lilliam M. Professor. B.A. UPR Río Piedras y M.S. Caribbean Center for Advanced Studies.
- 85. Salvarrey Iranzo, Gustavo. Librarian II. B.A. and M.L.S. UPR Río Piedras.
- 86. Santana Palacio, Juan A. Assistant Professor. B.S. Universidad Sagrado Corazón and Ph.D. UPR Río Piedras.
- 87. Santiago Rodríguez, Xiomara B. Assistant Professor. B.A. UPR Mayagüez, M.A., and D.B.A. Pontifical Catholic University.
- 88. Santiago Rosario, Margarita. Professor. B.S. and M.S. UPR Río Piedras.
- 89. Soto Malavé, Ana M. Assistant Professor. B.A. UPR Bayamón and M.B.A. Inter American University.
- 90. Steidel Rodríguez, Hernando. Associate Professor. B.A. University of Puerto Rico in Cayey, M.A., and Ed.D. UPR Río Piedras.
- 91. Torres Colón, Luz E. Professor. B.S. and Ph.D. UPR Río Piedras.
- 92. Torres Martínez, Lizandra. Professor. B.A. Universidad Interamericana, M.S., and Ph.D. Autonomous University of México.
- 93. Torres Vázquez, Waldo A. Professor. B.S. University of Puerto Rico at Cayey, M.S., M.A. Michigan State University, and Ed.D. UPR Río Piedras.
- 94. Vázquez Calle, Fernando. Assistant Researcher. B.A. UPR Río Piedras. M.B.A. Inter American University.
- 95. Vázquez De Jesús, Edwin. Professor. B.S. University of Puerto Rico at Cayey, M.S. Long Island University, and Ph.D. UPR Río Piedras.

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- 96. Vázquez Rivera, Nellie. Assistant Professor. B.A. University of Puerto Rico in Cayey, M.A., and Ph.D. UPR Río Piedras.
- 97. Vicente Rodríguez, Laura C. B.S. University of Puerto Rico at Cayey and UPR Medical Sciences Campus.
- 98. Vicente Santiago, Nidza. Associate Professor. B.S. University of Puerto Rico at Cayey and M.S. UPR Río Piedras.

# ADMISSIONS

Aware of the public interest in the admissions process to the University of Puerto Rico and in order to guarantee the greatest equity and objectivity to the applicant for admission to the University. available at the Admissions Office of the University of Puerto Rico at Cayey, located in the Dean's Office of Academic Affairs building. The current regulations are summarized here.

Application to the University of Puerto Rico at Cayey

## Procedures and requirements

- 1. High school students who aspire to begin studies at the University of Puerto Rico at Cayey must be guided by the following requirements and procedures:
- 2. Fill out the application for admission through the Internet (<u>www.admisiones.upr.edu</u> or <u>upr.edu/admisiones</u>) by clicking on the Apply *Today link*. Only one application can be filled. The late application is processed at the Admissions Office.
- 3. The \$30.00 application fee is charged if the student is able to enroll at the preferred campus.
- 4. Take the admission exam (PAA) offered by the *College Board* Office. The exam consists of the following parts:
- 5. Academic Aptitude Tests: Verbal and Mathematical Reasoning and English
- 6. It is also allowed to take the English version of the admission exam known as SAT I. Results must be submitted electronically by *the College Board* to the University of Puerto Rico Cayey. The PAA and SAT tests expire after five years.
- 7. Request the Office of the *College Board or Educational Testing Service*, as the case may be, to send the results of the exam to the Admissions Office of the University of Puerto Rico in Cayey. The results of public school students reach all the campuses of the UPR System. Private school students should request that the results be sent to the University of Puerto Rico Cayey.
- 8. Arrange for an official credit transcript from the high school where you studied no later than January 31. It must be sent to the Admissions Office of the University of Puerto Rico at Cayey with an official seal and authorized signature. The grades must appear in the alphabetical system: A, B, C, D, F and the High School Index (HEI) must be on a scale of 4.00. Some schools submit the transcript electronically through UPRPES.
- 9. Admitted applicants must submit to the Office of Admissions a Certificate of Graduation from the school with the official seal and authorized signature.
- 10. If you are coming from a university abroad from international countries, you must arrange for the following documents to be sent:
- 11. Official copy of the academic transcript (transcript of grades) in the vernacular language and another in Spanish or English, duly certified as an official copy by the institution of origin and by the American Embassy or by the Ministry of Education of the country of origin. Under no circumstances will the academic transcript be accepted from the applicant.
- 12. An official report describing the grading system used in the evaluation of academic achievement, the content and level of the subjects passed, and the number of hours of study per week in each subject.
- 13. Evidence of degrees or diplomas received.
- 14. Official certification indicating that the institution is duly recognized by the government of that country.
- 15. Evidence of achievement in Spanish and English.

16. Evidence of having the necessary economic resources to study in Puerto Rico. Any person applying must submit an affidavit to that effect.

## Selection of applicants for admission

For admission purposes to the University of Puerto Rico, a formula is used that gives a weight of 60% to the high school index and a weight of 40% to the verbal and mathematical reasoning tests of the admission exam. The results of the Spanish, English and mathematics subjects are required for the purpose of placing admitted applicants in the corresponding courses of those subjects.

All applications for admission are evaluated based on the Minimum Admission Index (IMI) established by the Academic Senate annually for each academic program. Admission will be based on the IMI and the quota established for each program.

Applicants will receive written notification of the decision made. Admitted applicants will be instructed to reserve their space electronically and process other documents on the dates indicated. Denied applicants with options will be informed of the procedure to follow for reconsideration.

#### **Pilot Plan Admissions Policy<sup>4</sup>**

#### Admission Requirements

**Traditional Student** - A student who applies under the Traditional Online Application and will be evaluated by the College Board's PAA or SAT test scores and high school GPA. The formula is 60% academic average and 40% entrance exam (20% verbal reasoning and 20% mathematical reasoning) which is equivalent to the minimum admission index (IMI).

**Non-Traditional Student** - student who applies under non-traditional in the electronic application and will be evaluated by a committee where they must provide the following: placement test, portfolio, essay, letters of recommendation and other criteria. The minimum average is 2.0 and the entrance exam will be optional (PAA and/or SAT). Each program will design particular admission criteria. Certification 25 (2003-2004) of the Board of Trustees remains on pause and the evaluation by the new Certification 33-(2022-2023) of the Board of Governors of the University of Puerto Rico is maintained.

#### Transfer

## Application for Admission to students from private institutions

Students who come from accredited private institutions may apply for transfer to the University of Puerto Rico at Cayey as long as they meet the following requirements:

- 1. have completed a minimum of 30 college credits with an overall GPA of 3.00 or higher.
- 2. comply with the specific requirements established by each academic department.
- 3. The applicant may not be under suspension and must be free of sanctions in the institution of origin.

Applicants with a baccalaureate degree are required to have a minimum GPA of 2.50.

<sup>4</sup> Pilot Plan Admissions Policy -Certification 33 of the Board of Governors of the University of Puerto Rico. (subject to change)

# Transfer procedure

Conduct an interview at the admissions office of the University of Puerto Rico at Cayey located in the Dean's Office of Academic Affairs building and if you meet the minimum requirements, you can file the transfer application. The deadlines for filing the transfer request are established in the academic calendar approved by the Board of Administrators (www.cayey.upr.edu). Applications to start studies in summer are not accepted. Each applicant must also submit the following documents:

- 1. an official copy of the academic record of each university institution where you are or have been studying (includes institutes). These files must be sent directly from the institution of origin to the University of Puerto Rico at Cayey.
- 2. a \$50.00 voucher (timely request) from the University of Puerto Rico at Cayey Collections Office. After the deadline the fee will be \$60.00.
- 3. a copy of the records of the courses approved in the institution or institutions where you are or where you have studied.

The institution will admit based on the requirements established in Certification 27 (2011-12) of the Academic Senate and the institutional quota and any other criteria established on the date of the application.

## Credit validation

The University of Puerto Rico at Cayey reserves the right to determine the number of courses to be validated. Only approved courses with a minimum grade of C and that are in tune with the requirements of the institution will be validated. The maximum number of credits to be validated may not exceed 30 percent of the credits of the program requested.

The validation process will be carried out in the academic departments and will culminate with the delivery of the final validation document at the Registry Office.

# **ENROLLMENT**

## **General Enrollment Rules**

The enrollment process begins with the academic counseling provided by the department in which the student is classified on the dates established by the academic calendar. Both required courses and electives must be chosen with the approval of the academic advisor and comply with the academic progress standards using all appropriate forms, which will be provided to you along with the instructions. New students will present their admission certificates.

Students must enroll on the days and times previously indicated by the University of Puerto Rico at Cayey and disclosed by the Registry. No student will be admitted to enroll after these dates. Changes in enrollment are not allowed after the date established for it in the academic calendar of the corresponding semester.

The student must enroll in the courses necessary to achieve academic progress toward the grade deposit in which he or she is classified.

The registration will be incomplete and will not have official value until the student pays all the fees and to the Campus collection officer and it is approved and registered by the Registrar.

Any course in which the student is enrolled will appear permanently in their academic record.

The Registrar is the custodian of the documentation relating to students and sets the enrolment procedure. No program of study has official validity without your approval.

## **Student categories**

Students at the University of Puerto Rico at Cayey are grouped into the following categories:

#### **Regular or full-program student**

You have met the entry requirements, are a candidate for a degree, diploma or certificate and follow a regular program with a minimum of 12 credits per semester or are enrolled in the teaching practice course (Certification 54, 2002-03, Academic Senate).

#### **Incomplete Program Student**

You have met the entry requirements, are a candidate for a degree, diploma, or certificate, and are pursuing a program of less than 12 credits per semester.

## Listening Student (Visitor)

You may attend classes, with permission from the department director and the Registrar, but you do not receive official qualifications or credit for work done in the courses. It must comply with the payment of the corresponding fees (Certification 70, 2004-05, Board of Trustees).

## **Special or Transitional Student**

You come from another accredited university institution and apply to take courses with the intention of transferring the credits to your home institution. Your admission will be determined by the space available in the courses requested.

#### **Career Enhancement Students**

They are those who follow a program of classes for their professional or academic improvement.

#### **University Staff**

The teaching and administrative staff of the University of Puerto Rico can enroll in the units of the System. Teaching staff can enroll for a maximum of six credit-hours per semester. Up to eight (8) credits may be authorized in cases where they take two subjects whose value exceeds the maximum of six (6) credits. Teaching staff and non-teaching exempt staff with a complete task may enroll in the subjects and credits that were authorized by their respective supervisors or directors. The time spent studying during regular working hours will be made up of vacation or accumulated overtime. Classified staff at the University of Puerto Rico at Cayey may enroll in a maximum of 12 credit hours per semester, three of which may be taken during business hours. They must request the prior authorization of the Chancellor and replace time charged to vacations or accumulated hours. You will be exempt from paying for the courses and will only pay the tuition fees.

# **Programs of Study**

#### Daytime or Regular Session

The daytime academic program usually consists of a group of subjects with a maximum value of 16 to 18 credits per semester, but it can be increased or decreased in particular cases, such as that of honors students, with the authorization of the director of the department and the Registrar, without in any case exceeding 21 credits per semester. Total credits per semester are determined by the student's average, as follows:

Less than 2.00	12 credits
from 2.00 to 2.49	16 credits
from 2.50 to 2.99	18 credits
from 3.00 and up	20 credits

Students with probationary enrollment may not take more than 12 credits per semester. They must comply with the probation conditions determined by the academic achievement committee.

#### Saturday Session

Students of the Saturday program are mostly teachers, employees of the University and other public or private companies who through this program can advance their studies.

#### Summer Session

A regular summer student is considered to be anyone enrolled in four (4) credits. The regular academic load during the summer will not exceed seven (7) credits. Students with honors and candidates for summer graduation will be able to take up to a maximum of 10 credits. The same rule governs students authorized to take summer courses at other universities and their programs must be approved by the Department Director, the Academic Dean, and the Registrar. Courses approved outside of the University of Puerto Rico with a grade of D are not accepted.

#### **Student Classification Code**

The student's ranking at the University of Puerto Rico at Cayey consists of the following: The ranking year is established according to the number of credits passed:

First year	1 to 23 credits passed	PRI
Second year	24 to 47 credits passed	SEC
Third year	48 to 72 credits passed	TER
Fourth year	73 on more	CUA
Graduate Students	Professional Enhancement	MEJ

# Codification of faculties, degrees and concentration<sup>5</sup>

The faculty and department are identified:

Faculty	Degree	Concentration	Program
CN	BCN	CN	Natural sciences
CN	BCN	BIOL	Biology
CN	BCN	MATE	Mathematics
CN	BCN	QUIM	Chemistry
HU	BA	ESHI	Hispanic Studies
HU	BA	INGL	English
CS	BA	CS	Social sciences
CS	BA	PSIC	Psychology
CS	BA	SOCI	Sociology
CS	BA	PSAL	Community Psychology and Mental Health
HU	BA	HU	Humanities
HU	BA	HIST	History*
PE	BEE	ECIE	Elementary Education Natural Sciences
PE	BEE	EESP	Elementary Spanish Education
PE	BEE	EING	Elementary Education English
PE	BEE	MAT	Elementary Education Mathematics
PE	BEE	EDES	Elementary Education Special Education
PE	BED	EESP	Secondary Education Spanish
PE	BED	EHIS	Secondary Education History *
PE	BED	EMAT	Secondary Education Mathematics*
PE	BED	EDFI	Secondary Education Physical Education
PE	BED	ECIE	Secondary Education Natural Sciences
PE	BED	EING	Secondary Education English
AE	BAE	GERE	Management
AE	BAE	CONT	Accounting
	BTD	AOFI	Office Administration

\*Programs in moratorium

<sup>5</sup> Certification 10, 1999-2000, Board of Trustees. (Certifications of the Council of Higher Education of Puerto Rico 2000-205; *Baccalaureate Colleges: Arts & Sciences Focus* 2015 Ranking

The following coding is used for authorizations:

PM	PRMPERM	NIN	Special Permits
PM	MEJPROF	NIN	Professional Improvement

#### **Student ID number**

Each student is assigned an identification number upon entering the University of Puerto Rico. It consists of nine digits: a three-digit prefix indicating the institutional unit where they began their studies, followed by two digits indicative of the year of admission and four randomly assigned digits.

## **Tuition Costs**

The cost of the undergraduate credit at the University of Puerto Rico at Cayey for the 2022-2023 Academic Year is \$157.00. (Certification 163 2021-2022 JG). There are a number of tuition increases contemplated in the University of Puerto Rico's Proposed Fiscal Plan 2023-2027.

Fiscal year	Cost Per Credit
FY'24	\$162
FY'25	\$167
FY'26	\$172
FY'27	\$177

Beginning in the 2020-2021 academic year, the cost of tuition for Non-Resident Students and International Students of the University of Puerto Rico will be equal to the cost of tuition for Local Students or Residents, with the exception of the cost of credit for non-resident students of the School of Medicine, Dental Medicine, and School of Pharmacy. This provision applies to undergraduate programs and graduate programs. The Office of the President, after evaluating the results for a period of two years, shall submit a review of this Policy. (Certification 77 2019-2020 JG)

Costs by Related Concepts (Certification 163 2021-2022, JG)

Concept	FY'22	FY'23
Maintenance Fee	100.00	100.00
Technology Fee	50.00	50.00
Lab Fee	100.00	100.00
Graduation Application	80.00	80.00
Other Maintenance Costs	67.00	67.00
Application for Admission	30.00	30.00
Application for Readmission	35.00	35.00
Transfer Request	50.00	50.00
Relocate Request	25.00	25.00
Transcripts and Certifications	5.00	5.00
Duplicate Documents	5.00	5.00
Change of Faculty	20.00	20.00
ID Card	10.00	10.00

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Late Tuition Fee	20.00	20.00
Maintenance Fee (summer)	50.00	50.00
Partial Leave Fee	10.00	10.00
Total Termination Fee	15.00	15.00
Course Repetition Fee	20.00	20.00

Costs by Related Concepts (Certification 163 2021-2022, JG)

Charges may vary depending on the payment dates established in the Academic Calendar or when approving changes to the University of Puerto Rico Fiscal Plan.

## **Student Medical Plan**

"No student will be able to complete their enrollment process if they are not covered by a medical plan, whether private or government. You must submit evidence before processing evidence before completing the enrollment process by means of a certification provided by the insurer indicating that you are a participant and it is current. If you do not validate the information before completing the process, you are automatically covered by the basic coverage of the medical plan provided by the University to eligible students. Any day or night student who has paid tuition at the University of Puerto Rico for no less than three (3) college credits in undergraduate programs or no less than three (3) credits in undergraduate programs during summer sessions will be eligible for health insurance. In addition, those undergraduate students who are doing their academic internship or who are candidates for graduation are eligible. Students classified under Professional Enhancement are not eligible." (Protocol for the enrollment of students under the medical plan)

The conditions and cost of the premium vary according to the contract that the University enters into with the insurance company for the provision of medical services to students of the university system.

## **Payment Rules**

All fees, regular and special charges are payable upon confirmation of enrollment. Payments are made by current currency of the United States of America, certified checks, money orders or bank orders (for the exact amount of the tuition fee and in favor of the University of Puerto Rico), credit cards (VISA or *Master Card*) and debit cards (ATH). Personal checks are not accepted unless certified by the bank.

#### Extensions

In justified situations, extensions may be processed, evaluated, and approved by the Dean of Students or his/her authorized representative. The extension constitutes a payment plan, so no other payment plans will be authorized. The president of the University will establish the terms and conditions of the payments of the extensions, as well as the costs for the service of granting the same, the interest and the applicable surcharges. The student will pay no less than twenty percent (20%) of the total credits plus the total cost of the applicable fees, since the fees are not subject to extension. The amount owed for credits, after the first payment, may be paid in up to four additional installments, on the dates established in the extension form.

#### Refunds

Students who withdraw within a period of one week after classes have started may claim a refund of 100% of the basic tuition fee, excluding regular and special fees. To claim the 50% refund, the student will have two weeks after the start of classes, excluding regular and special fees. The Change of Enrollment Form (registration and deregistration slip) must

be submitted to the Registration Office and the Collection Office on or before the last day of the deadline for cancellation with 50% entitlement. Failure to comply with this procedure cancels the right to a refund. Refunds of fees paid for: hearing students, students withdrawn for disciplinary reasons, and by students who owe a debt are not authorized.

Before leaving the Campus at the end of an academic session or withdrawing from courses, the student is obliged to return in good condition the property that has been borrowed in any of the departments and the books and materials that may have been borrowed from the Library. The value of the damaged or lost property must be paid in full at the maturity of the loan.

Students who owe arrears to the University, whether for property or money, will not be issued any official documents related to their academic work, nor will they be granted an extension of tuition or will not be eligible to enjoy other university benefits with or without payment until they have satisfied the debt (Certification 101 2000-2001/Certification 51 2015-2016).

# Distinction<sup>6</sup>

It is the exemption from the payment of academic credits to students who qualify according to the specific criteria established. At the end of each semester, the cumulative academic index of each student is computed. Then, the top 4% of their cohort is evaluated. To be eligible, they must be full-time students from sophomore year onwards and have passed no less than twelve (12) credits during the previous session. Those who qualify for this privilege must complete the FAFSA. The student must enroll and pass a minimum of 12 credits per semester.

<sup>&</sup>lt;sup>6</sup> Certification 4 (2019-2020), Governing Board, University of Puerto Rico.

# **GENERAL ACADEMIC REGULATIONS**

# **Class attendance**

Attendance at classes is mandatory. Teachers have the duty to notify the absences of their students and inform the Registrar through the attendance census. You will notify the Registrar of students who have never attended or stopped attending the class. Frequent no-shows affect the final grade and may result in the total loss of credits. The U.S. Department of Education, in accordance with the Financial Aid regulations (Title IV, 34 CFR 668.22 and 682.605) requires more accurate records of informal withdrawals and class attendance for the effective administration of *Pell* grants, SEOG, Work-Study and student loans, since failing to attend enrolled courses disqualifies the student from receiving federal grant payments.

In case the teacher does not notify that he will be late, the student may leave after waiting 15 minutes from the time the class starts, regardless of the duration of the class.

Arrangements to make up work due to legitimate absences are the sole responsibility of the students.

# **Course Outline or Syllabus**

Each teacher will give students an outline of the course in the first week of classes. It must include the name of the professor, title of the course, office, office hours, a brief description of the course and its objectives, the requirements, a chronological thematic outline, technological methods to be used and the system of evaluation of the achievement, the minimum bibliography and required readings if applicable. (Certification 56, 1983-84, Academic Board)

The courses are described later in the catalog. The coding, title, number of credits, requirements, and number of hours the class meets per week are indicated. It also involves hours of independent study.

## Tests

At least two exams on the subject studied are offered every semester, one of these before the deadline for partial withdrawals. Their grades will be reflected, along with other criteria established by the professor, in the student's final grade.

Final exams in all courses will be written, unless the nature of the subject prevents it or the dean authorizes another type of exam. The teacher will evaluate the work done by the student using the method he or she considers most appropriate, as long as he or she presents evidence indicating his or her objectivity in determining the grade. The date set for a final exam cannot be changed unless authorized by the Registrar and the Academic Dean. Student attendance is required to all exams at the time designated and published by Registry. A student who is absent from a duly announced final exam will receive a grade of 0 or F on that exam.

# Proctoring systems<sup>7</sup>

The monitoring or *proctoring* of the activities that entail qualification will only be carried out through specialized services in the technical, legal and ethical use of the monitoring systems previously approved by the institution and that comply with state and federal laws, as well as with institutional policies, related to student privacy. The University of California's Standards for the Acceptable Use of Information Technology Resources

<sup>&</sup>lt;sup>7</sup> Certification 11 (2020-21) Academic Senate

Puerto Rico is in harmony with applicable federal and state laws governing privacy and confidentiality of information, including the Electronic *Communications Privacy Act* of 1986, FERPA Act of 1974 (as amended), 20 U.S.C. 1232g, regulations set forth under 34 C.F.R. Part 99, *Portability and Accountability Act* (HIPAA), and Federal *Communication Commission* regulations" (Institutional Policy on the Acceptable Use of Information Technology Resources at the University of Puerto Rico, Certification 35, 2007-2008, JS). C. The institution will guide students on the minimum technologies required to take evaluations subject to monitoring or *proctoring* in the different distance education courses that are placed in the academic offer, such as computers, tablets, smartphones, cameras, programmed and internet connection.

## Credits and unit of instruction

At the University of Puerto Rico at Cayey, one credit is equivalent to one hour of lecture-discussion or two or more hours of lab per week per semester.

Each semester comprises fifteen weeks of instruction, not including final exams. The academic year is divided into the First Semester (from August to December) and the Second Semester (from January to May). A Summer Session is also offered.

Classes are offered Monday through Friday. Each class meets at least once Monday through Friday at scheduled times and days.

## Ratings

The grading system of the University of Puerto Rico at Cayey is as follows:

A-Outstanding B-Good C-Satisfactory D-Pass but Fail F-Failed or Failed P-Passed (Not included in the academic index) NP-Not Passed I – Incomplete W- Authorized Cancellation

## Provisional grade (Incomplete)

The student may receive Incompletes with provisional grade when the professor determines that for justified reasons the student has not been able to meet all the requirements of the course. The student will receive the grade of (0) zero or F in the portion of the work you have completed when calculating the provisional grade. In the event that the teacher reports only (I), the provisional grade will be IF. The student must request a space with the professor to discuss the determination of the final grade of a course taken the previous semester and initiate the Grade Claim process as established by Certification 23, 2018-2019 SA. Before the end of the next semester, the teacher may change the provisional grade to the final one. The final grade may not be less than the provisional grade. If the professor does not report any change during this period, the grade will become permanent in the academic record.

## Rating error

Any professor who makes a mistake in awarding a student's grade must submit to the Office of the Registrar, with the approval of the director of his department and through the Academic Dean: the completed grade change form, a copy of the student's exams and the record of grades. The student will have to

Make the complaint to the teacher immediately. After one semester has elapsed since the grade was awarded (the last day to submit grades in May, December or summer) the student will not be able to make any claim about errors in the assignment of a grade.

## Notification of grades

At the end of each semester, students will be able to check their final grades through the portal.upr.edu through "Grades". Any student who believes that an error has been made in this report should consult with the course teacher and notify the registrar.

The Registrar is responsible for enrollment, student transcripts, and the issuance of credit transcripts, and certifications of study and graduation. A student who desires information regarding his or her transcript or the submission of a credit transcript must request it from the Registrar's Office in accordance with established procedures and policy - *The Family Educational Rights & Privacy Act (Buckley Amendment*).

# Academic Index

The academic index is the measure of the student's achievement. It is calculated by dividing the total number of honor points by the total number of credits accumulated in the subjects in which the student has received a final grade, including F.

The point value of each rating is as follows:

	A=4	B=3	C=2	D=1	F=0
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The calculation is made according to this example:

Courses	Credits	Qualification	Honor Points
English	3	C (2)	6
ESPA	3	B (3)	9
MATE	3	C (2)	6
CISO	3	A (4)	12
	12 credits		33 points

Provisional grades count toward the academic index calculations for all purposes except graduation. Only required and elective courses in the student's program of study are considered when calculating the graduation rate. Subjects marked with a "W" do not count in the academic index. The grades obtained in the summer session are counted in the academic index of the following year. If a student repeats a course in which he or she would have obtained F, the lowest grade will not be counted in his or her index, but must appear in his or her academic record (Certification 87, 1976-77, CES).

Courses with a grade of D, F or Not passed may be repeated without restriction. Courses with a grade of C may be repeated with the authorization of the Dean of Academic Affairs (Certification 17, 1998-99, JS) If a student repeats a course, the highest grade will be counted towards his or her academic index

Academic Eligibility Standards for Participation in the University of Puerto Rico Financial Aid Programs As established in Certification 55, 2016-2017 of the Board of Governors of the University of Puerto Rico. At the conclusion of the second semester of each academic year, the Registrar's Office conducts an evaluation to determine the academic eligibility of all active students on campus for participation in financial aid programs. The results of this evaluation may be available from the last week of June or The main academic eligibility standards that the student must meet are the following:

Undergraduate Students

- o To participate in financial aid programs, the student must be officially classified in a degree program.
- $\circ$   $\;$  Academic Index and Progress towards the achievement of the degree.

Satisfactory academic progress will be governed by the following progression of cumulative GPAs and hundreds of credit passes

Year of Study	Minimum Average	Minimum percentage of credits attempted and approved in the year
Fourth year or more	2.00	67%
Third year	2.00	67%
Second year	2.00	67%
First year	2.00	57%

- o Maximum number of credits that can be attempted with financial aid eligibility
  - The undergraduate student may attempt up to 150 percent (150%) of the credits required by their academic program
- Transfer Students (Private Institutions), External Transfers (between UPR units) and Internal Transfers (internal reclassifications)
  - These students are admitted with Academic Progress if they have not earned a Baccalaureate degree. (\*)
  - When the next evaluation arises, in addition to those enrolled at the University of Puerto Rico at Cayey for the purpose of determining 150%, the courses accepted in equivalencies will be taken into consideration and these will be subtracted from the maximum to be attempted from 150% of their program.
- o Students on Special Permits
  - The academic progress of these students is assessed by their unit of origin. (\*)
  - Students from UPR units must process a certificate of academic progress at the Registration Offices of their units. If they come from Private Institutions, they must submit the required documentation to the Economic Assistance Office.
- Credits in the summer session
  - Courses taken in the summer are not considered as part of the academic year subject to evaluation. However, if a student does not meet the required credit percentage or index and takes the following summer, the approved credits will be used to fill the gap(s) in both credits and the Academic Index.
  - With these courses, the student can regain Financial Aid eligibility.
- Failure to comply with the Financial Aid Eligibility Rules.
  - A student who has lost eligibility for financial aid under these rules may submit a review to the Dean of Students, who will refer such request to the Review Committee.
  - If the undergraduate student has already used 150% of the credits, he or she will not be eligible to participate in the financial aid program under any circumstances, including through the review process.
  - If the Review Committee determines that the student can make satisfactory academic progress at the end of the academic session, it will recommend to the Dean of Students that he or she authorize probation for Financial Aid purposes.
  - If the Review Committee determines that it will take more than one session for the student to make academic progress, the probationary recommendation must be accompanied by a curriculum designed in communication

with the student and with his or her signature, so that he or she can make progress in the period established through the committee's analysis.

These standards do not replace any other institutional rules or policies related to students' academic achievement or the maximum time to complete their degree.

For more information on other requirements, please refer to Certification 55, 2016-2017 of the Governing Board of the University of Puerto Rico.

#### Eligibility Time

A student classified in a baccalaureate program must complete his or her studies in a maximum of six years as long as he or she has been enrolled full-time at the institution.

The student will be inactivated upon completion of the requirements of their program of study, consistent with Board of Trustees Certification 85, 2005-06.

#### **Retention rate**

Incomplete courses with a provisional grade of D (ID) or higher are considered passed.

Incomplete courses with a provisional grade of F (IF) are not counted towards the total number of credits passed.

The student must remove the incomplete before the end of the next academic semester. After removal, the scholarship student must bring a certification from the Registrar to the Financial Aid Office indicating the total number of credits passed in the previous semester.

#### Reimbursement

50% of the tuition fee is refunded if a student withdraws in full within the first ten (10) days of the academic semester.

A total withdrawal with or without the right to reimbursement may disqualify the student from receiving financial aid the following semester, if he or she does not pass the minimum proportion of credits enrolled in the degree.

## **Repeating Courses**

Courses with grades of "D", "F" or "Not Passed" may be repeated without restriction. If a student repeats a course, only the highest grade will be counted toward their academic index, but the lowest grades must appear on their transcript. Repetition of courses approved with C (Certification 17, 1998-99, Board of Trustees) is authorized with the approval of the Dean of Academic Affairs. The University of Puerto Rico at Cayey adheres to the Policy for the Inclusion of Repeated Courses in the Cost of Study of the University of Puerto Rico Central Administration Pell Grant.

#### **Pre-university courses**

Pre-college courses do not carry academic credit and are not funded by federal financial aid.

## **Advanced Level Exams**

Accreditation of the Advanced Level Exams in the subjects of Spanish, English and mathematics (4 or more), offered by the *College Entrance Examination Board* on a scale of five (5) points. Only tests offered by this Agency to high school students prior to their admission to the Unit will be accredited.

#### **Summer Courses**

Summer courses are counted together with those of the following academic year.

#### **Relocation students**

This is when the student is interested in moving permanently to another unit within the UPR System to complete their Baccalaureate either in the same program they were in or in a different one. The transfer student will be considered a new student at the time of admission to the institution and will be classified according to the approved credits.

#### **Transfer Student**

The student has started his university studies in a private institution and transfers to the public university system.

#### Readmission

The student requests to rejoin the Campus after an inactive period or to complete another grade. As established by Certification 36 (2019-2020) SA, students will be readmitted to the program in which they were originally enrolled and the curriculum in force at the time of their readmission will be applied. If another program is of interest, they must meet the minimum requirements for reclassification. On the other hand, those students who require 5% or less of the courses to complete their degree when applying for readmission may be evaluated with the curriculum in force at the time of their last active semester.

#### **Course Expiration**

Certification 36, 2019-20, Academic Senate states that each readmitted case will be independently evaluated by departments to determine the expiration of courses taken up to the time of their last active semester.

#### Reclassification

This is when the student is interested in changing the study program within the same campus. Student must meet the requirements established in certification 77, 2020-2021, Academic Senate.

#### **Honor Roll**

Students who have obtained an academic index of at least 3.50 and who complete at least (12) credits per semester are part of the Honor Roll. The recognition ceremony is held in May of each academic year. These students can aspire to be part of the Honors Study Program.

#### Distinction

Exemption from the payment of academic credits to regular students residing in Puerto Rico who maintain an overall academic index of 3.50 or higher at the end of each academic semester and belong to the **top 4%** of their admission class (Cohort). They must have passed twelve (12) credits or more per semester.

# Suspension for academic deficiency

A student who at the end of the academic year obtains an average below the minimum academic index required of 2.00 may be suspended for academic deficiency (Certification 90, 1997-98, Academic Senate). Any student who obtains an overall average below 2.00 during the first year of study will be placed on probation for the second year. At the end of the second year, if your GPA is less than 2.00, you will be suspended for academic deficiency. These students are not authorized to enroll in the summer session. Registration will send a letter of suspension to students who do not meet the minimum academic index requirement to continue studies. A student who is suspended for the first time may apply for readmission for the academic year following the year of suspension. If readmitted, it will be on probation with a maximum program of twelve (12) credits per semester that must be passed with the average that is established. A second suspension imposes a separation of the University of Puerto Rico and its campuses for five years.

#### **Administrative Registrations or Cancellations**

It is processed by means of an official letter from the Department or Academic Dean addressed to the Registrar, when a course is enrolled or withdrawn outside the enrollment period. The reasons may vary, but they must be duly justified. Similarly, section or course changes or credit modifications are made.

#### Partial withdrawal

Students may withdraw from one or more subjects within the period established for this purpose in the academic calendar. The withdrawal is partial when the student continues to take the other courses enrolled. You will not receive a grade for the work done in the subject from which you have withdrawn. The student can process the partial withdrawal through the <u>portal.upr.edu</u>

Procedure for filing partial withdrawal:

- 1. Visita portal.upr.edu
- 2. Select UPR-Cayey
- 3. Enter your institutional email and password.
- 4. Oprima en el link de Course Drop.
- 5. Select the course(s) to be partially withdrawn and then select Continue.
- 6. Then if you are interested in partially unsubscribing, press *Process* and if not, press Cancel.
- 7. f. Once you click *on Process*, you have completed the Partial Withdrawal process and you will receive a confirmation email to your UPR account.

The deadline to file partial withdrawals is the last day of classes of the semester.

## **Total Withdrawal**

A student who fails to take all the enrolled subjects is completely withdrawn. If the withdrawal has been duly authorized, you will not receive a grade for the work done and you will be noted —W in all the subjects in which you enrolled that semester. When the withdrawal is filed, the student is inactive for the following semester (Certficación 62, 1978-79, Junta Colegial).

Procedure for filing total cancellation

- 1. Look for the Total Cancellation form at the Registrar's Office.
- 2. Fill it out in all its parts, sign it and look for the corresponding signatures.
- 3. Deliver the signed document to the Registrar's Office, where you will be given a copy of the form as evidence of its filing.

4. The student will retain and submit this evidence in cases of claims related to semester grades. The deadline to file total withdrawals is the last day of classes of the semester.

#### **Probationary registration**

See Academic Senate Certification 90, 1997-98. (Registrar's Office)

#### **Courses at other institutions**

Those students who are interested in taking courses at other institutions will fill out the corresponding form which, after being approved by the department director, the academic dean and the registrar, will be sent with a copy of their academic transcript to the institution where they are interested in taking the courses. They may be authorized a full program during the semester and six (6) credits during the summer session, up to a maximum of ten (10) if they have a 3.50 GPA or higher, or are a candidate for graduation in that summer. It will be the student's responsibility to request that institution send a copy of the academic transcript with the grades obtained.

Students who voluntarily suspend their studies and study at a public or private institution outside the University of Puerto Rico system; In case of requesting re-admission, they will submit an official copy of the file of the other institution. The director of the department that readmits you will evaluate the department and determine which courses validate you. You will not be able to validate any course in the following cases:

- a. if the student had an overall GPA of less than 2.00 at the time of voluntarily dropping out of school.
- b. if the student was suspended for academic, disciplinary, or administrative reasons.
- c. if the student obtains an overall average of less than 2.00 at the other institution.

## Transcripts

The academic transcript is a confidential document of which a copy is sent only at the request of the student himself. Official copies are sent directly by the University to the applicant's designated agency or institution. Those that are given to the student are for their personal use and this is recorded. To deliver to other people, the written authorization will be required to be duly signed by the student. The payment of the fee established for the processing of this document will be made by postal order or certified check in favor of the University of Puerto Rico. You can also do it in cash, with an official receipt from the Collector, if the payment is made personally. Likewise, the procedure can be carried out online, through the https://services.portal.upr.edu page \_and continue with the steps. Any cheque that is not certified will be returned to the applicant. Credit transcripts are issued free of payment of fees to any veteran, widow of a veteran, spouse of the veteran and their minor children, as provided by Law 203 of 2007. Requests must be filed with the Registrar's Office at least two (2) weeks prior to the date the transcript is needed.

## Transcript Privacy (Buckley Amendment) "FERPA"

The University of Puerto Rico intends to comply with the provisions of the *Buckley Amendment* (*Family Educational Rights and Privacy Act of* 1974, *as amended*). The Registrar's Office is responsible for safeguarding and maintaining the academic records of active and inactive graduate and undergraduate students, while monitoring the privacy and security of the records as required by the Registrar's Office. This law, also known as the Buckley Amendment, protects the privacy of students' education records and transfers rights to students once they:

- They are 18 years old.
- Attend any post-secondary institution or college
   In order to release information from students' education records, written authorization must be obtained from
   the students. Disclosure of information to parents is allowed if they claim it on the Income Tax Return.
- Evidence must be submitted to the director of the Registrar's Office; at the discretion of the institution.

• Otherwise, the only way to disclose the information is with the student's written consent. The authorization must specify that it authorizes the disclosure of information contained in the academic record; This includes the educational record.

## Directory Information

The University of Puerto Rico offers the student the opportunity to choose from the following categories:

#### Category I

Name, address, telephone number, dates of attendance, courses enrolled

#### Category II

Transfers from other institutions (name of institutions attended); concentration or program of study; awards and honors (including Dean's List); degree(s), including dates

## Category III

Participation, past and present, in official or other sporting activities; physical description (height, weight); date and place of birth.

However, under the provisions of FERPA, as amended, the student has the right to prevent disclosure of information contained in any of the directory categories.

By opting for **Category I**, the student authorizes the University of Puerto Rico to disclose the information included in the selected category for those purposes that the Institution determines appropriate, in addition to those provided by law. Students have the right to file complaints, if they choose, with — *The Family Educational Rights and Privacy Act Office, Department of Health, Education and Welfare, 330 Independence Ave., S.W. Washington,* D.C. 2020, regarding alleged violations of the Law by the University. For more information on this law, you can visit the Family <u>Policy Compliance Office (FPCO) website</u>.

# GRADUATION

# **Graduation Requirements**

To qualify as a candidate for a bachelor's degree at the University of Puerto Rico at Cayey a student must meet the following requirements:

- 1. An overall minimum academic index of 2.00 and a minimum concentration index of 2.00 (Certification 47, 2019-2020 SA and Certification 51, 2019-2020, AS).
- 2. Pass at the University of Puerto Rico the last 28 credits required for the bachelor's degree (Certification 83, 2002-03, AS).
- 3. The student must ensure that he or she does not owe debts to the institution.
- 4. File the graduation application the semester prior to the date on which you estimate to complete the requirements for the degree (Certification 33, 2012-2013 AB).

The University of Puerto Rico at Cayey reserves the right to make changes to the different programs and curriculum requirements in effect at the time of admission. Students who resume studies after a period of absence will be governed by the provisions applicable at the time of their readmission.

All students must apply for graduation the semester prior to completing their degree. Any student who completes the requirements of their program of study as stipulated in Board of Trustees Certification 85, 2005-06 will be automatically graduated.

# **Automatic Graduation**

According to (Certification 85, 2005-2006, SB) the University of Puerto Rico at Cayey will automatically confer the degree to all students who have met the requirements for it. For this procedure, the payment of the corresponding graduation fee will be required. Graduates under this policy who are interested in continuing studies in any program or discipline at the University of Puerto Rico will have to apply for readmission to the corresponding unit

## **Posthumous Degrees**

For the award of a posthumous degree, please refer to the certification indicated (Certification 32, 2020-2021, AS).

## Honors

Students with a graduation rate of **3.50** to **3.69** will graduate *Laude*, students who achieve a graduation rate of **3.70** to **3.94** will receive the honor of *Magna Laude*, and students who complete a graduation rate of **3.95** to **4.00** will receive the honor of *Summa Laude* (Certification 16, 2016-2017 AS).

## Awards

The University of Puerto Rico at Cayey awards graduation awards to students who graduate with honors. As well as students who have the highest average in their concentration and who are recommended for this distinction by their department. Also, the students with the highest average of the graduating class and those with the highest average in each academic area are awarded.

## **Changes to Graduation Requirements**

The University of Puerto Rico reserves the right to make any changes in the different programs and requirements for degrees, diplomas or certificates. Generally, students have the right to graduate under the requirements of the current curriculum upon entering the institution. Students who do not meet graduation requirements within the limits set for their curriculum, and students who resume studies after a period of absence, will be governed by the regulations that apply to the class in which they graduate.

#### **Graduation Ceremonies**

The University of Puerto Rico at Cayey celebrates the Graduation exercises once a year, at the end of the second academic semester. All baccalaureates are conferred only on that occasion. Those students who meet the degree requirements at the end of the first semester or during the summer session may apply for a certificate of completion, but the degree will be conferred on them at the next graduation ceremony.

# **STUDENT SERVICES**

# **Registrar's Office**

The Office of the Registrar administers and enforces academic regulations and standards approved by university bodies and the Dean of Academic Affairs. He is responsible for the custody of all academic records of students enrolling at the University of Puerto Rico at Cayey.

The Registrar directs and coordinates all registry activities: consultation with principals and other officials on course scheduling and enrollment procedures; directs the preparation and evaluation of academic records; issues official transcripts and the list of graduates; directs the collection of statistical data on students and enrollment for the Central Government and other agencies and analyses them for administrative use in policy-making; interprets academic policies and standards for students and faculty; directs the collection and dissemination of information on class scheduling and enrollment, graduation requirements, reclassification, transfer, and transfer, special permits, etc.; coordinates the dissemination of information on courses offered, enrollment procedures, and others that require registration actions; Coordinates class scheduling with available classrooms to optimize the use of the physical plant and equipment.

The office is located on the first floor of the Carlos Iñiguez building. To offer registration services, the window remains open from Monday to Friday from eight in the morning to noon and from one to four thirty in the afternoon.

# **Office of Economic Assistance**

The Programmatic Office of Financial Assistance is responsible for administering the financial aid programs available at the institution. Financial aid programs are those funds that are intended to financially help college students cover their tuition costs. They include, but are not limited to federal scholarships, the Federal Work-Study Program, student loans, and other aid administered by the Institution. These programs help to cover all or part of the tuition costs of qualifying students. The granting of funds is made in accordance with current regulations and is subject to the amount of funds available.

Federal programs subject to financial need

## Scholarship Federal Pell

The *Pell* Grant is the basis for the granting of other possible financial aid administered by the University of Puerto Rico at Cayey. The award is based on the socioeconomic situation, determined by the EFC (*Expected Family Contribution*) formula and the student's academic load. The Pell Grant participant, as with all supplemental scholarships, must be taking the courses required for the academic program to which he or she was admitted. The student may not use it in different educational institutions simultaneously. To apply for financial aid you must access: <u>www.fafsa.ed.gov</u>.

## Work-Study Program or Community Service

The Work-Study program provides the opportunity for the eligible student to gain experience in areas related to their studies, through part-time employment. The student will earn the current federal minimum wage. The program encourages community service work which can be on or off the university in a private non-profit organization whose work is in the public interest.

## Federal Student Loans (Direct Loans)

• Subsidized Loan—This loan will not accrue interest until such time as the student decreases

their academic load to less than six credits, stop studying or graduate. Six months later he will have to start paying.

- UNSUBSIDIZED Loan (Federal Program Not Subject to Financial Need)—This loan will accrue interest from the time you make it. Six months after you lower your academic load to less than six credits, stop studying or graduate, you will have to start paying.
- FSEOG Grant—Federal Supplemental Educational Opportunity Grant--This comes from federal funds intended to help undergraduate students who demonstrate extreme financial need. According to federal regulations, priority will be students eligible for *Pell Grants* with EFC (0).

# State programs subject to financial need

• Legislative Grant—Comes from state funds intended to help students who demonstrate financial need.

# Rights and Responsibilities of Financial Aid Applicants:

- Know the federal, state and institutional economic aid programs.
- Know the application deadlines for applicable financial aid programs and the process required.
- Know how their financial need is determined and how the study costs of the program they attend are calculated.
- Know what resources are considered in the calculation of your financial need, and how much of your need as determined by UPR-Cayey has been covered.
- An explanation of the types of financial aid you were awarded, as well as how to maintain eligibility for those funds (if applicable).
- Request a review of your current financial situation if your financial situation has changed since you submitted the FAFSA application in the year the aid was awarded.
- Know how much of your financial aid is debt (requires repayment) and what is scholarship (does not require repayment). In addition, you have the right to know the interest rates, total amount to be paid, repayment procedures, when you start paying, and how long you have to repay the student loan.
- Know the eligibility criteria to continue with financial aid including the requirements to meet the Academic Progress Policy (Certification 55, 2016-2017)
- Know the method of payment and the frequency of financial aid disbursements.

As a student, you have the responsibility to:

- Complete the FAFSA application in all parts and reliably. Falsifying information on federal financial assistance application forms is considered a crime and may be subject to penalties under the U.S. Penal Code. When signing the FAFSA you are warned: If you intentionally provide false or misleading information, you may be subject to a fine of up to \$20,000, imprisonment, or both.
- If selected for verification, provide all requested documents in a timely manner and ensure that all evidence submitted is complete and reliable. You must keep a copy of them.
- Notify the Financial Assistance Office of any changes that affect the information you previously submitted when applying for financial aid.
- Complete all requirements reliably, on time, and on deadline.
- Know their economic capacity to pay institutional charges based on their available financial aid and personal resources.
- Read and understand all forms you are asked to file or sign and acknowledge that you are legally responsible for all signed agreements.

- Know and comply with all policies and procedures of the University of Puerto Rico at Cayey, such as: Satisfactory Academic Progress Policy, Reimbursement Policy for Financial Aid programs, Financial Aid Verification Policy, among others.
- Review and understand the terms and conditions of your financial aid.
- Tell the Financial Aid office about any additional scholarships, aids, or resources you receive.
- Manage your debt responsibly, if any.
- If you received a student loan, take the exit interview. If he does not do so, he will be considered a debtor and no certifications or transcripts will be issued.
- Pay off all student loans you received at the undergraduate level.
- Know the impact and consequences in the area of economic assistance that filing a total or partial leave has.
- Verify the institutional email since all communications from the Economic Assistance office are sent by that means.
- Be aware of changes and new requirements in federal, state, and institutional regulations such as: Eligibility for grants up to 150% of the credits required by the academic degree, mandatory class attendance, and the "*Lifetime Eligibility Used* (LEU 600%) that includes the limit of six years of scholarship.
- Meet with your Financial Assistance Officer when:
- Receive an email or letter that requires it.
- Request a partial or total withdrawal of the enrolled courses, since this procedure may affect the financial aid you are receiving or will receive in a future semester or academic year.
- You need to be oriented about possible debts if you stop attending the courses enrolled.

# General Requirements for Financial Aid Eligibility

- Be admitted to the Institution in a program leading to obtaining an academic degree.
- Be a citizen of the United States of America or be a permanent resident.
- Have a valid social security number.
- Demonstrate financial need as required by federal and state regulations.
- Have completed high school requirements.
- If male, 18 to 25 years of age, be enrolled in the selective service. If not, you can enroll through the FAFSA, by calling 1-847-688-6888 or online at <u>www.sss.gov</u>.
- Complete the FAFSA, and if chosen for verification, submit the required documents on time.
- Not be a Title IV debtor, or have arrears on federal student loans.
- Not have enjoyed six years of scholarship or its equivalent. (Lifetime Elegibility Used- LEU).
- Meet the academic progress standard. (Certification 55, 2016-2017)
- Not have completed 150% of the credits attempted in their academic program.
- Not having received convictions for possession or sale of illegal drugs because of a misdemeanor or infraction committed while receiving federal student aid, you will lose the right to receive financial aid, for a period that will be calculated according to the type and number of convictions received.

For additional information, visit the programmatic financial aid office, which is located on the second level of the student center.

# **Office of Veterans Services**

The Office of Veterans Services, attached to the Academic Dean's Office and located in the Registrar's Office, collaborates with the Veterans Administration (VA) so that eligible students can receive study benefits. The Certifying Officer of the Office of Veterans Services of the University of Puerto Rico at Cayey, has the authorization of the Veterans Administration (VA) Approval Agency to process the

Forms and certifications of individuals eligible for tuition benefits. Eligible students will need to appear in person and receive guidance related to the programs of study and benefits offered by the office.

## Benefits Provided by the Veterans Administration

The Veterans Benefits Administration offers a wide variety of benefits and services to service members. Active duty National Guard and Reserve members may also qualify for a variety of VA benefits:

Post-9/11 GI Bill<sup>®</sup> https://www.va.gov/education/gi-bill/post-9-11/ch-33-benefit

Montgomery GI Bill<sup>®</sup> – Active Duty (MGIB-AD) <u>https://www.va.gov/education/about-gi-bill-benefits/montgomery-active-duty</u>

Montgomery GI Bill<sup>®</sup> – Selected Reserve (MGIB-SR) <u>https://www.va.gov/education/about-gi-bill-benefits/montgomery-selected-reserve</u>

Dependents' Educational Assistance Program (DEA) https://www.va.gov/education/survivor-dependent-benefits

("GI Bill®" is a registered trademark of the U.S. Department of Veterans Affairs (VA).)

For service members and Veterans who are not ready to work because their compensable service-connected disabilities are so severe, the program provides services so that participants can gain skills and achieve as much independence as possible in their homes and community.

Vocational Rehabilitation (VR&E) https://www.benefits.gov/es/benefit/296

The Veterans Administration, governed by Title 38 CFR (Code of Federal Regulations) does not pay for retakes of approved courses with the grade A, B, C. The Veterans Administration will only pay for retakes of courses passed with a grade of D, failed courses (F), and/or courses that the student withdrew (W), as long as the courses passed with a grade of D, failed courses, or courses that were withdrawn are concentration.

To determine eligibility for these programs, the student must apply for benefits through their unit if they are Chapters 1606 and 1607.

To request and obtain more detailed information about GI Bill Chapters, please visit the following page: www.giblill.va.gov or if you wish to contact the Veterans Administration directly, you can call the following number: 1-888-442-4551.

#### Rights of the Puerto Rican Veteran of the 21st Century

On December 14, 2007, Law 203, known as the Bill of Rights of the Puerto Rican Veteran of the 21st Century, was approved, effective immediately. The law compiles all previously approved legislation and in an orderly manner the benefits that the Government of Puerto Rico confers on veterans who have served in the Armed Forces of the United States of America defending the postulates of democracy. Among these benefits are those related to education.

#### Get to know Law 203

Bill of Rights of the Puerto Rican Veteran XXI Century (Law 203 of December 14, 2007)

Category F	Costs of QBooks Registration		& Materials
Veterans who exhausted their GI Bill® benefits	100%	n/a	n/a
Children of living Veterans	50%	50%	50%
Spouses of Living Veterans	50%	50%	50%
Children of Veterans killed in action or whose death is related	100%	100%	100%
to active duty	1000/	1000/	1000/
Spouses of Veterans killed in action or whose death is related to active duty	100%	100%	100%

There are a few important terms you should know about the law:

- Veteran Any person who has served honorably in any of the five Armed Forces of the United States (i.e., *Army*, Navy, Air Force, *Marines*, and *Coast Guard*). It includes individuals who have served honorably on the Commissioned Corps of the U.S. Public Health Service (*USPHS*), Commissioned Officer of the National Oceanic and Atmospheric Administration (NOAA).
- **Dependents** any dependent of the soldier or veteran who is part of their household and is in possession of a dependent identification issued by the Department of Defense (DoD) of the United States of America.
- Soldier Although the law does not define a soldier, it is a person who serves in the military.

Veteran university students who exhaust or are close to exhausting their rights to studies under the legislation approved by the Congress of the United States of America without having been able to complete their baccalaureates or other postgraduate studies already begun for which they qualify, and whose academic degree they wish to complete respective of the final concentration they choose and wish to continue because such studies are prolonged for a period longer than that authorized by under federal legislation, shall have the right to free tuition at the University of Puerto Rico and all its academic units, as well as any post-secondary education institution of the State and equal preference in terms of aid, scholarships, and other benefits granted to students of the University, or unit or institution. It can also refer to Law 305 of 2018 that adds to Article 2 of Law 203.

Credit transcripts are issued free of payment of fees to any veteran, widow of a veteran, spouse of the veteran and their minor children, as provided by Law 203 of 2007.

For more information about the law, you can access the Veterans Advocate's page at http://www.opv.pr.gov

*Protocol for active military service* Protection Measures Regulation

• CESPR 2008-065 Certification (CESPR 2008-065 Certification)

**UPR** Protocol

- <u>R-0809-10\_Active Duty Military Service Student</u>
- <u>Clarification of the term Military Activation</u>

## **Office of Extracurricular Activities**

The Office of Extracurricular Activities has as its main objective the offer of a diverse program of activities that contributes and collaborates to the academic training and sociocultural development of the student. This office is in charge of designing and coordinating a varied program of activities related to the different fields of Fine Arts: theater, dance, classical, popular and folk music, cinematography, plastic arts and body movement, among others, in order to enrich the academic experience of our young university students.

# **Athletic Program**

The Athletic Program promotes the participation of inter-university sports as a complement to the academic phase in the student's professional development. Sports preparation for the high level of inter-university competition involves rigorous training to develop and enhance physical and psychosocial capacities and skills, through which student-athletes seek sporting excellence and acquire knowledge and training experiences. Participation in sports activities, actively or passively as a spectator, promotes and promotes a sports culture that fosters identity, a sense of belonging and the Alma Mater. Students acquire the necessary skills to face life with more resources and in a healthy way.

The University of Puerto Rico at Cayey belongs to the Intercollegiate Athletic League of Puerto Rico and the Virgin Islands (LAI). The Program offers over 10 sports disciplines for students who demonstrate outstanding sports skills. Sports facilities include: two basketball and volleyball courts with capacity for 935 people, a 400-meter synthetic athletic track, an outdoor basketball and volleyball court, a field tennis court, an Olympic lifting area, a general preparation gym, a soccer court and an injury treatment center. To be eligible to participate, our athletes must meet all the eligibility criteria as established in the General Regulations of the Interuniversity Athletic League, in addition to the academic and disciplinary requirements of the institution.

# **Office of Exchange and International Studies**

The mission of the Office of Exchange and International Studies of the University of Puerto Rico at Cayey is to actively contribute to the internationalization of education, encouraging and promoting the encounter of cultures in order to give students a comprehensive and global vision of the world through Academic Collaboration Agreements.

The University of Puerto Rico at Cayey maintains academic cooperation agreements with educational institutions abroad that allow students to study abroad for a year or semester and transfer credits to the University. The student will be able to study at one of the 180 universities, since we are active members of the National Student Exchange Consortium (NSE) that includes the United States, Canada or the Virgin Islands (www.nse.org) or they can study through academic agreements in Spain, Argentina, Mexico, France, in addition to the International Student Exchange Program (ISEP Direct) which includes universities in Japan, Thailand, Chile, among others. Website: https://www.isepstudyabroad.org/programs/program-types-and-deadlines/isep-direct.

# **Office of Student Organizations**

Student organizations are different groups of students with common interests and a desire to develop skills and experiences that strengthen their personal, professional, and academic lives. Belonging to a student organization gives its members the opportunity to interact with their peers in various scenarios. These organizations allow students to nurture enriching experiences that will contribute to their exposure within the educational and work environment. At the University of Puerto Rico at Cayey we have more than 30 student organizations from various areas and disciplines such as natural sciences, social sciences, business administration,

pedagogy, social and artistic interest. This includes chapters of national, local and general interest groups. Through student organizations, they develop qualities of leadership, teamwork, and social responsibility, which complement their academic learning. In the Office of Student Organizations and Lodging, students are guided about the facilities of existing private lodging and duly registered in the institution. The office ensures that the lodging facilities comply with the requirements established by law (DACO) and guides students and lodging owners on rules when operating and/or using the facilities of a private lodging.

# **Office of Medical Services**

The Medical Services Office, located on the first floor of the Student Center, offers medical and nursing services to the entire student population. It has an administrative secretary, a nurse who graduated with a bachelor's degree and a general practitioner. Its primary goal is to provide high-quality, comprehensive primary medical services that respond to student needs and help maintain proper academic functioning in students. In addition, it provides outpatient, urgent and emergency medical services. It also offers counseling services for prevention and health maintenance. Service hours are Monday through Friday from 8:00 a.m. to 4:30 p.m. Any student who is enrolled in the institution and who has completed and submitted the admission documents required by the Office of Medical Services, has the right to request and receive outpatient services in this office.

# Interdisciplinary Center for Student Development (CEDE)

CEDE offers professional counseling and psychology services to students enrolled at the University of Puerto Rico at Cayey. Its staff is comprised of three licensed psychologists, two professional counselors, and one vocational rehabilitation counselor. In addition, we are a training center for graduate students in the areas of psychology and counseling. All of us are prepared to address the most common dynamics related to mental health among young university students.

Support Groups

- Community GLB
- NAMI on Campus
- Student Mentor Program (PEM)

# Office of Student Services with Disabilities (OSEI)

The University of Puerto Rico at Cayey provides reasonable accommodations to students who have a documented disability through the Office of Student Services with Disabilities (OSEI). Reasonable accommodations are modifications or adjustments in the teaching-learning process of the student with a disability. In such a way that it allows them to compete on equal terms and have inclusion in university activities. Reasonable accommodation services are based on submitted documentation, OSEI requirements, and the particular needs of each student's disability independently. The student eligible for OSEI services will work with the coordinator to develop a Reasonable Accommodation Plan that fits their curricular and extracurricular needs.

# Office of Quality of Life

The Office of Quality of Life coordinates and carries out activities aimed at preventing the use of illicit drugs, sexual assault and harassment, as well as alcohol abuse. Healthy lifestyles are promoted and encouraged, as well as safety on campus, so that the institution can guarantee the student and the university community a better quality of life.

#### Security and Surveillance

The mission of the Office of Security and Surveillance is to offer surveillance, protection and orientation services to the university community and visitors that provide a safe and calm environment that guarantees academic, administrative, research and community service work. Success will depend on respect for the rights of the human being, teamwork, camaraderie, preserving the values of the institution, maintaining a climate of harmony in the performance of our function and acting with respect, honesty, professionalism and courtesy.

# **LEARNING RESOURCES**

## Víctor M. Pons Gil Library

The Víctor M. Pons Gil Library is the information unit that promotes study, teaching, research and stimulates human and professional training and critical thinking of the individual, thus contributing to the academic, social and cultural development of Puerto Rico.

The Library, aware of the goals and objectives of the University of Puerto Rico, has as its main task to satisfy the information needs of the university community through the development, organization and dissemination of printed and electronic collections that enrich academic work. It also seeks to develop competencies in the search, location, access and critical use of information in users and in this way promote and support the creative work of users. Finally, the library transforms the infrastructure of physical and virtual spaces to create the optimal conditions that promote academic work and collaborative learning in physical and virtual environments.

Our library is made up of 7 collections with trained and trained personnel to offer a quality service in person and virtually. In addition, it has a bibliographic collection of approximately 167,000 physical and electronic titles with a thematic scope that responds to the disciplines offered by our academic departments. The library's collections cover general and specialized subjects in different formats such as books, documents, maps, audiovisuals and virtual ones. It also includes 24/7 information resources that support research, stimulate creative work, and promote academic development, such as subscribed databases, open-access databases, and modernized and unique spaces that enable our students to achieve their academic objectives and goals.

# Office of Information Systems (OSI)

The Information Systems Office (OSI) is a service unit attached to the Chancellor's Office, whose fundamental objective is to support the university community in academic, administrative and institutional activity. Its goal is to strengthen and develop technological solutions in the areas of greatest service to the university community

#### Scope of our service

We provide technological services to the Administrative Offices, Academic Departments, Institutional Proposals and the Student Community. Our hours are Monday through Friday from 7:30 a.m. to 7:00 p.m. We have seven (7) technology rooms, equipped with a total of two hundred and thirty-two (232) computers with Windows 10 operating systems, Microsoft Office 2019, internet access.

# **Student Support Center (CAE)**

CAETV offers a program of student tutors and peer mentors in conjunction with a mentor faculty for the subjects of precalculus, calculus, mathematics, general chemistry, organic chemistry, biology, physics, business administration, psychology, Spanish and English. It is an experience of students helping students, where academic development and language skills are supported through teamwork. The program works in coordination with teachers of the various subjects, so that there is coherence between the topics studied in the formal class and the tutoring program. Other specialists support the CAE in the areas of Counseling, Education, Library Services, Technology and Communication. Since August 2016, the CAE has been part of the Title V Proposal within the Supplementary Instruction component, which includes among its objectives face-to-face tutoring and mentoring and distance with technological support. This program has been attached to the Dean of Academic Affairs since the academic year 2009-2010.

## Dr. Pío López Martínez Museum of Art

The Dr. Pío López Martínez Museum of Art is a center for the study, conservation, creation and dissemination of the arts based on the artistic and historical legacy of Ramón Frade (Cayey, 1875-1954), the Puerto Rican poster and graphics and the collection of photographs and negatives of the José Manuel Cruet Legacy that documents the history of Cayey. The Museum is part of the University of Puerto Rico at Cayey with rooms that exhibit the work of Puerto Rican painter Ramón Frade in La Casa Frade, Puerto Rican posters and graphics in the Lorenzo Homar Room and temporary exhibitions in the Central Room. The name of the Museum highlights the work of its founder and director, Professor Pío López Martínez (Burgos, Spain, 1922 - Cayey, 1998).

The Frade Legacy, which the Museum has guarded since 1979, is made up of a variety of works of art and objects produced by the Artist, as well as his belongings and cultural materials from his home in Cayey. The collection was donated to the University of Puerto Rico in 1957 by the widow of the painter Doña Reparada Ortiz, fulfilling the artist's wish.

The Museum opened to the public on June 11, 1979 with an exhibition of the Legacy. In 1996, the Museum began a process of reconceptualization at the museographic, programmatic and administrative levels by the Artist-in-Residence of the University of Puerto Rico in Cayey, Antonio Martorell. The museological and museographic renovation represents an advanced formulation in the national museological field. As a university cultural institution, it is a core axis to promote the education of its community through the experiences and information provided by the Museum.

#### The Exhibitions

The exhibitions at the Museum are the product of curatorial research generated at the Museum as a result of the study of: the Frade Legacy, the life and work of the artist and his correspondence with national and international art; the silkscreen poster and Puerto Rican graphic art as a sample of art, history and culture from the mid-twentieth century to the present.

#### **Education Program**

The Museum promotes the experience of appreciation, interpretation, and creation of art in the community through an educational plan developed from the research of the exhibitions that includes talks, conferences, and art workshops in summer. As an initiative to strengthen ties with the university, Cayey, regional and national community, the Museum began in 2001 a series of workshops taking art to spaces beyond its walls. The art workshops are offered by master artists with a career in the national art scene to young university students and from the Cayey community. In turn, the Museum offers guided tours of the exhibition halls. Its main audience is the university community, its students and students from public and private schools in the region. Adults from the region and the island who do domestic tourism, students and tourists from abroad also frequent.

# ACADEMIC PROGRAMS

#### **Components of the Programs**

The University of Puerto Rico at Cayey is an institution committed to comprehensive education of excellence through undergraduate programs in teacher preparation and in the disciplines of Natural and Social Sciences, Humanities and Business Administration. We understand general education and professional specialization as complementary experiences of the formation of the human being. We believe in offering an interdisciplinary and innovative education, which integrates topics and experiences from various fields of knowledge while keeping the value of specialization in perspective. We educate with a global perspective that at the same time recognizes the location of the human being in his or her community, with a sense of history and a vision of the future.

We are committed to the development of the integral, autonomous, critical and sensitive human being, who believes in excellence as a norm of life, and who is prepared to place himself creatively in society and in the world of work. He will be someone who discovers in himself the resources and stimuli for learning, who has learned to seek and develop the knowledge for a full life, and who maintains a lifelong commitment to study. In accordance with the profile of the graduate enunciated in the Mission of the University of Puerto Rico at Cayey and with the general objectives of the goal of providing an undergraduate education of excellence, its twenty-four (24) academic programs seek interaction between the various disciplines. They intertwine three components: general education courses (core courses), concentration or specialty courses, and free choice courses (non-core courses).

The component of core courses of general education consists of a set of courses common to students in fundamental or core subjects of knowledge that in turn are aligned with the Document of Skills and Contents: Mathematics, Physical and Biological Sciences, Language and Literature (in Spanish and English), History, Social Sciences and General Culture (Humanities). Subjects that correspond to the type of general training required by each specialization or concentration.

General education seeks to initiate the student in the knowledge of what should be part of the education of every person: the kind of world in which he lives and the phases that compose it. One of its fundamental purposes is to teach the student to learn how to know himself. It aims for the student to grasp the dynamic and changing nature of knowledge. It also provides fundamental skills – verbal and mathematical reasoning, research, etc. – essential for success in university studies and for performance in today's world.

The discipline of study in which the student takes his or her degree is known as the concentration or specialty. It consists of ten or more courses that reach around 30 credits. At the University of Puerto Rico at Cayey, the courses of the concentration are classified into three types: additional courses required in disciplines of the same department, courses required in the discipline of specialization itself, and elective courses directed within the specialty.

Free electives are those courses that the student chooses without restriction from among those offered by the School, regardless of their concentration. A minimum of twelve credits from this group is required per program. The free-choice courses allow the student to explore other branches of knowledge, deepen their knowledge of subjects of their interest and take courses that will prepare them to continue towards professional or graduate studies. Through free electives, students can earn a minor, such as the education courses required for teacher certification. They can also complement their training with courses in fields such as Business Administration that help direct them to the world of work. Elective credits make it easier for the student to participate in educational experiences such as a semester of study abroad or special scientific research courses without exceeding the total credits required by their program of study or delaying the graduation date.

In addition to regular courses, the University of Puerto Rico at Cayey offers non-credit skills workshops and courses. It is recommended that in their first semester of study all students enroll in the workshops on computer management offered by the Academic Computer Center. Librarians offer workshops on bibliographic instruction and research methods.

An essential complement to academic programs as an element of university education is the rich range of co-curricular activities. We encourage students to attend every week at least one of the scientific, theatrical, musical, literary, cinematographic and other activities that the school makes available to them.

# **General Education**

Our University is committed to providing an undergraduate education of excellence in which it is highlighted to train students with a vision of the interrelationship between general education, the knowledge of the specialty and their living environment.

Among the distinctive elements of General Education are the following: the interdisciplinary nature of knowledge, the investigative approach, the development of critical thinking strategies, the integration of general education throughout the university career, the culture of appraisal, and the development of the skills and contents of general education.

General Education at the University of Puerto Rico at Cayey is distinguished by the following elements:

- A core curriculum structure for all 42-credit General Education academic programs—39 credits of general education core courses and 3 credits of the First-Year Interdisciplinary Seminar—designed around the General Education skills and content recognized at the University of Puerto Rico at Cayey.
- A course or *capstone* experience that promotes the integration of general education skills and content with those of the specialty.
- A continuous program of programmatic and classroom appraisal, in line with the culture of appraisal that is being developed in our institution.

The classification in the courses in the New Model is: core of general education (component of General Education, 48 credits), core of the specialty (courses of other disciplines), concentration (courses of content of the study program) and free electives.

# DEPARTMENTS AND PROGRAMS OF STUDY

The academic departments of the University of Puerto Rico at Cayey are grouped into three areas, which you will see below:

# Arts

**Department of Social Sciences** 

- Bachelor of Arts with a concentration in Social Sciences
- Bachelor of Arts with a concentration in Psychology
- Bachelor of Arts with a concentration in Psychology and Community Mental Health
- Bachelor of Arts with concentration in Sociology
- Department of Hispanic Studies
  - Bachelor of Arts with a concentration in Hispanic Studies
- Department of Humanities
  - Bachelor of Arts with a concentration in Humanities

Department of English

• Bachelor of Arts with a concentration in English

# Natural sciences

Department of Biology

- Bachelor of Science with concentration in Biology
- Department of Mathematics-Physics
  - Bachelor of Science with a concentration in Mathematics
- Department of Chemistry
  - Bachelor of Science with concentration in Chemistry
- Natural Sciences Program
  - Bachelor's Degree in Natural Sciences
  - Multidisciplinary in Science and Mathematics

# **Professional Schools**

Department of Business Administration

- Bachelor of Business Administration with a concentration in Accounting
- Bachelor's Degree in Business Administration with a concentration in Management
- Bachelor's Degree in Technology and Office Administration with concentration in Office Administration

Department of Pedagogy

- Bachelor of Arts in Elementary Education with a concentration in
  - Special Education
  - Natural Sciences
  - Spanish
  - Mathematics
  - English
- Bachelor of Arts in Secondary Education with a concentration in
  - English
  - Spanish
  - Natural Sciences
  - Physical Education

## **Social Sciences**

#### https://www.cayey.upr.edu/decanato-de-asuntos-academicos/cienciassociales

In the Social Sciences Program we understand that the production of new knowledge is intimately linked to the development of social research. In each of the areas of specialization, students actively participate in their academic and professional training process from leadership positions, exercised in student associations, interdisciplinary research courses, and activities related to university life.

#### Programs:

- Bachelor of Arts with a concentration in Social Sciences
- Bachelor of Arts with a concentration in Psychology
- Bachelor of Arts with a concentration in Psychology and Community Mental Health
- Bachelor of Arts with a concentration in Sociology

#### **Minor Concentrations:**

- Minor Concentration in Political Sociology
- Minor in Women's Studies with a Gender Perspective
- Minor Concentration in Human Developmental Psychology

#### **Related professions:**

- Psychologist
- Researcher
- Demographer
- Teacher
- Social worker
- You can also work in government and private agencies.

#### \*Graduate Studies Required

Bachelor of Arts with	a concentration in Social Sciences		
General Education Core	Courses		
Code	Title		Credits
HUMA 3101-3102	Western Culture I-II		6
ESPA 3101-3102	Basic Spanish I-II		6
ESPA 3201-3202 or	Introduction to Literary Genres I-II Introdu	uction to Spanish Literature	6
ESPA 3211-3212	1-11	-	
INGL 3101-3102 or	Basic English I-II (450-539 CEEB points)		6
INGL 3103-3104 or	Intermediate English I-II (540-640 CEEB		
INGL (3XXX-4XXX)	points) Advanced English (641 or more CEEB poin	+c)	
INGL 3201-3202 or	Composition and Reading I-II (Requirement		6
ENGLISH 3221-3222 or	Introduction to Literature I-II (Requirement	<b>-</b>	
	Advanced English) Advanced Level English		
INGL (3XXX-4XXX)	Intermediate or Advanced English)		
MATE 3041-3042	Introduction to Mathematics I-II		6
CIBI 3001-3002	Biology Fundamentals I-II		6
HIST 3245	Compendium History of Puerto Rico		3
INTD 3027	First Year Interdisciplinary Seminar		3
Non-Core Courses			
Code	Title		Credits
CISO 3121-3122	Introduction to Social Sciences I-II		6
HUMA 3201-3202	Western Culture III-IV		6
CIFI 3001-3002	Introduction to the Physical Sciences I-II		
ART 3155 or	Ancient and Medieval Art		3
ART 3156	Modern and Contemporary Art		
ECON 3021	Principles of Economics		3
GEOG 3155	Elements of Geography		3
PSIC 3001	Introduction to Psychology I		3
SOCI 3261	Introduction to Sociology		3
SOCI 3265	Social Research Techniques		3
CISO 3155	Fundamentals of Statistical Reasoning		3
CIPO Elective	Directed Elective in Political Science		3
Specialty/Concentration	Courses		
Code	Title		Credits
CISO Electives	Directed Electives in Social Sciences		12
CISO 3085 Society and Culture of Puerto Rico ( <i>Capstone</i> )		3	
Free Electives			
Code	Title		Credits
	Free Electives		23
		Total credits	128

Bachelor of Arts with a concentration in Sociology       General Education Core Courses					
HUMA 3101-3102	Western Culture I-II	6			
ESPA 3101-3102	Basic Spanish I-II	6			
ESPA 3201-3202 or	Introduction to Literary Genres I-II	6			
ESPA 3211-3212	Introduction to Spanish Literature I-II				
INGL 3101-3102 or	Basic English I-II (450-539 CEEB points)	6			
INGL 3103-3104 or	Intermediate English I-II (540-640 CEEB points)				
INGL (3XXX-4XXX)	Advanced English (641 or more CEEB points)				
INGL 3201-3202 or	Composition and Reading I-II (Requirement: Basic English)	6			
INGL 3221-3222 or	Introduction to Literature I-II (Requirement: Intermediate or				
	Advanced English) Advanced Level English (Requirement:				
INGL (3XXX-4XXX)	Intermediate or Advanced English)				
MATE 3041-3042	Introduction to Mathematics I-II	6			
CIBI 3001-3002	Biology Fundamentals I-II	6			
HIST 3245	Compendium History of Puerto Rico	3			
INTD 3027	First Year Interdisciplinary Seminar	3			
Non-Core Courses					
Code	Title	Credits			
CISO 3121-3122	Introduction to Social Sciences I-II	6			
HUMA 3201-3202	Western Culture III-IV	6			
CIFI 3001-3002	Introduction to the Physical Sciences I-II	6			
ARTE 3155 or	Ancient and Medieval Art	3			
ARTE 3156	Modern and Contemporary Art				
CISO 3155	Fundamentals of Statistical Reasoning	3			
ECON 3021	Principles of Economics	3			
GEOG 3155	Elements of Geography	3			
PSIC 3001	Introduction to Psychology I	3			
SOCI 3261	Introduction to Sociology	3			
SOCI 3265 or	Social Research Techniques	3			
PSIC 3137	Non-Experimental Methods of Psychology	5			
CIPO Elective	Directed Elective in Political Science	3			
Specialty/Concentration		5			
Code	Title	Credits			
ANTR 3005	Caribbean Society and Culture	3			
ECON 3032	Statistical Methods II	3			
PSIC 3006	Social psychology	3			
SICI 3006	Principles of Computerization	3			
SOCI 3270	Social Institutions ( <i>Capstone</i> )	3			
SOCI 3270	Modern Sociological Theory	3			
		3			
SOCI or ANTR Elective					
SOCI Electives	Directed Electives in Sociology	6			
Free Electives	Title				
Code	Title	Credits			
	Free Electives	15			
	Tota	l credits 132			

Bachelor of Arts with a concentration in Psychology and Community Mental Health				
General Education Co	re Courses			
Code	Title			
HUMA 3101-3102	Western Culture I-II	6		
ESPA 3101-3102	Basic Spanish I-II	6		
ESPA 3201-3202 or	Introduction to Literary Genres I-II Introduction to Spanish Literature	6		
ESPA 3211-3212	1-11			
INGL 3101-3102 or	Basic English I-II (450-539 CEEB points)	6		
INGL 3103-3104 or	Intermediate English I-II (540-640 CEEB points)			
INGL (3XXX-4XXX)	Advanced English (641 or more CEEB points)			
INGL 3201-3202 or	Composition and Reading I-II (Requirement: Basic English)			
INGL 3221-3222 or	Introduction to Literature I-II (Requirement: Intermediate or			
	Advanced English) Advanced Level English (Requirement:			
INGL (3XXX-4XXX)	Intermediate or Advanced English)			
MATE 3041-3042	Introduction to Mathematics I-II	6		
CIBI 3001-3002	Biology Fundamentals I-II	6		
HIST 3245	Compendium History of Puerto Rico	3		
INTD 3027	First Year Interdisciplinary Seminar	3		
Non-Core Courses				
Code	Title	Credits		
CISO 3121-3122	Introduction to Social Sciences I-II	6		
HUMA 3201-3202	Western Culture III-IV	6		
CIFI 3001	Introduction to the Physical Sciences I	3		
CISO 3155	Fundamentals of Statistical Reasoning	3		
PSIC 3001	Introduction to Psychology I			
SOCI 3261	Introduction to Sociology			
SOCI 3315	Sociology of the Family			
ECON 3085	Economic and Social Development of Puerto Rico	3		
Specialty/Concentration	on Courses	•		
Code	Title			
PSIC 3006	Social psychology			
PSIC 3016	Psychopathology	3		
PSIC 3017	Personality Measurement	3		
PSIC 3018	Physiological Psychology	3		
PSIC 3118	Physiological Psychology Laboratory	1		
PSIC 3019	Clinical and Community Psychology	3		
PSIC 3025	Human Development	3		
PSIC 3137	Non-Experimental Methods of Psychology	3		
PSIC 4008	Intellectual Disability	3		
PSIC 4015	Practicum in Social Psychology	3		
PSIC 4095	Counseling and Short Therapies	3		
PSIC 4097	Practicum in Clinical Psychology and Health ( <i>Capstone</i> )	3		
PSIC Electives	Directed Electives in Psychology	6		
Free Electives				
Code	Title	Credits		
	Free Electives	12		
	Total credits			

Bachelor of Arts with	a concentration in Psychology		
<b>General Education Core</b>	Courses		
Code	Title		Credits
HUMA 3101-3102	Western Culture I-II		6
ESPA 3101-3102	Basic Spanish I-II		6
ESPA 3201-3202 or	Introduction to Literary Genres I-II Intro	duction to Spanish	6
ESPA 3211-3212	Literature I-II		
INGL 3101-3102 or	Basic English I-II (450-539 CEEB points)		6
INGL 3103-3104 or INGL	Intermediate English I-II (540-640 CEEB	points)	
(3XXX-4XXX)	Advanced English (641 or more CEEB points)		
INGL 3201-3202 or	Composition and Reading I-II (Requirem	ent: Basic English)	6
INGL 3221-3222 or	Introduction to Literature I-II (Requirem	ent: Intermediate or	
	Advanced English) Advanced Level Engli	sh (Requirement:	
INGL (3XXX-4XXX)	Intermediate or Advanced English)		
MATE 3041-3042	Introduction to Mathematics I-II		6
CIBI 3001-3002	Biology Fundamentals I-II		6
HIST 3245	Compendium History of Puerto Rico		3
INTD 3027	First Year Interdisciplinary Seminar		3
Non-Core Courses			
Code	Title		Credits
CISO 3121-3122	Introduction to Social Sciences I-II		6
HUMA 3201-3202	Western Culture III-IV		6
CIFI 3001-3002	Introduction to the Physical Sciences I-II		6
ART 3155 or	Ancient and Medieval Art		3
ART 3156	Modern and Contemporary Art		
CISO 3155	Fundamentals of Statistical Reasoning		3
ECON 3021	Principles of Economics		3
GEOG 3155	Elements of Geography		3
PSIC 3001	Introduction to Psychology I		3
SOCI 3261	Introduction to Sociology		3
CIPO 3011	Introduction to Political Science		3
Specialty/Concentration	Courses		
Code	Title		Credits
PSIC 3018	Physiological Psychology		3
PSIC 3118	Physiological Psychology Laboratory		1
PSIC 3025	Human Development		3
PSIC 3137	Non-Experimental Methods of Psycholo	gy	3
PSIC 3166	Research Practice in Psychology		1
PSIC 4003	Experimental psychology		3
PSIC 4004	Experimental Psychology Laboratory		1
PSIC 4065	Seminar in Psychology (Capstone)		3
PSIC Electives	Directed Electives in Psychology		12
Free Electives	· · · ·		
Code	Title		Credits
	Free Electives		12
		Total credits	129

## **Hispanic Studies**

#### https://www.cayey.upr.edu/decanato-de-asuntos-academicos/est-hisp

We invite all students with an aptitude or interest in literary creation (poetry, short story, novel, essay or drama) to consider this option as an ideal baccalaureate to enhance their creativity, while obtaining a degree leading to graduate studies in other areas.

#### Program:

• Bachelor of Arts with a concentration in Hispanic Studies

## **Minor Concentrations:**

- Hispanic Literature
- Literary Creation

#### **Related professions:**

- Teacher
- Editor
- Lawyer
- Translator
- Cultural Manager
- Journalist
- Writer
- Researcher
- Linguist
- Concealer

Bachelor of Arts with a concentration in Hispanic Studies						
General Education Core Courses						
Code	Title		Credits			
HUMA 3101-3102	Western Culture I-II		6			
HUMA 3201-3202	Western Culture III-IV		6			
CISO 3121-3122	Introduction to Social Sciences I-II		6			
INGL 3101-3102 or	Basic English I-II (450-539 CEEB points)		6			
INGL 3103-3104 or	Intermediate English I-II (540-640 CEEB point	s)				
INGL (3XXX-4XXX)	Advanced English (641 or more CEEB points)					
INGL 3201-3202 or	Composition and Reading I-II (Requirement: Basic English) Introduction		6			
INGL 3221-3222	to Literature I-II (Requirement: Intermediate	or Advanced English)				
INGL (3XXX-4XXX)	Advanced Level English (Requirement: Interm English)	ediate or Advanced Level				
MATE 3041-3042	Introduction to Mathematics I-II		6			
CIBI 3001-3002	Biology Fundamentals I-II		6			
HIST 3245	Compendium of Puerto Rican History		3			
INTD 3027	First Year Interdisciplinary Seminar		3			
Non-Core Courses						
Code	Title		Credits			
ESPA 3101-3102	Basic Spanish I-II		6			
ESPA 3211-3212	Introduction to Spanish Literature I-II		6			
CIFI 3001-3002	Introduction to the Physical Sciences I-II		6			
MUSI 3225	Appreciation of the Elements of Music		3			
FILO 3001-3002	Introduction to Philosophy I-II		6			
ARTE 3155 or	Ancient and Medieval Art		3			
ARTE 3156	Modern and Contemporary Art					
Specialty/Concentration	on Courses					
Code	Title		Credits			
ESPA 3291-3292	Spanish Grammar I-II		6			
ESPA 4011-4012	Hispanic Linguistics I-II		6			
ESPA 4221-4222	Literatura Hispanoamericana I-II	Literatura Hispanoamericana I-II				
ESPA 4231-4232	Puerto Rican Literature I-II		6			
ESPA 4251-4252	Literature of the Golden Age I-II		6			
ESPA 4496	Research Seminar ( <i>Capstone</i> )		3			
ESPA Elective	Directed Elective in Hispanic Studies		3			
Free Electives	· · ·					
Code	Title		Credits			
	Free Electives		15			
		Total credits	129			

## https://www.cayey.upr.edu/decanato-de-asuntos-academicos/humanidades

Through its programs, it trains professionals with vast knowledge in cultural processes and their various manifestations. Our graduates are trained with skills that allow them independence of criteria to exercise leadership, both in their professional life and in their personal and social environment.

## Program:

• Bachelor of Arts with a concentration in Humanities

## **Minor Concentrations:**

- Visual arts
- Philosophy
- Theatre
- History of America
- History of Europe

## **Related Professions:**

- Right
- Plastic Arts
- Music
- Cultural Management
- Advertising
- Teaching

Bachelor of Arts with a	a concentration in History	
General Education Core		
Code	Title	Credits
ESPA 3101-3102	Basic Spanish I-II	6
ESPA 3211-3212 or	Introduction to Spanish Literature I-II Hispano-American Literature I-II	6
ESPA 4221-4222 or	Puerto Rican Literature I-II	
ESPA 4231-4232		
CISO 3121-3122	Introduction to Social Sciences I-II	6
INGL 3101-3102 or	Basic English I-II (450-539 CEEB points)	6
INGL 3103-3104 or INGL	Intermediate English I-II (540-640 CEEB points)	
(3XXX-4XXX)	Advanced English (641 or more CEEB points)	
INGL 3201-3202 or	Composition and Reading I-II (Requirement: Basic English) Introduction to	6
INGL 3221-3222	Literature I-II (Requirement: Intermediate or Advanced English)	
INGL (3XXX-4XXX)	Advanced Level English (Requirement: Intermediate or Advanced Level English)	
MATE 3041-3042	Introduction to Mathematics I-II	6
CIBI 3001-3002	Biology Fundamentals I-II	6
CIFI 3001	Introduction to the Physical Sciences I	3
INTD 3027	First Year Interdisciplinary Seminar	3
Non-Core Courses		
Code	Title	Credits
HUMA 3101-3102	Western Culture I-II	6
HUMA 3201-3202	Western Culture III-IV	6
CIFI 3002	Introduction to the Physical Sciences II	3
MUSI 3225	Appreciation of the Elements of Music	3
ARTE 3155 or	Ancient and Medieval Art	3
ARTE 3156	Modern and Contemporary Art	
FILO 3001	Introduction to Philosophy I	3
FRAN 3021-3022	Experimental French I-II	6
FRAN 3033	Experimental French III	3
Specialty/Concentration	Courses	
Code	Title	Credits
HIST 3111-3112	History of the United States I-II	6
HIST 3211-3212	Historia Hispanoamericana I-II	6
HIST 3241-3242	History of Puerto Rico I-II	6
HIST 4226	Seminar on Methodology and Techniques of Historical Research ( <i>Capstone</i> )	3
Electivas HIST	Directed Electives in History	15
Free Electives		
Code	Title	Credits
	Free Electives	12
	Total credits	129

Bachelor of Arts wi	th a concentration in Humanities		
General Education Co	ore Courses		
Code	Title		Credits
ESPA 3101-3102	Basic Spanish I-II		6
ESPA 3211-3212 or	Introduction to Spanish Literature I-II Hispar	o-American Literature I-II	6
ESPA 4221-4222 or	Puerto Rican Literature I-II		
ESPA 4231-4232			
CISO 3121-3122	Introduction to Social Sciences I-II		6
INGL 3101-3102 or	Basic English I-II (450-539 CEEB points)		6
INGL 3103-3104 or	Intermediate English I-II (540-640 CEEB poin	ts)	
INGL (3XXX-4XXX)	Advanced English (641 or more CEEB points)		
INGL 3201-3202 or	Composition and Reading I-II (Requirement:	Basic English)	6
INGL 3221-3222	Introduction to Literature I-II (Requirement:	Intermediate or	
or INGL (3XXX-	Advanced English) Advanced Level English (F	Requirement:	
4XXX)	Intermediate or Advanced English)		
MATE 3041-3042	Introduction to Mathematics I-II		6
CIBI 3001-3002	Biology Fundamentals I-II		6
CIFI 3001	Introduction to the Physical Sciences I		3
INTD 3027	First Year Interdisciplinary Seminar		3
Non-Core Courses			
Code	Title		Credits
HUMA 3101-3102	Western Culture I-II		6
HUMA 3201-3202	Western Culture III-IV		6
CIFI 3002	Introduction to the Physical Sciences II		3
MUSI 3225	Appreciation of the Elements of Music		3
ARTE 3155	Ancient and Medieval Art		3
ARTE 3156	Modern and Contemporary Art		3
HIST 3241-3242	History of Puerto Rico I-II		6
FILO 3001-3002	Introduction to Philosophy I-II		6
FRAN 3021-3022	Experimental French I-II		6
FRAN 3033	Experimental French III		3
LITE 3011	Modern Literature		3
Specialty/Concentrat			
Code	Title		Credits
FILO Elective	Directed Elective in Philosophy		3
Electiva HIST	Directed Elective in History		9
ARTE Elective	Art-Directed Elective		6
HUMA 4105	Seminar on Research or Creation in the Hum	anities (Capstone)	3
Free Electives			5
Code	Title		Credits
	Free Electives		12
		Total credits	129

# https://www.cayey.upr.edu/decanato-de-asuntos-academicos/english-dept

The Bachelor of Arts in English currently offered at the University of Puerto Rico at Cayey provides flexibility and diversity of disciplines to design a program of study that is grounded in students' diverse career goals and that also engages with their daily lives as members of contemporary Puerto Rican society. and the global community. The program hopes to offer students a variety of emphases that reflect their diverse interests, as well as current developments in the field of English studies, such as theoretical and applied linguistics and literature, women's and gender studies, and/or Caribbean and diaspora studies, thus responding to significant changes in the discipline since the department's founding in 1969.

# Program:

• Bachelor of Arts Concentration in English

# Minor concentrations:

- Literature
- Language and Linguistics

# **Related professions:**

- University Professor
- Teaching
- Laws
- Journalism
- Translation / Interpreter
- Federal Agencies
- Creative Arts
- Public Relations, among others.

Bachelor of Arts w	ith a concentration in English		
General Education C	ore Courses		
Code	Title		Credits
HUMA 3101-3102	Western Culture I-II		6
HUMA 3201-3202	Western Culture III-IV		6
CISO 3121-3122	Introduction to Social Sciences I-II		6
ESPA 3101-3102	Basic Spanish I-II		6
MATE 3041-3042	Introduction to Mathematics I-II		6
CIBI 3001-3002	Biology Fundamentals I-II		6
HIST 3245	Compendium of Puerto Rican History		3
INTD 3027	First Year Interdisciplinary Seminar		3
Core Courses of the	Discipline		
Code	Title		Credits
INGL 3101-3102**o	Basic English I-II (450-539 CEEB points)		6
ENGL 3103-3104 o	Intermediate English I-II (540-640 CEEB poir	nts)	
INGL (3XXX-4XXX)	Advanced English (641 or more CEEB points	;)	
ESPA 3201-3202 or	Introduction to Literary Genres I-II		6
ESPA 3211-3212	Introduction to Spanish Literature I-II		
CIFI 3001-3002	Introduction to the Physical Sciences I-II		6
MUSI 3225	Appreciation of the Elements of Music		3
HIST 3111	History of the United States I		3
ARTE 3155 or	Ancient and Medieval Art		3
ARTE 3156	Modern and Contemporary Art		
Social Sciences	Directed Elective in Social Sciences		6
Elective			
Language Elective	ve Language-Directed Elective		6
Specialty/Concentration	tion Courses		
Code	Title		Credits
INGL 3001-3002	English Literature I-II		6
INGL 3231-3232	Advanced Composition I-II: Introduction to	Rhetoric and Composition	6
INGL 3251-3252	Americana Literature I-II		6
ENGLISH 4011	Phonetics and Phonology of English		3
ENGLISH 4407	Closing Experience Seminar in English ( <i>Capstone</i> )		3
Advanced English	Seminar in Literature, Cultural Studies or Ge	ender (INGL 4185, 4195,	3
Directed Elective	4275, 4295, 4370, 4375 or 4380)		
Directed Elective	Directed Elective in English Linguistics (INGI 4210, 4245, 4335, 4290)	_ 3205, 3225, 3265, 3370,	3
Free Electives			
Code	Title		Credits
	Free Electives		17
		Total credits	128

\*\*Starting level in the program must be of intermediate proficiency (INGL 3103-3104). Students admitted to INGL 3101-3102 will be discerned/evaluated at the end of their first year to assess their proficiency and receive course recommendations if they still merit strengthening their language skills.

# https://www.cayey.upr.edu/decanato-de-asuntos-academicos/biologia

The Department of Biology is attached to the area of Natural Sciences. It offers courses leading to two baccalaureates in Natural Sciences with a concentration in Biology: baccalaureate in face-to-face mode and baccalaureate in hybrid mode. This baccalaureate offers the academic foundations to pursue graduate or professional studies in core areas of biology or related to health. It prepares biologists with the necessary skills to contribute to technology, research and problem solving. It offers meaningful teaching and learning experiences that allow the development of scientific thinking.

Areas of interest: Biomedical Sciences, Cellular, Molecular, Biotechnology, Environmental, Zoology and Botany. Research in the areas of neurobiology, mycology, microbiology, bioinformatics, ecology and others.

# Program:

• Bachelor of Science with a concentration in Biology

# Minor concentrations:

- Structure and Function of the Human Body
- Medical Pre-Technology
- Neuroscience

# **Related professions:**

- Branches allied to health
- Environmental branches

Bachelor of Science	e with a concentration in Biology	
General Education C	ore Courses	
Code	Title	Credits
CISO 3121-3122	Introduction to Social Sciences I-II	6
ESPA 3101-3102	Basic Spanish I-II	6
ESPA 3201-3202 or	Introduction to Literary Genres I-II	6
ESPA 3211-3212	Introduction to Spanish Literature I-II	
HIST 3245	Compendium of Puerto Rican History	3
HUMA 3101-3102	Western Culture I-II	6
INGL 3101-3102 or	Basic English I-II (450-539 CEEB points)	6
INGL 3103-3104 or	Intermediate English I-II (540-640 CEEB points)	
INGL (3XXX-4XXX)	Advanced English (641 or more CEEB points)	
INGL 3201-3202 or	Composition and Reading I-II (Requirement: Basic English) Introduction to	6
INGL 3221-3222	Literature I-II (Requirement: Intermediate or Advanced English)	
INGL (3XXX-4XXX)	Advanced Level English (Requirement: Intermediate or Advanced Level	
	English)	
INTD 3027	First Year Interdisciplinary Seminar	3
Core Courses of the I	Discipline / 43 or 44 Crs.	
Code	Title	Credits
BIOL 3031	General Biology I	3
BIOL 3033	General Biology Laboratory I	1
MATE 3211-3212	Pre-calculation with Experiments I-II	6
MATE 3052	Calculus I	3
QUIM 3131-3132	General Chemistry I-II	6
QUIM 3133-3134	General Chemistry Laboratory I-II	2
QUIM 3121-3122	Organic Chemistry I-II	6
QUIM 3123-3124	Organic Chemistry Laboratory I-II	2
FISI 3011-3012	University Physics I-II	6
FISI 3013-3014	University Physics Laboratory I-II	2
SOCI 3006 or	Sociology of Science	
FILO 4471 or	Philosophy of Science	3
FILO 4021	Principles of Ethics	
Elective in Mathema	tics-Physics (3 to 4 credits) SICI3007 –CITE4005-MATE3015, MATE4160,	3
MATE4997		
Concentration or Spe	ecialty Courses / 15 Crs.	-
Code	Title	Credits
BIOL3305	Genetics	4
BIOL3405	General Zoology	4
BIOL3415	General Botany	4
BIOL4915	"Sem Integrator of Topics in Biology" (Capstone)	3
Directed Elective Cou	urses in Biology / 12 Crs.	
Code	Title	Credits
BIOL3701	Physiological Anatomy I Laboratory	0
BIOL3701	Physiological Anatomy I	4
BIOL3702	Physiological Anatomy Laboratory II	0
BIOL3702	Physiological Anatomy II	4

Directed Elective Courses in Biology / 12 Crs.			
Code	Title		Credits
BIOL3705	General Microbiology (conference)		4
BIOL4018	Cellular/Molecular Biology		4
BIOL4746	Economic Mycology		3
BIOL4370	Bioinformatics		
BIOL4758	Neurobiology		3
Free Electives			
Code	Title		Credits
	Free Electives		15
		Total credits	131

To meet the requirements of the Bachelor's Degree in Biology, you must also meet the following:

- •Advanced courses to be used as directed electives in Biology do not include BIOL3755, BIOL4990\*. These can count as free electives.
- At least two of the advanced courses to be used as directed electives in Biology must be laboratory-based.
- Concentration courses in Biology must be passed with a minimum of 2.0.
- The average in the concentration courses necessary for graduation is a minimum of 2.0.
- The cumulative index with graduation requirements must be a minimum of 2.0.
- •The BIOL3009 course (4crs) can replace BIOL 3031 and BIOL 3033.

# https://www.cayey.upr.edu/decanato-de-asuntos-academicos/quimica

The main objective is to train professionals with a comprehensive academic preparation. The Department of Chemistry wishes to raise awareness in students of the scientific and technological development of Puerto Rico. That they can comply with the requirements of the law for professional practice that includes, revalidation exam and eventual authorization from the Chemical Examination Board of Puerto Rico. As part of its offerings, it encourages research at the undergraduate level.

# High school:

• Bachelor of Science with a concentration in Chemistry

# Lower concentration:

• It does not have

## **Related professions:**

- Chemical Analyst in the Industry
- Pursue graduate studies in Chemistry or related areas

Bachelor of Science with a co		
General Education Core Courses		
Code	Title	Credits
HUMA 3111-3112	Compendium of Western Culture I-II	6
CISO 3121-3122	Introduction to Social Sciences I-II	6
ESPA 3101-3102	Basic Spanish I-II	6
ESPA 3201-3202 or	Introduction to Literary Genres I-II Introduction to	6
ESPA 3211-3212	Spanish Literature I-II	
INGL 3101-3102 or	Basic English I-II	6
INGL 3103-3104 or INGL (3XXX-	Intermediate English	
4XXX)	I-II	
INGL 3201-3202 or	Composition and Reading I-	6
INGL 3221-3222	II Introduction to Literature	
HIST 3245	Compendium of Puerto Rican History	3
INTD 3027	First Year Interdisciplinary Seminar	3
Non-Core Courses		
Code	Title	Credits
MATE 3171-3172	Precálculo I-II	6
MATE 3052-3053	Calculus I-II	6
MATE 3054	Calculus III	3
BIOL 3031-3103	Biología General I-II	6
BIOL 3033-3104	General Biology Laboratory I-II	2
FISI 3011-3013	University Physics I-II	6
FISI 3012-3014	University Physics Laboratory I-II	2
Specialty/Concentration Courses	5	
Code	Title	Credits
QUIM 3131-3132	General Chemistry I-II	6
QUIM 3133-3134	General Chemistry Laboratory I-II	2
QUIM 3151-3153	Organic Chemistry I-II	6
QUIM 3152-3154	Organic Chemistry Laboratory I-II	2
QUIM 3025	Analytical chemistry	4
QUIM 3006	Biography, Chemical Literature and Seminar	2
QUIM 4041-4042	Physical Chemistry I-II	6
QUIM 4101-4102	Physical Chemistry Laboratory I-II	2
QUIM 4015	Instrumental Analytical Chemistry (Capstone)	4
QUIM 4000	Inorganic chemistry	3
QUIM 4065	Biochemistry	3
QUIM 4066	Biochemistry Laboratory	1
QUIM Elective	Directed Elective in Chemistry	3
QUIM Elective	Directed Elective in Chemistry	2
Free Electives		
Code	Title	Credits
	Free Electives	12
	Total credi	ts 131

# **Mathematics-Physics**

## https://www.cayey.upr.edu/decanato-de-asuntos-academicos/matematica-y-fisica

Mathematics is the basis of scientific and technological development in the modern era. Its study encourages formal and analytical reasoning in individuals. These are skills that are becoming increasingly relevant in society. The Department offers a baccalaureate with a concentration in Mathematics designed for students who are interested in pursuing graduate studies in this discipline or related areas.

## Program:

• Bachelor of Science Concentration in Mathematics

## Lower concentration

• Mathematics

## **Related professions:**

- Pure and Applied Mathematics
- Computer Science
- Statistics
- Biomathematics
- Mathematics Education
- Actuarial
- Economy and Finance
- Physics, Astronomy and Meteorology

Bachelor of Science	with a concentration in Mathematics	
General Education Co	re Courses	
Code	Title	Credits
HUMA 3101-3102	Western Culture I-II	6
HUMA 3201-3202	Western Culture III-IV	6
CISO 3121-3122	Introduction to Social Sciences I-II	6
ESPA 3101-3102	Basic Spanish I-II	6
ESPA 3201-3202 or	Introduction to Literary Genres I-II Introduction to Spanish	6
ESPA 3211-3212	Literature I-II	
INGL 3101-3102 or	Basic English I-II (450-539 CEEB points)	6
INGL 3103-3104	Intermediate English I-II (540-640 CEEB	
or INGL (3XXX-	points)	
4XXX)	Advanced English (641 or more CEEB points)	
INGL 3201-3202 or	Composition and Reading I-II (Requirement: Basic English)	6
INGL 3221-3222	Introduction to Literature I-II (Requirement: Intermediate or	
INGL (3XXX-4XXX)	Advanced English) Advanced Level English (Requirement:	
	Intermediate or Advanced English)	
HIST 3245	Compendium of Puerto Rican History	3
INTD 3027	First Year Interdisciplinary Seminar	3
Non-Core Courses		·
Code	Title	Credits
MATE 3171-3172	Precálculo I-II	6
QUIM 3131-3132	General Chemistry I-II	6
QUIM 3133-3134	General Chemistry Laboratory I-II	2
BIOL 3031-3103	Biología General I-II	6
BIOL 3033-3104	General Biology Laboratory I-II	2
FISI 3011-3013	University Physics I-II	6
FISI 3012-3014	University Physics Laboratory I-II	2
FISI Elective	Directed Elective in Physics	3
Electiva SICI	Computer Elective-Second Level	3
Specialty/Concentrati	on Courses	
Code	Title	Credits
MATE 3052-3053	Calculus I-II	6
MATE 3015	Elemental Stat	3
SICI 3007	Basic Programming	3
MATE 3019	School Geometry	3
MATE 3054 or	Calculus III	3
MATE 4009	Ordinary Differential Equations	
MATE 4031	Pseudogebra Lineal	3
MATE 4032-4033	Álgebra Superior I-II	6
MATE 4035	Real Analysis	3
MATE 4997	Special Topics in Mathematics ( <i>Capstone</i> )	3
Free Electives		-
Code	Title	Credits
	Free Electives	12
	Total cred	

## **Program in Natural Sciences**

The Program in Natural Sciences provides a multidisciplinary academic training in Natural Sciences and Mathematics, ideal for the training of professionals who will work in work areas that require a broad and integrated vision of the Sciences. The Bachelor's Degree in Natural Sciences consists of a multidisciplinary, varied and flexible curriculum of 132 credits. The student has the opportunity to explore various fields of Natural Sciences, such as Biology, Chemistry, Physics, as well as Mathematics before deciding on specialization in one or more of them. You may also complete one or more minor concentrations using the free electives. Various curricular options can be completed so that students can develop in areas of knowledge of their choice. This also aims to ensure that graduates have an optimal preparation that allows them greater and better employment opportunities, as well as academic success for those who pursue graduate or professional studies.

# **Mission and Vision**

The mission of the Program in Natural Sciences is to offer a broad, flexible and multidisciplinary curriculum in Natural Sciences that aims to prepare students to perform successfully in the personal, professional and graduate or professional studies.

Our vision is to provide comprehensive education of excellence in the Natural Sciences that is distinguished by its multidisciplinary and innovative nature and that promotes the integration of various disciplines of Natural Sciences and Mathematics, keeping in perspective the value of professional specialization.

# Objectives

The objectives of the Program are:

- 1. To offer a curriculum with an interdisciplinary vision that provides the student with a solid foundation of skills and content related to various scientific disciplines.
- 2. To provide a curriculum of excellence, flexible and agile that allows the student to complete requirements and successfully pursue graduate or professional studies.
- 3. To contribute to the development of research and community service experiences and to the participation of the student in these experiences.

# Graduate profile

Currently, work areas related to science and technology demand professionals with multidisciplinary academic training and an interdisciplinary scientific vision that allows them to understand and/or explain natural processes, as well as social and technological problems in the world. In the field of scientific work, research requires more than one specialization and broad knowledge in several disciplines. The Program in Natural Sciences allows the training of graduates with skills, knowledge and aptitudes in various scientific disciplines related to the Natural Sciences. The student may combine two (2) concentrations using the directed electives in Science and Mathematics and the free electives of their curriculum.

Students pursuing studies in professional or graduate schools such as: Medicine, Dentistry, Pharmacy, and Allied Health Sciences (Medical Technology, Nursing, Pharmacy, and Physical or Occupational Therapy, among others) may complete course requirements as part of the discipline's core courses (45 CRDS), specialty or concentration electives (24 CRDS), and free electives (18 CRDS).

The Natural Sciences Program is located in Office 330 of the New Science Building. Their phone number is 787-738-2161; extensions are 3330 and 3334.

# https://www.cayey.upr.edu/decanato-de-asuntos-academicos/ciencias-naturales-generales

The Natural Sciences program, through its bachelor's degree, seeks to prepare you for the challenges and opportunities of the future with a multidisciplinary academic training; with an interdisciplinary scientific vision that allows you to understand and explain natural processes, as well as social and technological problems and continue graduate and professional studies successfully. We have a rich, diverse, agile and flexible curriculum in Science and Mathematics.

## **Baccalaureates:**

- Bachelor's Degree in Natural Sciences
- Multidisciplinary in Science and Mathematics

# Lower concentration:

• It does not have

## **Related Professions:**

- PhD and Master's Degrees in Biomedical Sciences
- Medicine
- Dentistry
- Pharmacy
- Emerging careers of scientific innovation
- Health Sciences: Medical Technology, Physical or Occupational Therapy, Speech Pathology, among others

Bachelor's Degree in	Natural Sciences		
Core Courses in Genera			
Code	Title		Credits
HUMA 3101-3102	Western Culture I-II or Compendium of Western Culture I and	11	6
HUMA 3111- 3112	Compendium of Western Culture III and IV		
CISO 3121-3122	Introduction to Social Sciences I-II		6
ESPA 3101-3102	Basic Spanish I-II		6
ESPA 3201-3202 or	Introduction to Literary Genres I-II		6
ESPA 3211-3212	Introduction to Spanish Literature I-II		
INGL 3101-3102 or	Basic English I-II (450-539 CEEB points)		6
INGL 3103-3104 h	Intermediate English I-II (540-640 CEEB points)		
INGL (3XXX-4XXX)	Advanced English (641 or more CEEB points)		
INGL 3201-3202 or	Composition and Reading I-II (Requirement: Basic English)		6
INGL 3221-3222	Introduction to Literature I-II (Requirement: Intermediate or A	dvanced English)	
INGL (3XXX-4XXX)	Advanced Level English (Requirement: Intermediate or Advanced Level English (Requirem	ced Level English)	
HIST 3245	Compendium of Puerto Rican History		3
Core Courses of the Dis	scipline		
Code	Title		Credits
BIOL 3031-3103	Biología General I-II		6
BIOL 3033-3104	General Biology Laboratory I-II		2
FISI 3011-3012	University Physics I-II		6
FISI 3013-3014	University Physics Laboratory I-II		2
MATE 3171-3172	Precálculo I-II		6
MATE 3052-3053	Calculus I-II		6
QUIM 3131-3132	General Chemistry I-II		6
QUIM 3133-3134	General Chemistry Laboratory I-II		2
SICI 3007 or	Basic Programming		3
MATE 3015	Elementary Statistics		
SOCI 3006	Sociology of Science		3
Social Sciences	Directed Elective in Social Sciences		3
Elective			
INTD 3027	Interdisciplinary Seminar		3
Concentration Courses	**		
Code	Title		Credits
*QUIM Elective	Directed Elective in Chemistry		4
*BIOL Elective	Directed Elective in Biology		4
*FISI Elective	Directed Elective in Physics		4
*Science or Mathematics Elective	Directed Electives in Science or Mathematics		12
*NUTR 4177	Nutrition and Health (Capstone)		3
Free Electives			
Code	Title		Credits
	Free Electives		18
		Total credits	132

\*These concentration courses (27 credits) must be passed with a minimum GPA of 2.00 as a graduation requirement (Academic Senate Certification 47 and 51, 2019-2020).

\*\*Courses on theoretical and/or experimental research will be counted as a requirement of the electives directed in the concentration of the Bachelor's Degree in Natural Sciences up to a maximum of three credits. The courses that may be considered are: Introduction to Research in Biology (BIOL4990), Special Subjects in Physics (FISI4995), Mathematics Seminar (MATE4125) and Undergraduate Research in Chemistry (QUIM4999). (Certification 78, 2015-16 Academic Senate)

# **Business Administration**

#### https://www.cayey.upr.edu/decanato-de-asuntos-academicos/adem

The Department of Business Administration has demonstrated a genuine commitment to the comprehensive learning of its students. It develops and trains competent professionals to join the world of work, be an agent of change in business administration or to continue graduate studies.

#### **Baccalaureates:**

- Bachelor of Business Administration with a concentration in Accounting
- Bachelor's Degree in Business Administration with a concentration in Management
- Bachelor's Degree in Office Technology and Administration with a concentration in Office Administration

### **Minor Concentrations:**

- Management
- Management and Human Resources
- Management and Entrepreneurship
- Management and Marketing
- Operations Management
- Financial accounting
- Accounting-Emphasis on Contributions
- Accounting-Emphasis in Financial Accounting
- Accounting-Emphasis in Auditing
- Office Technology & Administration

### **Related Professions:**

- Certified Public Accountant (CPA)
- Managers
- Auditor
- Administrative Assistants

General Education Co	Administration with a concentration in Accounting	
Code	Title	Credits
HUMA 3111-3112	Compendium of Western Culture I-II Compendium	6
	of Western Culture III and IV	· ·
CISO 3121-3122	Introduction to Social Sciences I-II	6
ESPA 3101-3102	Basic Spanish I-II	6
INGL 3101-3102 or	Basic English I-II (450-539 CEEB points)	6
INGL 3103-3104 or	Intermediate English I-II (540-640 CEEB points)	
INGL (3XXX-4XXX)	Advanced English (641 or more CEEB points)	
MATE 3011-3012	Quantitative Methods I-II	6
CIBI 3001-3002 or	Fundamentals of Biology I-II Introduction	6
CIFI 3001-3002	to Physical Sciences I-II	
HIST 3245	Compendium History of Puerto Rico	3
INTD 3027	Second Year Interdisciplinary Seminar	3
Core Courses of the S	pecialty (Discipline)	
Code	Title	Credits
ECON 3005	Economy	3
ADMI 4019	Corporate Social Responsibility	3
TAOF 4035	Integration and Management of Programs for Business Decision Making	3
ADMI 4225	Principles of International Trade	3
ESCO 3001-3002	Psychology of Communication I-II	6
INCO 3005-3006	Commercial Communication I-II	6
ESTA 3001	Statistical Analysis I	3
ESTA 3002	Statistical Analysis II	3
FINA 3006	Mercantile Finance	3
FINA 3007	Currency and Banking	4
MERC 3115	Marketing Principles	3
CONT 3005-3006	Introduction to Accounting Fundamentals I-II	8
DEME 4005	Commercial law	4
ADMI 4005	Introduction to Managerial Activity	3
ADMI 4006	Quantitative Analysis for Decisions	3
Specialty/Concentrat	ion Courses	
Code	Title	Credits
CONT 3025	Cost Accounting	4
CONT 3101-3102	Philosophy, Theory and Problems of Financial Accounting I-II	6
CONT 4015	Advanced Accounting Theory and Problems	4
CONT 4040	Business Enterprise Audit and Professional Services (Capstone)	4
CONT Electives	Directed Electives in Accounting	6
Free Electives		
Code	Title	Credits
	Free Electives	12
	Total credits	136

Bachelor's Degree in	Business Administration with a concentration in Management	
General Education Co	pre Courses	
Code	Title	Credits
HUMA 3111-3112	Compendium Cultura Occidental I-II	6
	Compendium Cultura Occidental III-IV	
CISO 3121-3122	Introduction to Social Sciences I-II	6
ESPA 3101-3102	Basic Spanish I-II	6
INGL 3101-3102 or	Basic English I-II (450-539 CEEB points)	6
INGL 3103-3104 or	Intermediate English I-II (540-640 CEEB points)	
INGL (3XXX-4XXX)	Advanced English (641 or more CEEB points)	
MATE 3011-3012	Quantitative Methods I-II	6
CIBI 3001-3002 or	Fundamentals of Biology I-II Introduction	6
CIFI 3001-3002	to Physical Sciences I-II	0
HIST 3245	Compendium History of Puerto Rico	3
INTD 3027	Second Year Interdisciplinary Seminar	3
Core Courses of the S		
Code	Title	Credits
ECON 3005	Economy	3
ADMI 4019	Corporate Social Responsibility	3
TAOF 4035	Integration and Management of Programs for Business Decision Making	3
ADMI 4225	Principles of International Trade	3
ESCO 3001-3002	Psychology of Communication I-II	6
INCO 3005-3006	Commercial Communication I-II	6
ESTA 3001	Statistical Analysis I	3
ESTA 3002	Statistical Analysis II	3
FINA 3006	Mercantile Finance	3
FINA 3007	Currency and Banking	4
MERC 3115	Marketing Principles	3
CONT 3005-3006	Introduction to Accounting Fundamentals I-II	8
DEME 4005	Commercial law	4
ADMI 4005	Introduction to Managerial Activity	3
	Quantitative Analysis for Decisions	3
Specialty/Concentrat		
Code	Title	Credits
ADMI 4007	Administrative Policy (Capstone)	3
CONT 4006	Managerial Accounting	3
GEOP 4315	Production and Operation Management	3
REHU 4405	Human Resource Management	3
REHU 4409	Human relations	3
REHU or MERC	Directed Electives in Human Resources or Marketing	6
Electives		
Free Electives	Title	Carachite
Code	Title	Credits
	Free Electives	12
	Total credits	133

Bachelor's Degree in Technology and Office Administration with a concentration in Office Administration

	pre Courses (42 Credits)	
Code	Title	Credits
HUMA 3111-3112	Compendium of Western Culture I-II	6
	Compendium Of Western Culture III-IV	
CISO 3121-3122	Introduction to Social Sciences I-II	6
ESPA 3101-3102	Basic Spanish I-II	6
INGL 3101-3102 or	Basic English I-II (450-539 CEEB points) Intermediate	6
INGL 3103-3104 or	English I-II (540-640 CEEB points)	
INGL (3XXX-4XXX)	Advanced English (641 or more CEEB points)	
MATE 3041-XXXX	Introduction to Mathematics I - Elective in Mathematics	6
CIBI 3001-3002 or	Fundamentals of Biology I-II Introduction to	6
CIFI 3001-3002	Physical Sciences I-II	
HIST 3245	Compendium History of Puerto Rico	3
INTD 3027	Interdisciplinary Seminar	3
Core Courses of the S	pecialty (Discipline) 31 Credits	
Code	Title	Credits
THIS 3026	Statistics for the Administrative Professional	2
ESCO 3001-3002	Psychology of Communication I-II	6
ECON 3021	Principles of Economics I	3
INCO 3005-3006	Commercial Communication I-II	6
REHU 4409	Human relations	3
INCO 4005	Pronunciation Techniques	3
FINA 3045	Finance for the Administrative Professional	2
MERC 3115	Marketing Principles	3
CONT 3016	Accounting for the Administrative Professional	3
	ion Courses (49 Credits)	
Code	Title	Credits
TAOF 3008	Office Systems and Technology Concepts	3
TAOF 3009	Document Management, Management and Preservation	3
TAOF 3026	Website, Internet and Telecommunications	4
TAOF 3016	Learning the Keyboard and its Applications	4
TAOF 3017	Document Formats and Production	4
TAOF 3018	Document Production	4
TAOF 3019	Integration of Electronic Information Design and Processing Programs	4
TAOF 3027	Transcription in Spanish by Magnetic Media	3
TAOF 3028	English transcription by magnetic means	3
TAOF 4015	Administrative Systems and Office Procedures	3
TAOF 4015	Office Supervision and Administration	3
TAOF 4010	Office Systems Integration	3
TAOF 4024	Internship Seminar in Office Administration	5
TAOF 4025	Directed Elective at TAOF	
		3
Free Electives	Title	Cradita
Code	Title	Credits
	Free Electives	13

# Teacher Preparation Program (Pedagogy)

### https://www.cayey.upr.edu/decanato-de-asuntos-academicos/pedagogia

Teacher training is one of the central objectives of the University of Puerto Rico at Cayey. The Department of Pedagogy responds to the needs of our times by facilitating clinical experiences in existing educational environments in the communities of our region. It has the responsibility of teaching, developing, evaluating, and disseminating everything related to the area of teacher preparation to the university community, to collaborators in public and private schools, as well as to the staff of the Puerto Rico Department of Education.

## **Programs:**

- Bachelor of Arts in Elementary Education with a concentration in
  - Special education
  - o Natural sciences
  - o Spanish
  - o Mathematics
  - English
- Bachelor of Arts in Secondary Education with a concentration in
  - English
  - o Spanish
  - Natural sciences
  - Physical education

## Lower concentration:

• Sports Administration

## **Professional Certifications:**

- Sports Training
- Personal Training
- Recreation

### **Related Professions:**

- Teachers
- Occupational therapy
- School Management
- Speech Pathology
- School Counseling
- Assessment specialists, among others

	lementary Education with a concentration in Natural Sciences	
General Education Cor		
Code	Title	Credits
HUMA 3111 - 3112	Compendiums of Western Culture I – II	6
CISO 3121 - 3122	Introduction to Social Sciences I - II	6
ESPA 3101 - 3102	Basic Spanish I - II	6
ESPA 3201	Introduction to Literary Genres I	3
INGL 3101 - 3102 or	Basic English I-II (450-539 CEEB points) Intermediate English I-II	6
INGL 3103 - 3104	(540-640 CEEB points)	
or INGL ####	Advanced English (641 or more CEEB points)	
INGL 3021	Oral and Written English I	3
HIST 3245	Compendium of Puerto Rican History	3
MATE 3211 - 3212	Pre-calculation with experiments I - II	6
INTD 3027	First Year Interdisciplinary Seminar	3
Core Courses of the Dis	scipline (54 credits)	
Code	Title	Credits
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical and Social Foundations of Education	3
EDFU 4019	Philosophical Foundations of Education	3
EDFU 3017	Learning Assessment	3
EDFU 4005	The Study of Man and His Physical Environment	3
EDPE 4008	Teaching Reading in Elementary School	3
EDPE 3016 or	Teaching Music in School	3
EDPE 3328	Fine Arts in Elementary and Secondary School	
EDPE 3018	Teaching English as a Second Language in Elementary School	3
EDES 4006	The Exceptional Child with the Technological Assistance component	3
HIST 3115	Compendium History of the United States	3
TEED 3008	Introduction to Educational Technology	3
EDFU 3046	Health Education in Elementary School	3
EDFI 3105 or 3585	Simple Organization Games or Basic Rhythms	2
EDPE 4117	Teaching Spanish and Social Studies in Elementary School	3
EDPE 4115	Teaching Science and Mathematics in Elementary School	3
EDPE 3087	Pre-Practice	1
EDPE 4016	Elementary School Teaching Practice Clinical Experience	6
	(Capstone)	
Concentration Courses	(20 credits)	
Code	Title	Credits
BIOL 3031 - 3103	Biología General I - II	6
BIOL 3033 - 3104	General Biology Laboratory I - II	2
QUIM 3131 - 3132	General Chemistry I - II	6
QUIM 3133 - 3134	General Chemistry Laboratory I - II	2
BIOL	Directed Elective in Biology	4
ree Electives		•
Code	Title	Credits
	Free Electives	14
	Total credits	

Bachelor of Arts in E	ducation with a concentration in Elementary Special Education	
General Education Cor	e Courses (42 credits)	
Code	Title	Credits
HUMA 3111 - 3112	Compendiums of Western Culture I – II	6
CISO 3121 - 3122	Introduction to Social Sciences I - II	6
ESPA 3101 - 3102	Basic Spanish I - II	6
INGL 3101 - 3102 or	Basic English I - II (450 - 539 CEEB points)	6
INGL 3103 - 3104 or	Intermediate English I - II (540 - 640 CEEB points)	
INGL 3221 - 3222	Advanced English (641 or more CEEB points)	
HIST 3245	Compendium of Puerto Rican History	3
MATE 3041 - 3042	Introduction to Mathematics I - II	6
CIBI 3001 - 3002 or	Fundamentals of Biology I - II Introduction to	6
CIFI 3001 - 3002	the Physical Sciences I - II	
INTD 3027	First Year Interdisciplinary Seminar	3
Core Courses of the Di		
Code	Title	Credits
INGL 3021 - 3022	Oral and Written English I - II	6
EDFI 3645	First Aid & Safety	2
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical and Social Foundations of Education	3
EDFU 4019	Philosophical Foundations of Education	3
HIST 3115	Compendium History of the United States	3
EDES 4096	Methodology and Teaching of Reading and Writing of K-12 in Special Education	3
EDES 4097	K-12 Language Arts Methodology and Teaching in Special Education	3
EDES 4098	K-12 Math Methodology and Teaching in Special Education	3
TEED 3008	Introduction to Educational Technology	3
Concentration Courses		•
Code	Title	Credits
EDPE 4115	Teaching Science and Mathematics in Elementary School	3
EDES 3017	The Arts in Special Education	3
EDES 3018	Emotional Disturbances	3
EDES 3019	Specific Learning Problems	3
EDES 4006	The Exceptional Child with the Technological Assistance component	3
EDES 4078 - 4079	Curriculum in Special Education I - II	6
EDES 4086	Mental retardation	3
EDES 4087	The Preschool-Age Child with Disabilities	3
EDFI 3395	Teaching Physical Education for the Disabled	3
EDES 4088	Evaluation in Special Education	3
EDES 4089	Special Education Practice Clinical Experience (Capstone)	6
Free Electives		
Code	Title	Credits
	Free Electives	12
	Total credits	128

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	ementary Education with English concentration	
	re Courses (42 credits)	Cuadita
Code	Title	Credits
HUMA 3111 - 3112	Compendiums of Western Culture I – II	6
CISO 3121 - 3122	Introduction to Social Sciences I - II	6
ESPA 3101 - 3102	Basic Spanish I - II	6
INGL 3103 - 3104 or	Intermediate English I - II Advanced	6
INGL 3231 - 3232	Composition I - II	2
HIST 3245	Compendium of Puerto Rican History	3
MATE 3041 - 3042	Introduction to Mathematics I - II	6
CIBI 3001 - 3002 or	Fundamentals of Biology I - II Introduction to	6
CIFI 3001 - 3002	the Physical Sciences I - II	2
INTD 3027	First Year Interdisciplinary Seminar	3
Core Courses of the Di		
Code	Title	Credits
3021	Oral and Written English I	3
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical and Social Foundations of Education	3
EDFU 4019	Philosophical Foundations of Education	3
EDFU 3017	Learning Assessment	3
EDFU 4005	The Study of Man and His Physical Environment	3
EDPE 3016 or	Teaching Music at School or	3
EDPE 3328	Fine Arts in Elementary and Secondary School	
EDPE 3018	Teaching English as a Second Language in Elementary School	3
EDES 4006	The Exceptional Child with the Technological Assistance component	3
HIST 3115	Compendium History of the United States	
EDFI 3105 or	Simple Organization Games or Basic	2
EDFI 3585	Rhythms	
TEED 3008	Introduction to Educational Technology	3
EDFU 3046	Health Education in Elementary School	3
EDPE 4117	Teaching Spanish and Social Studies in Elementary School	3
EDPE 4115	Teaching Science and Mathematics in Elementary School	
EDPE 3087	Pre-Practice	3
EDPE 4016	Elementary School Teaching Practice Clinical Experience	6
	(Capstone)	
Concentration Course		
Code	Title	Credits
INGL 4335	Second Language Acquisition	
INGL 4326	Children's Literature	
INGL 3225	Introduction to Linguistics (requirement for other advanced linguistics)	
INGL ####	Intermediate or Advanced Literature	
INGL ####	Advanced Linguistics	
ree Electives		6
Code	Title	Credits
	Free Electives	13
	Total credits	

	lementary Education with a concentration in Spanish	
General Education Cor		<b>a b</b>
Code	Title	Credits
HUMA 3111 - 3112	Compendiums of Western Culture I – II	6
CISO 3121 - 3122	Introduction to Social Sciences I - II	6
ESPA 3101 - 3102	Basic Spanish I – II	6
INGL 3101 - 3102 or	Basic English I - II (450-539 CEEB points)	_
INGL 3103 - 3104	Intermediate English I - II (540-640 CEEB points)	6
or INGL ####	Advanced English (641 or more CEEB points)	
HIST 3245	Compendium of Puerto Rican History	3
MATE 3041 - 3042	Introduction to Mathematics I - II	6
CIBI 3001 - 3002 or	Fundamentals of Biology I - II	6
CIFI 3001 - 3002	Introduction to the Physical Sciences I - II	
INTD 3027	First Year Interdisciplinary Seminar	3
Core Courses of the Dis		
Code	Title	Credits
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical and Social Foundations of Education	3
EDFU 4019	Philosophical Foundations of Education	3
EDFU 3017	Learning Assessment	3
EDFU 4005	The Study of Man and His Physical Environment	3
EDPE 3016 or	Teaching Music in School	3
EDPE 3328	Fine Arts in Elementary and Secondary School	
EDPE 3018	Teaching English as a Second Language in Elementary School	3
EDES 4006	The Exceptional Child with the Technological Assistance component	3
HIST 3115	Compendium History of the United States	3
EDPE 4008	Teaching Reading in Elementary School	3
EDFI 3105 or	Simple Organization Games or Basic	2
EDFI 3585	Rhythms	
TEED 3008	Introduction to Educational Technology	3
EDFU 3046	Health Education in Elementary School	3
EDPE 4117	Teaching Spanish and Social Studies in Elementary School	3
EDPE 4115	Teaching Science and Mathematics in Elementary School	3
EDPE 3087	Pre-Practice	
EDPE 4016	Elementary School Teaching Practice Clinical Experience	6
	(Capstone)	
Concentration Courses		
Code	Title	
ESPA 3291 - 3292	Spanish Grammar I - II	
ESPA 3201	Introduction to Literary Genres I	
ESPA 3211 - 3212	Introduction to Spanish Literature I - II	
ESPA 4231 - 4232	Puerto Rican Literature I - II	
ree Electives		6
Code	Title	Credits
	Free Electives	13
	Total credits	

Bachelor of Arts in	Elementary Education with a concentration in Mathematics	
General Education Co	pre Courses (42 credits)	
Code	Title	Credits
HUMA 3111 - 3112	Compendiums of Western Culture I – II	6
CISO 3121 - 3122	Introduction to Social Sciences I - II	6
ESPA 3101 - 3102	Basic Spanish I – II	6
ESPA 3201	Introduction to Literary Genres I	3
INGL 3101 - 3102 or	Basic English I-II (450 - 539 CEEB points)	6
INGL 3103 - 3104 or	Intermediate English I - II (540 - 640 CEEB points)	
INGL	Advanced English (641 or more CEEB points)	
ENGLISH 3021	Oral and Written English I	3
HIST 3245	Compendium of Puerto Rican History	3
CIBI 3001 - 3002 or	Fundamentals of Biology I - II	6
CIFI 3001 - 3002	Introduction to the Physical Sciences I - II	
INTD 3027	First Year Interdisciplinary Seminar	3
Core Courses of the D	Discipline (60 credits)	
Code	Title	Credits
MATE 3041 - 3042	Introduction to Mathematics I - II	6
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical and Social Foundations of Education	3
EDFU 4019	Philosophical Foundations of Education	3
EDFU 3017	Learning Assessment	3
EDFU 4005	The Study of Man and His Physical Environment	3
EDPE 4008	Teaching Reading in Elementary School	3
EDPE 3016 or	Teaching Music in School	3
EDPE 3328	Fine Arts in Elementary and Secondary School	
EDPE 3018	Teaching English as a Second Language in Elementary School	3
EDES 4006	The Exceptional Child with the Technological Assistance component	3
HIST 3115	Compendium History of the United States	3
EDFU 3046	Health Education in Elementary School	3
EDFI 3105 or 3585	Simple Organization Games or Basic Rhythms	2
TEED 3008	Introduction to Educational Technology	3
EDPE 4117	Teaching Spanish and Social Studies in Elementary School	3
EDPE 4115	Teaching Science and Mathematics in Elementary School	3
EDPE 3087	Pre-Practice	1
EDPE 4016	Elementary School Teaching Practice Clinical Experience	6
	(Capstone)	
Concentration Course	es (15 Credits)	
Code	Title	Credits
MATE 3211	Pre-Calculus with Experiments I	3
MATE 3212	Pre-Calculus with Experiments II	3
MATE 3015	Elemental Stat	3
MATE 4026	Math for Elementary School Teachers	3
MATE	Directed Elective in Mathematics	3
Free Electives		
Code	Title	Credits
	Free Electives	13
	Total credit:	130

# Bachelor of Arts in Secondary Education Concentration in Natural Sciences

	-	
General Education Cor	e Courses (42 credits)	
Code	Title	Credits
HUMA 3111 - 3112	Compendiums of Western Culture I – II	6
CISO 3121 - 3122	Introduction to Social Sciences I - II	6
ESPA 3101 - 3102	Basic Spanish I - II	6
INGL 3101 - 3102 or	Basic English I - II (450-539 CEEB points)	6
INGL 3103 -	Intermediate English I - II (540-640 CEEB points)	
3104 or INGL	Advanced English (641 or more CEEB points)	
INGL 3201 - 3202	Composition and Reading I - II	6
HIST 3245	Compendium of Puerto Rican History	3
MATE 3211 - 3212	Pre-calculus with Experiments I - II	6
INTD 3027	First Year Interdisciplinary Seminar	3
Core Discipline Course	· · ·	-
Code	Title	Credits
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical and Social Foundations of Education	3
EDFU 4019	Philosophical Foundations of Education	3
EDES 4006	The Exceptional Child with the Technological Assistance component	3
EDFU 3017	Learning Assessment	3
EDFU 4005	The Study of Man and His Physical Environment	3
HIST 3115	Compendium History of the United States	3
TEED 3008	Introduction to Educational Technology	3
EDPE 3087	Pre-Practice	1
EDPE 4135	Theory and Methodology of Science Teaching in Secondary School	3
EDPE 4006	High School Teaching Practice Clinical Experience (Capstone)	6
Concentration Courses		
Code	Title	Credits
MATE 3052	Calculus I	3
BIOL 3031 – 3103	Biología General I – II	6
BIOL 3033 – 3104	General Biology Laboratory I – II	2
QUIM 3131 – 3132	General Chemistry I – II	6
QUIM 3133 – 3134	General Chemistry Laboratory I – II	2
QUIM 3121	Organic Chemistry I	3
QUIM 3123	Organic Chemistry Laboratory I	1
FISI 3011 – 3012	Física General I – II	6
FISI 3013 – 3014	General Physics Laboratory I – II	2
BIOL 3305	Genetics (Science-directed elective)	4
FISI o BIOL o QUIM	Directed Elective in Science	3
Free Electives		
Code	Title	Credits
	Free Electives	12
	Total credits	129

Bachelor of Arts in Se	condary Education with a concentration in Spanish	
General Education Core	Courses (42 credits)	
Code	Title	Credits
HUMA 3111 - 3112	Compendiums of Western Culture I – II	6
CISO 3121 - 3122	Introduction to Social Sciences I - II	6
ESPA 3101 - 3102	Basic Spanish I – II	6
INGL 3101 - 3102 or	Basic English I - II (450-539 CEEB points)	
INGL 3103 - 3104 or	Intermediate English I - II (540-640 CEEB points)	6
INGL 3221- 3222	Advanced English (641 or more CEEB points)	
HIST 3245	Compendium of Puerto Rican History	3
MATE 3041 - 3042	Introduction to Mathematics I - II	6
CIBI 3001 - 3002 or	Fundamentals of Biology I - II	6
CIFI 3001 - 3002	Introduction to the Physical Sciences I - II	
INTD 3027	First Year Interdisciplinary Seminar	3
Core Courses of the Dis	cipline (46 credits)	
Code	Title	Credits
ESPA 3211 - 3212	Introduction to Spanish Literature I - II	6
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical and Social Foundations of Education	3
EDFU 4019	Philosophical Foundations of Education	3
EDES 4006	The Exceptional Child with the Technological Assistance component	3
EDFU 3017	Learning Assessment	3
EDFU 4005	The Study of Man and His Physical Environment	3
HIST 3115	Compendium History of the United States	
TEED 3008	Introduction to Educational Technology	3
EDPE 4235	Theory and Methodology of Teaching Spanish in Secondary School	3
ESPA 4496	Research Seminar	3
EDPE 4006	High School Teaching Practice Clinical Experience (Capstone)	6
<b>Concentration Courses</b>		
Code	Title	Credits
ESPA 3291 - 3292	Spanish Grammar I - II	6
ESPA 4011 - 4012	Hispanic Linguistics I - II	
ESPA 4221 - 4222	Hispanic American Literature I - II	6
ESPA 4231 - 4232	Puerto Rican Literature I - II	
ESPA 4251 - 4252	Literature of the Golden Age I - II	
Free Electives		_
Code	Title	Credits
	Free Electives	12
	Total credits	129
Highly recommended o		
~ ·	duction to Literary Genres I – II	6
EDPE 3087- Pre-practice		1

Bachelor of Arts in S	econdary Education with a concentration in	English	
General Education Cor	e Courses (42 credits)		
Code	Title		Credits
HUMA 3111 - 3112	Compendiums of Western Culture I – II	Compendiums of Western Culture I – II	
CISO 3121 - 3122	Introduction to Social Sciences I - II		6
ESPA 3101 - 3102	Basic Spanish I - II		6
INGL 3103 - 3104	Intermediate English I - II (540 - 640 CEEB poir	nts)	6
HIST 3245	Compendium of Puerto Rican History		3
MATE 3041 - 3042	Introduction to Mathematics I - II		6
CIBI 3001 - 3002 or	Fundamentals of Biology I - II or		6
CIFI 3001 - 3002	Introduction to Physical Sciences I - II		
INTD 3027	First Year Interdisciplinary Seminar		3
Core Courses of the Di	scipline (43 credits)		
Code	Title		Credits
INGL or INGL 3225	Advanced Level English (Requirement: Interm	ediate or Advanced	
	Level English)		6
	Introduction to Linguistics (Requirement: Inte	rmediate or Advanced	
	English)		
EDFU 3001 - 3002	Human Growth and Development I - II		6
EDFU 3007	Historical and Social Foundations of Education	l	3
EDFU 4019	Philosophical Foundations of Education		3
EDES 4006	The Exceptional Child with the Technological	Assistance component	3
EDFU 3017	Learning Assessment		3
EDFU 4005	The Study of Man and His Physical Environme	The Study of Man and His Physical Environment	
HIST 3115	Compendium History of the United States		3
TEED 3008	Introduction to Educational Technology		3
EING 3515	Teaching Methodology "TESOL" K – 12		3
EDPE 3087	Pre-Practice		
EDPE 4006	High School Teaching Practice Clinical Experie	nce	6
	(Capstone)		
<b>Concentration</b> Courses	(30 credits)		
Code	Title		Credits
INGL 3335	Literature for Teens		3
INGL 4335	Second Language Acquisition		3
INGL	Directed in Intermediate Linguistics or Advanced Composition		3
INGL	Directed in Advanced Linguistics		6
INGL	Directed in Intermediate or Advanced Literature		12
INGL	Directed in Rhetorical or Critical Theory		3
ree Electives			
Code	Title		Credits
	Free Electives		14
		Total credits	129

	ndary Education with a concentration in Physical Education	
General Education Core Co		
Code	Title	Credits
HUMA 3111 - 3112	Compendiums of Western Culture I – II	6
CISO 3121 - 3122	Introduction to Social Sciences I - II	6
ESPA 3101 - 3102	Basic Spanish I - II	6
INGL 3101 - 3102 or	Basic English I - II (450-539 CEEB points)	6
INGL 3103 - 3104 or INGL	Intermediate English I - II (540-640 CEEB	
	points)	
HIST 3245	Compendium of Puerto Rican History	3
MATE 3041 - 3042	Introduction to Mathematics I - II	6
CIBI 3001 - 3002 or	Fundamentals of Biology I - II Introduction	6
CIFI 3001 - 3002	to the Physical Sciences I - II	Ū
		2
INTD 3027	First Year Interdisciplinary Seminar	3
Core Courses of the Discip		Credite
Code	Title	Credits
ING 3201	Composition and Reading I	3
ESPA 3201	Introduction to Literary Genres I	3
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical and Social Foundations of Education	3
EDFU 4019	Philosophical Foundations of Education	3
EDES 4006	The Exceptional Child with the Technological Assistance component	3
EDFI 4045	Measurement, assessment and evaluation in Physical Education from	3
EDFU 4005	The Study of Man and His Physical Environment	3
HIST 3115	Compendium History of the United States	3
TEED 3008	Introduction to Educational Technology	3
EDFI 4018	Methodology for the Teaching of Physical Education in Elementary	3
	School	1
EDPE 3087	Pre-Practice in Physical Education Seminar on Curriculum and Teaching Methodology Physical Education	<u>1</u> 3
EDFI 4215	K-12	5
EDFI 4216	Physical Education Teaching Practice in Secondary School	6
	Clinical Experience (Capstone)	
Concentration Courses (27	(Credits)	
Code	Title	Credits
EDFI 3385	Physical Efficiency	2
EDFI 4105	Philosophy of Exercise	3
EDFI 3105 or	Games and Simple Organization	2
EDFI 3585	Basic Rhvthms	3
EDFI 3465	Personal Health & Community	
EDFI 3555	History and Principles of Physical Education	3
EDFI 3645	First aid	2
EDFI 4115	Anatomy and Kinesiology	3
EDFI 4125	Physical Education Administration	3
EDFI 3100	Motor Learning	3
EDFI 4146	Law on Responsibility in Physical Education and Recreation	3
ree Electives		
Code	Title	Credits
	Free Electives	15
	Total credits	130

# **Honors Studies Program**

The Honors Studies program at the University of Puerto Rico at Cayey is a Program dedicated to promoting high academic excellence. He is an active member of the *National Collegiate Honors Council* and the University Association of Honor Programs of Puerto Rico. In 2005, he was recognized by the *Middle State Association* as an *Exemplary Honors Program*.

The Program stimulates comprehensive and interdisciplinary training and promotes the qualities that every university student needs to successfully face the historical time and space in which he or she has lived. To this end, it encourages the development of the attitudes, knowledge and skills necessary to carry out scientific research and encourages creative, artistic and literary activity. The Program creates a climate that encourages critical thinking, self-directed learning, exploration of disciplines outside the field of expertise, leadership, and commitment to the betterment of their society.

Students in the Program continue their regular program of study into the baccalaureate in concentration and complete, using elective credits or under the provisions of the 1994-95 Board of Trustees Certification 17, a minimum of 15 credits in the following activities:

- *Research Seminar*: a one-semester course, worth one (1) to three (3) credits, whose purpose is for students to conduct scientific research and prepare a monograph presenting the project and its results.
- Community Service Practice: a one-semester course worth three (3) credits that seeks to sensitize the student about the problems faced by their community, while providing them with the tools for teamwork, decisionmaking and problem solving. In it, students have the opportunity to offer their services through a responsible and ethical community intervention methodology. Communities can be diverse as can the levels at which they work. Practice alternates with theoretical training. Communities can be urban or rural geographic areas or specific institutions, such as shelters, nursing homes, schools, and others. Students can serve as tutors, facilitators, recreational leaders, readers, and others.
- Languages and/or computers: course of one to three credits per semester. The Program will require the study of at least two courses in languages and/or computers. Such courses may represent more advanced levels in languages known to the student or the study of languages not known to the student.

This requirement may be met in various ways that will not be understood as mutually exclusive:

- With the study of advanced courses in English or Spanish for those students who wish to achieve a greater proficiency than the one they possess;
- With the study of a third language (Portuguese, French, German and others.
- With the study of a computer course and Internet access.
- Independent Studies (Directed Research): These are one-semester courses with a load of one (1) to three (3) credits on a topic selected by the student(s) in consultation with the Program Director and the corresponding Area Representative (Advisory Committee), who will help you identify the most suitable professor for the project. Once the student(s) selects the teacher with whom he/she wishes to work, it will be the responsibility of the student(s) and the director to make the necessary approaches to the teacher. The selected topic will represent a challenging and rigorous experience, which responds to the objectives of the Program and the interest of the participants.

This type of educational experience aims to form a work team between the student and the teacher who come together to explore a topic in a systematic way, critically examine what is known about it and reach conclusions that the student presents with clarity, rigor and open-mindedness.

• *Dissertation*: the dissertation work will have a value of three credits. It will be carried out with the collaboration of a research professor in the selected area. The topic may be in the student's area of specialization

or another topic of particular interest for which you have adequate preparation. To meet this requirement, the student must submit his/her dissertation in writing to the Dissertation Committee. Once approved, the student will request a date for the defense of their work. The dissertation requirement will be met when the student passes the oral defense of their project.

o In cases where the Committee so determines, the student may satisfy this requirement with works of artistic or literary creation. On such occasions, the Committee shall seek the advice of persons recognized in the artistic field concerned.

Admission requirements for the Program and their relationship with the general admission rules in force

- Students from sophomores onwards with a 3.50 or higher GPA may apply for admission to the Program. For those students with a 3.30 GPA or higher who are not part of the Program, the Program's courses count as free electives in interdisciplinary courses.
- The Program does not lead to a degree or diploma, so its admission requirements are not in conflict with the general admission rules in force. In light of the objectives of the Programme, the following admission requirements are proposed:
  - Have completed at least one semester at an accredited university and, at most, be in their first semester of their classification in their third year:
  - Overall grade point average of 3.50 p plus;
  - Interest in and willingness to meet the requirements of the Program;
  - $\circ$   $\;$  Personal interview with the members of the candidate's Advisory Committee;
  - Complete the application for admission, letters of recommendation, and essay;
  - Be recommended for admission by the Advisory Committee

# Academic requirements to award the certificate

The Honors Program will award a Special Certificate, not a degree or diploma as it is not a specialty. The student will obtain the degree or diploma by fulfilling the requirements stipulated by his department, for his specialty.

The Certificate that will be awarded by the Honors Study Program will be based on the fulfillment of the following requirements:

- Pass a minimum of fifteen (15) credits in five (5) core areas
- Research Seminars-From One (1) to Three (3) Credits
- Community Service Practicum- Three (3) credits
- Languages and/or Computers from one (1) to three (3) credits
- Independent Study One (1) to three (3) credits
- Dissertation-three (3) credits.

# Additional Student Benefits

In addition to academic benefits, students in the Program receive the following additional benefits:

- Publication of their research works and/or literary works in the Kalós Journal, aimed at the university community and catalogued in the *Latindex*.
- Early enrollment during the first day of the process.
- Priority access to the resources of the Computer Center.
- Equal conditions with teachers when using the Library.
- Exemption from payment of basic tuition.
- Individualized counseling.
- Participation in conventions, cultural trips and co-curricular activities.
- Facilities of a computer laboratory, seminar rooms and audiovisual equipment.
- Obtaining a certificate evidencing compliance with the requirements of the Program.

- Payment of 15 additional credits in PEH courses (Certification 027 Board of Trustees).
- Publication of dissertation, awarding of a medal and identification with a stole during the graduation of the University of Puerto Rico in Cayey.
- Guidance on financial aid, scholarships, and internships in and outside of Puerto Rico
- Graduate study opportunities.

# Division of Continuing Education and Professional Studies and the Extended University

## https://www.cayey.upr.edu/decep

The Division of Continuing Education and Professional Studies and the Extended University of the University of Puerto Rico, with a presence in the eleven institutional units of the system, is a vehicle by virtue of which the University maintains close ties with its graduates; fulfills its mission to meet the higher education needs of the communities of Puerto Rico and its surroundings, and with its commitment to the continuous search for new ways to respond quickly and creatively to present and future challenges and opportunities. This synergistic relationship is materialized through an innovative, relevant, excellent, broad, dynamic, flexible academic offer and high quality services, for the professional and personal development of non-traditional students. In the era of globalization and a knowledge-based economy, the University of Puerto Rico reaffirms its leadership in Continuing Education and Professional Studies in Puerto Rico, and as the competitive educational alternative for individuals beyond the geographical barriers of the Island.

# Extended University

The Extended University of the University of Puerto Rico at Cayey, fulfilling the mission of the institution, offers programs of excellence, expanding the opportunity for study to our university community with equal conditions and a faculty of excellence. The UNEX Office is located in the building of the Dean of Academic Affairs. Students enrolled in courses during the evening session (UNEX) may take up to a maximum of 12 credits per term. UNEX courses are scheduled in three cycles during the calendar year with academic calendars in the following periods: August-October, November-February and March-May. During the hours from 5:00 to 10:00 PM from Monday to Thursday and Saturdays from 8:00 to 12:00 M and 1:00 to 4:00 PM.

## Continuing Education Area Professional Studies

Under the Continuing Education phase, several short and long-term programs are offered to meet the immediate educational needs generated by the technological, professional, and social changes of the population it serves. Services offered:

- 1. Certificate Programs
- 2. Short Course Program
- 3. Summer Remedial Program
- 4. Co-sponsorship of educational activities for non-profit organizations and dependencies of the university system.
- 5. Continuing Education Activities for Professionals regulated by law, in accordance with the provisions of the Examination Boards and Professional Associations, conferring the corresponding continuing education units.
- 6. Training program for entities, companies and government agencies.

# Registration and registration fee payment procedure

Anyone interested in participating in the professional and personal improvement courses should visit the DECEP facilities located at 124 Morales Carrión Building (MC) of the University of Puerto Rico in Cayey. DECEP's working hours are: Monday – Friday: 8:00 a.m. – 4:30 p.m.; Saturday: 7:30 AM – 3:30 PM

Registration will begin by completing the form and you will pay the full amount by check or money order (certificate) or credit card.

# Cancellations and refunds

DECEP reserves the right to cancel courses that do not reach the required enrollment. Persons enrolled in these courses will be refunded the full tuition paid. The student may withdraw from the enrolled course(s) at any time. To file the cancellation, you must present the registration payment receipt and complete the form for these purposes.

The student may claim a refund of 90% of the fees paid if the withdrawal is filed before the start of the course. If you withdraw before the second class, you will be able to claim 80% of the tuition fees. You will not receive a refund if you process the withdrawal after the second class.

# Class attendance

Participants in continuing education programs must attend classes regularly. To receive the certificate of participation, the student may not exceed a maximum of:

\*1 absence in courses of 24 hours or less

\*2 absences in courses of 25 to 30 hours

\*3 absences in courses of 31 to 45 hours

In addition to the conditions of attendance, the participant must comply with the requirements stipulated by the teacher of each course.

# Talented Student Program

Project objectives

- It provides the opportunity to get started in college life while a public or private school student.
- The student takes university courses with academic credit that will be credited once admitted and enrolled.
- The student will participate in educational workshops aimed at facilitating their adjustment and integration into university life.

Selection criteria for participants

- 1. Be a junior or senior in high school.
- 2. Have an academic average of 3.40 or higher.
- 3. Be interested in applying for admission to the University of Puerto Rico at Cayey.
- 4. Cover the cost of tuition.
- 5. Availability to study on Saturday, morning or afternoon.

### The student gets

- Certificate of participation with the grade obtained in the course.
- Workshop on academic counseling.
- Fraternization Day Activity.

### Enrollment Procedures

The student will receive the printed enrollment form with the courses they will take in their first two cycles. He will proceed to make the corresponding payment for the first cycle.

### **Tuition Fee**

This academic project is self-financing and is offered through the Division of Continuing Education and Professional Studies (DECEP). The payment of registration is made by cycles.

The academic year is divided into three cycles: August-October/October-February/February-May. The student may take one course in each cycle equivalent to one semester. \*The total cost per course is \$327.00. Textbook costs

materials, activities and educational trips are not included in the payment of the tuition fee.

The University of Puerto Rico at Cayey states that this activity is a free participation activity. The student's entry into this activity does not commit the University of Puerto Rico at Cayey to the admission of the participant, if he or she does not qualify as established in the institutional rules and procedures. The course that the student decides to take may be transferred to another unit of the UPR System that participates in this project.

Accreditation system upon satisfactory completion of a continuing education activity through DECEP The participant will receive a certificate of attendance or approval, as the case may be. If an activity is awarded the Continuing Education Unit (UEC) credential, this information will be specified in the certificate.

\*A continuing education unit is defined as: —Participation for ten contact hours in an organized continuing education experience under responsible auspices, appropriate direction, and competent instruction.

## Parking facilities

DECEP will arrange provisional permits for participants who use the parking facilities of the University of Puerto Rico at Cayey. They will be processed at the beginning of the course. The participant must complete the provisional permit application form and have paid their tuition.

Certification 190 2000-2001

# Institute for Interdisciplinary Research

# https://www.upr.edu/iii-cayey

The Institute for Interdisciplinary Research is a unit of the University of Puerto Rico at Cayey that promotes research and academic creation through projects with an applied, regional, and interdisciplinary approach. Our goal is to generate knowledge of relevance to Puerto Rico and, above all, to those communities in the region served by the University of Puerto Rico in Cayey, which includes the towns of Cayey, Aibonito, Cidra, Caguas, Aguas Buenas, Patillas, Arroyo, Guayama, Salinas, Coamo and Barranquitas. The Institute contributes to strengthening the research capacity of teaching staff and offers interdisciplinary and transformative education to students through mentored research experiences. Since its inception, more than 1,600 students have benefited, achieving critical skill acquisition, collaboration in knowledge production and preparation for graduate school. In 2022, the Institute won the "Example of Excellence" award from the U.S. organization *Excellence in Education* in recognition of its track record of achievement.

# Goals

- Promote interdisciplinary research.
- To sponsor the development of knowledge relevant to the country and to the region served by the University of Puerto Rico at Cayey.
- Facilitate research work at the University of Puerto Rico at Cayey.
- Encourage research to serve as an input for curricular renewal.
- Provide a meeting place for researchers.
- Disseminate the results of our research.

# **Ecological Education Center**

The Center for Ecological Education represents the only Museum of Natural History that Puerto Rico has and is located at the University of Puerto Rico in Cayey. The purpose of the program is to educate and raise awareness among visitors and students about the Evolution of Life on Planet Earth, Endangered Species, and the ecosystems of Puerto Rico through the use of diagrams, exhibits, collections, aquariums, and themed gardens.

In it we find several collections of scientific and educational importance such as corals, mollusks, turtle shells, mammal skulls, rocks and minerals, among others, which are integrated into the exhibits and diagrams. Among these is a cave, mangrove, seagrass meadow, coral reefs, abyssal zone. In addition, it has a butterfly garden, turtle garden, thematic gardens of medicinal plants, cacti and succulents and aquariums of freshwater and saltwater plants and animals. Since 2006, the Ecological Center has served thousands of visitors of all ages and has provided college students with the opportunity to carry out community work as an interpretive guide to exhibits, diagrams, working with animals, saltwater and freshwater aquariums, theme gardens, and butterfly farms.

The Ecological Center promotes community work with students and visitors and scientific research.

# **Military Sciences**

The Military Sciences Program at the University of Puerto Rico at Cayey is an extension of the Río Piedras Campus Program. Its purpose is to develop the leadership potential of students. It also guides them to continue their academic preparations with a view to obtaining a Second Lieutenant Commission in the United States Reserve and the Puerto Rico National Guard.

Its objectives are: to provide an understanding of the fundamental concepts of military art and science; develop a strong sense of integrity, leadership, honor and responsibility; and develop an appreciation of the need for national security.

# Four-year program

The Four-Year Program is offered to both sexes and consists of four years with a total of 24 academic credits. These credits can be used as electives toward high school. They are divided into a basic course consisting of the first two years and an advanced course of two years.

The core course includes world military history, fundamentals of tactics, and military geography. The program provides books, tuition, and uniforms. During this course the student has the opportunity to compete in the scholarship program offered by the Army-ROTC. In addition, as all the classes and activities of the Program are in English, it offers the opportunity to improve their ability in that language.

The Program provides financial aid to those students who have the desire to pursue a military career after college graduation. The scholarship provides tuition, books, and lab expenses for all four academic years. It also includes financial aid of \$100.00 per month during the academic year for personal expenses.

Students who pass the foundation course can continue with the advanced course, which includes leadership, personnel management, and military operations techniques, and offers the same benefits as the core course.

During the summer, third-year students go to the United States for a six-week camp with the purpose of putting into practice the knowledge learned during the first years of the Program.

After passing the advanced course and coinciding with the achievement of the baccalaureate, students are commissioned as second lieutenants in the army.

### Two-year program

The Two-Year Program is designed for first- and second-year students who for one reason or another did not have the opportunity to enroll in the basic military science course. Students receive the same financial aid as students on the advanced course. Applicants to this Program must possess the ability to converse in English, pass an exam, and during the summer go to a six-week camp in the United States to receive basic military instruction that aligns the students of the Two-Year Program with the students of the advanced course. Interested students should stop by the ROTC office during the month of April to fill out the necessary documents for the camp.

# **COURSE DESCRIPTIONS**

Courses are listed in alphabetical order of coding by subject. The course coding, title, number of credits, hours per week, requirements, and description are indicated. The handbook with the objectives, the bibliography and other particulars can be obtained from the Dean's Office of Academic Affairs, in the corresponding academic department and in the Library.

# ADEM 4995

Special Topics in Business Administration

3 credits, 3 hours

Requirement: Permission from the Professor or Head of Department

Discussion of topics related to Business Administration, incorporating recent literature for it. Topics may vary from semester to semester.

# ADMI 3402

Market Plan for a New Business

3 credits, 3 hours

Requirement: Have passed the Business Idea Evaluation course, ADMI 3401

This course examines the main elements related to marketing a new business. It starts from the basic definition of marketing to the development of the ideal market mix for a company, taking into consideration aspects of the analysis of the industry. This course examines the main elements related to marketing a new business. It starts from the basic definition of marketing to the development of the ideal market mix for a company, taking into consideration aspects of the analysis of the industry. The process involved in the preparation of a marketing plan is analyzed in order for the student to acquire the necessary tools to complete it. The student reviews and analyzes the sales estimates prepared in the "Business Idea Evaluation" course and prepares a marketing plan with the marketing and sales strategy for the selected business idea.

# ADMI 3403

Financial Proposal for a New Business

3 credits, 3 hours

Requirement: Have passed the Business Idea Evaluation course, ADMI 3401

In this course the student will examine the basic concepts and elements related to financing new businesses. The general aspects of the financing needs in a business will be taken into consideration and the sources of financing available in the short, medium and long term will be evaluated. The entire process involved in the preparation of a financial proposal will also be analyzed so that the student acquires the necessary tools to carry out a financial plan. The student will prepare a financial plan for the selected business idea. This financial plan includes budget and projected financial statements.

# ADMI 3404

Preparation of the Business Plan 3 credits, 3 hours

Requirements: ADMI 3401, ADMI 3402 and ADMI 3403 In this course, the student will learn about the different components of a business plan. You will prepare and integrate these components into a formal document that will serve as a management guide, in addition to serving to start the business. You will review the parts of the plan already prepared in previous courses on business development, particularly the business concept or idea, the financial plan and the marketing plan. In the review of the financial plan, you will identify financing alternatives for the start of a business concept. It will also prepare an implementation itinerary for the plan, which will include activities, dates, resources and costs. You will write the final version of the business plan for the selected idea.

### ADMI 4005

Introduction to Managerial Activity 3 credits, 3 hours

Requirement: None

Introduction to the most relevant theories related to managerial sciences within an interdisciplinary study framework. Study of the various roles and responsibilities of managers in contemporary organizations

### ADMI 4006

Quantitative Analysis for Decisions 3 credits, 3 hours Requirement: ESTA 3001 Conceptualization, identification and formulation of managerial decision problems. Application of

managerial decision problems. Application of quantitative and qualitative methods to the analysis, solution and interpretation of them. Emphasis on the use of computers.

### ADMI 4007

Administrative Policy – *Capstone* 3 credits, 3 hours Requirement: Be a Classified Student in Fourth Year, FINA3006, ADMI4005 and MERC3115 Introduction to a comprehensive, conceptual and decisional analysis scheme to help the company evaluate its current condition, analyze the environmental forces that affect it, including the competition and translate that information into objectives and strategies that allow it to compete efficiently in the industry. Emphasis on management's responsibility to formulate programs that keep the company competitive in the long run.

#### ADMI 4019

Corporate Social Responsibility 3 credits, 3 hours Requirements: ADMI 4005

During the course, the company's responsibility to society is studied. The patterns of ethical conduct in political, legal and economic matters, and social pressures that drive the company to contribute to the improvement of the social ecosystem are analyzed.

### ADMI 4045

Government Regulation of Trade 3 credits, 3 hours

**Requirements:** None

Study of the historical background of public regulation of trade, its causes, the administrative law process implemented by the agencies and the regulatory management of the government

### ADMI 4225

Principles of International Trade

3 credits, 3 hours

Requirement: ADMI 4005, MERC 3115 and FINA 3006 Introduction to the International Dimension of Trade. Emphasis on the participants, theories and particularities that international trade entails.

#### ANTR 3005

Introduction to Anthropology 3 credits, 3 hours Requirements: CISO 3121 and CISO 3122 Analysis of the socio-cultural behavior of humans through the comparative study of institutions in tribal society. Study of contemporary problems from anthropological perspectives.

### ANTR 3085

Caribbean Society and Culture 3 credits, 3 hours Requirements: CISO 3121 and CISO 3122

Study of the Caribbean sociocultural reality from a historical and anthropological perspective. Starting from a definition of the Caribbean as a living laboratory of

racial and cultural hybridity and creolization, the political and economic processes that have contributed to shaping the racial/cultural reality of the region are studied, as well as the processes of construction of racial/cultural identities in the postcolonial era. Particular emphasis is given to the movements to vindicate Afro-Caribbean identities in the insular Caribbean, and indigenous identities in the continental Caribbean.

### ANTR 4995

Special Topics in Anthropology

3 credits, 3 hours

Requirement: ANTR 3005

Discussion of various topics in anthropology, and incorporating recent literature for it. The specific description will be provided in each particular case in which the course is taught.

### ARTE 3001

The Art of Mosaic I 3 credits, 4.5 hours per week, 1.5 hours per credit Requirement: None

Study, practice and experimentation with the techniques and materials related to the creation of mosaics, their historical aspects, styles and periods.

#### **ARTE 3008**

Art of the Twentieth Century 3 credits, 3 hours Requirement: Second year students of the concentration Chronological study of twentieth-century artistic movements in the visual arts and architecture. Analysis of concepts and artistic manifestations that marked modern

and contemporary art in the twentieth century.

#### ART 3011

Computer ARTE I 3 credits, 3 hours Requirement: None This course is an in

This course is an introduction to the techniques and processes in creating digital images for use in the visual arts. The Student will use the digital image to elaborate an artistic work of a personal nature.

### ARTE3015

Puerto Rican Art 3 credits, 3 hours Requirement: None The course offers the opportunity to learn about the manifestations of the plastic culture of the Puerto Rican people as it has taken shape in the successive stages of our cultural development. To this end, expressions of folklore are valued and analysed as well as the most academic forms of art. It will be complemented with visits to Old San Juan, exhibition halls and private collections, among others.

# ARTE 3056

Calligraphy

3 credits, 3 hours Requirement: None

Study of the basic principles of alphabetic forms through the practice of the Roman alphabet and its variants for specific calligraphic design purposes.

# ARTE 3105

Puerto Rican Art 3 credits, 3 hours

Requirement: None

The course offers the opportunity to learn about the manifestations of the plastic culture of the Puerto Rican people as it has taken shape in the successive stages of our cultural development. To this end, expressions of folklore are valued and analysed as well as the most academic forms of art. It will be complemented with visits to Old San Juan, exhibition halls and private collections, among others.

# ARTE 3107

Hispano-American Art 3 credits, 3 hours Requirement: None

It will provide from a humanistic perspective fundamental aspects of the artistic expressions that have been produced in Latin America. This will allow a deep understanding of its antecedents, expansion, influences, trends and main exhibitors, as a position on the historiography of art.

# ARTE 3135

**Basic Painting I** 

3 credits, 4.5 hours per week, 1.5 hours per credit Requirement: None

Study and experimentation with the basic elements and fundamentals of oil and/or acrylic painting expanding different techniques. Brief study of paintings in the history of art.

# ARTE 3155

Ancient and Medieval Art 3 credits, 3 hours

# Requirement: HUMA 3102

Study and analysis of the art of the periods in question from Prehistory, Egypt and Mesopotamia, through the Greco-Roman world to the medieval styles inclusive: Byzantine, Islamic, Romanesque and Gothic.

# ARTE 3156

Modern and Contemporary Art 3 credits, 3 hours

Requirement: HUMA 3102

Study of the most representative works of art, styles and schools of the periods in question, from the Renaissance to the present century.

# ARTE 3171

Drawing I: Basic Drawing Elements 3 credits, 4.5 hours per week. 1.5 hours per credit Requirement: None

Study, practice and experimentation with the techniques and basic elements of drawing using different media and using still life, the human figure and the landscape.

# ARTE 3172

Drawing II: Drawing of the human figure 3 credits, 4.5 hours per week. 1.5 hours per credit. Requirement: ARTE 3171

Study of the human figure, its proportions, movements and its representation in drawing through different techniques, materials of artistic styles from the Renaissance to the present.

# ARTE 3175

Engraving Techniques I: Linoleum, Woodcut and Relief 3 credits, 3 hours

**Requirement: None** 

Study, practice and experimentation with techniques and materials related to the creation of engravings, such as woodcut, linoleum engraving and relief engraving. Its history in art is briefly studied.

# ARTE 3215

Color Theory, Design and Composition

3 credits, 4.5 hours per week in individual and collective work

Requirement: None

Study of color theory, design elements and principles and their application in artistic composition, using different techniques and materials.

# ARTE 3231

Design and Artistic Composition I 2 credits, 3 hours Requirement: None

Study of the elements and principles of design and their application in composition and artistic design using different techniques and materials.

# **ARTE 3405**

Experimental and Creative Drawing 3 credits, 4.5 hours Requirement: None Different drawing techniques are studied, seeking new dimensions through experiment observation and the

dimensions through experiment, observation and the development of creative imagination. Various materials will be used and various techniques will be studied such as: frottage, collage, textures and others.

# **ARTE 4001**

Engraving Techniques I: Linoleum, Woodcut and Relief 3 credits, 3 hours

**Requirement: None** 

Study, practice and experimentation with techniques and materials related to the creation of engravings, such as woodcut, linoleum engraving and relief engraving. Its history in art is briefly studied.

# **ARTE 4006**

Sculptural Processes I 3 credits, 4.5 hours Requirement: ARTE 3172 Study of the elements, principles and techniques related to three-dimensional creation. Experimentation with different materials and sculptural processes.

### **ARTE 4007**

Screen Printing I 3 credits, 4.5 hours Requirement: None

Study and experimentation with the methods, techniques and materials used for the production of screen printing.

# **ARTE 4008**

# Video Art

3 credits, 4.5 hours

Requirement: Art of the Script and "Storyboard", ART Cinema: Artistic Expression of the Moving Image. ART Computer Art I

This course develops the techniques and basic concepts of video art and the development of an artistic script. The

proper use of the video camera and digital editing (images manipulated through the computer) are taught.

#### ARTE 4015

Visual Thinking 3 credits, 4.5 hours

Requirement: None

In this theoretical/practical course, the formal and conceptual aspects of a work of art are analysed through class exercises and slide projections. Both the phenomena of visual perception (color, composition, etc.) and the idea and reading of the work are studied. Different approaches and artistic movements are discussed through topics related to the history of art. This course is designed for the student to develop a personal work in the face of the diversity of possible directions in the creation of a plastic work.

# **ARTE 4016**

Mural Painting credits, 4.5 hours Requirement: ARTE 3135

This course examines the historical importance of murals and/or large-format painting from rock art to the present day. It teaches the development of the techniques, procedures and materials used in this medium. Experiment with new techniques and encourage creativity in the development of an idea. Through sketches and class exercises, the student presents a large-format painting at the end of the course.

### ARTE 4017

Watercolor I credits, 4.5 hours Requirement: None Study, practice and experimentation with the techniques and materials related to the creation of watercolours.

### ARTE 4035

Handmade Paper as Artistic Expression 3 credits, 4.5 hours Requirement: None Study, practice and experimentation with natural plant fibres, industrial fibres and recycled paper, for the production of artistic works with handmade paper. Its history in art is briefly studied.

### **ARTE 4266**

Art Workshop 3 credits, 3 hours Requirement: None Study and practice of the scenographic components that interact in the play. He studies the structure and functions of theatrical architecture. It emphasizes the notion of scenographic design as the conceptual support of the text and the staging. Develop the design and composition of visual elements within the stage space through sketches and models.

#### **ARTE 4806**

Interdisciplinary Workshop (Installation, Conceptual Art and Performance)

3 credits, 3 hours

**Requirement: None** 

This course synthesizes the processes, actions and attitudes that lead to a different form of communication and aesthetic approach. It is based on an analysis of artistic movements from the second half of the twentieth century to the present. He points out the role of the idea as the main instrument in the creation of a work of art. It discusses and reevaluates traditional approaches to art and its interpretations, enabling the development of a more comprehensive vision of art. It encourages the creation of a personal work based on the search for new forms and artistic expressions.

### ASTR 3006

Basic Astronomy 3 credits, 3 hours Requirement: FISI 3102 and MATE 3053 Co-requisite: ASTR 3007

The purpose of this course is to introduce the student to the study of astronomy. It includes an exposition of astronomical observations of the solar system, stars, galaxies, the universe, and their interpretations based on theoretical and experimental physics. Two hours of lecture and one hour of discussion (67% 33%).

#### ASTR 3007

Basic Astronomy Laboratory 1 credit, 3 hours Requirement: FISI 3012 Co-requisite: ASTR 3006

It includes experiments, observations, and exercises to illustrate the basic concepts and principles of astronomy. Handling of reflection and refraction telescopes. It includes day and night observations of celestial objects and phenomena. It uses digital photographs of the moon, stars, galaxies and spectra. Visits to the Arecibo radio telescope.

# **BIOL 3018**

**Developmental Biology** 

Credits, 3 lecture hours and 4 lab hours per week Requirement: BIOL 3305 Recommended: QUIM 3122, QUIM 3124

Study of the basic processes of animal and plant development by analyzing the mechanisms that control these processes at the cellular, genetic, and molecular levels. Other aspects of adult development are studied, such as continuous growth, regeneration, aging, cancer, and teratology.

#### BIOL 3031

General Biology I 3 credits, 3 hours of lecture Co-requisite: BIOL 3033

Comparative study of the fundamental themes of living systems, both in plants and animals. A characterization of the properties, behavior, and interdependence of the levels of organization (the atom, molecules, cell, organism, and population). The course emphasizes the molecular level, including aspects of heredity. The laboratory includes practices at the cellular and molecular level. The topics of the laboratory correspond to those discussed in class.

#### BIOL 3033

General Biology Laboratory I 1 credit, 3 hours per week Requirement: BIOL 3031

The laboratory course will consist of a series of practical exercises where the student will be able to study cellular and molecular concepts. Basic concepts of Ecology and Evolution will be included. You will learn the use and operation of laboratory equipment and how this equipment can be used to study different aspects of biology. The relationship between the theoretical and the practical in the study of biological systems at the cellular level will be emphasized.

#### **BIOL 3040**

Principles of Neuroscience

3 credits, 3 hours

Prerequisite: BIOL 3103, BIOL 3104 or CIBI 3002

This course presents central topics in the area of neurosciences with a historical approach. The course units present the following topics: the different subspecialties that make up neuroscience, history and development of neurosciences, basic concepts of living organisms, the evolution of the human brain, cellular components of the nervous system, synaptic communication, divisions of the nervous system, the bases of sensation, perception and aging of the nervous system. Common disorders or diseases that affect the motor systems and higher processes of the brain are discussed. It also includes seminars for the development of basic skills in information search and critical reading of scientific literature in neuroscience.

#### **BIOL 3095**

Literature in Biology 1 credit, 1 hour lecture Requirement: BIOL 3031 – BIOL 3033

The course is aimed at preparing the student in the use of all available reference resources to make a scientific bibliography or a mini review article. The student is trained in the location and management of traditional printed sources of information, as well as electronic databases accessible through the Internet. The discussion of scientific articles is focused on the development of reading skills that allow locating relevant information in different types of articles regardless of the content (topic) and the distinction by the student of the different types of scientific literature and their components.

### **BIOL 3103**

General Biology II 3 credits, 3 hours Requisitos: BIOL 3031 - BIOL 3033 Co-requirement: BIOL 3104

The General Biology II course is the comparative and evolutionary study of the different functional systems in animals and plants. The evolutionary development of systems and the different adaptations to their physical and biotic environment are analyzed. The laboratory includes practices at the microscopic, anatomical and physiological levels. The practices analyze the functional systems in plants and animals and the relationship between them and their environment. The topics of the laboratory correspond to those discussed in class.

#### **BIOL 3104**

General Biology Laboratory II 1 credit, 3 hours Requisitos: BIOL 3031 - BIOL 3033 Co-requirement: BIOL 3103

The General Biology II laboratory is the comparative and evolutionary study of the different functional systems in plants and animals using models, dissection of preserves, films, and simple reactions that mimic the physiological activity of some functional systems in plants and animals. Analysis of the evolutionary development of these systems for the adaptation of organisms with their environment.

### **BIOL 3115**

General Ecology

4 credits, 3 hours of lecture and 4 hours of laboratory; Include excursions

Requisitos: BIOL 3103 - BIOL 3104 of BIOL 3415 of BIOL 3405

Introduction to knowledge of the fundamental principles of ecology and nature, and properties of ecosystems, biotic communities and the dynamics of the operating forces that control these biological systems. The laboratory studies the different types of communities and the ecological principles and concepts applicable through excursions to ecological sites. Includes independent research projects.

### **BIOL 3205**

## Embryology

4 credits, 3 hours of lecture and 4 hours of laboratory Requisitos: BIOL 3103 - 3104 ó BIOL 3405 y BIOL 3115 Comparative study of the basic concepts of development in vertebrates (amphibians, birds and mammals) with an understanding of the mechanisms and sequences of events involved in the formation of tissues and organs. The development of abnormal (congenital anomalies) in humans will be introduced, with special interest in etiological aspects (genetic and environmental).

#### **BIOL 3305**

#### Genetics

4 credits, 3 hours of lecture and 4 hours of laboratory Requirements: BIOL 3031 - BIOL 3033 Co-Requisite: QUIM 3131 - QUIM 3133

Introduction to the study of the fundamental principles of genetics, such as: transmission and distribution of hereditary material, chemical nature, mode of action of genetic material and its importance in the evolution of living beings. In the laboratory, emphasis is placed on the techniques used to establish the fundamental principles of inheritance, including the techniques of molecular genetics and recombinant DNA.

### **BIOL 3405**

### General Zoology

4 credits, 3 hours of lecture and 4 hours of laboratory Requirements: BIOL 3031 and BIOL 3033

The Zoology course is the introductory study of the physiology, reproduction, development, ecology and evolution of the animal kingdom. The study of the local

fauna stands out. In the laboratory, a practical study of the taxonomy, morphology and ecology of the various groups of animals is carried out. As a supplement to the course, instructional trips are offered to various important communities on the island.

# **BIOL 3406**

Computer-applied biostatistics

# 3 credits, 3 hours

Requirements: Be a sophomore student in Natural Sciences or Biology and have passed the Precalculus I and II (MATE 3171-3172) courses or the equivalent Precalculus with experiments I and II (MATE 3211 and 3212).

The course concentrates on the explanation and discussion of the most commonly used statistical tests in the field of Biology. The student is taught statistical theory to apply it to research problems in Biology through the most accessible tools or computer programs. Emphasis will be placed on developing skills in the selection, evaluation and management of appropriate statistics for the investigation of different biological problems.

# **BIOL 3407**

Invertebrate Biology

4 credits, 3 hours of lecture and 4 hours of laboratory. Includes excursions

Requirements: BIOL 3103 - 3104 or BIOL 3405 Study of the taxonomy, morphology, ecology, reproductive cycles and evolution of invertebrates, with emphasis on the local fauna. The laboratory introduces modern research methods to its study. Field trips and the collection and classification of organisms complement the class.

# **BIOL 3415**

### **General Botany**

4 credits, 3 hours of lecture and 4 hours of laboratory Requirements: BIOL 3031 and BIOL 3033

Structure and metabolism of plants. The emphasis of the course is the study of flowering plants as a model for understanding the functioning of plants, their role in nature, their evolution, and their biological diversity. Through the course, methods used in biotechnology and plant research are discussed. The laboratory requires the cultivation of a garden and the preparation of experiments designed by the students.

# **BIOL 3566**

Biopsychology 3 credits, 3 hours

# Requirements: BIOL 3103 and BIOL 3104

In the field of Neuroscience and Biopsychology, important research has been carried out on the relationship between the nervous system and human behavior. The integration of Biology and Psychology aims to understand animal and human behavior in terms of biological mechanisms. Biopsychology is nourished by disciplines such as Molecular Biology, Neuropsychology, Neurochemistry and Health Sciences. Current trends in this field include the study of the function and structure of the nervous system, the molecular and neurobiological bases of higher mental processes, the plasticity of the nervous system in learning and memory, the neurobiology of mental illness, and drug addiction, among other topics.

## **BIOL 3576**

Pharmacology of Drug Abuse

3 credits, 3 hours

Requisitos: BIOL 3103, BIOL 3104 o BIOL 3405

Drug addiction is a serious public health problem in Puerto Rico. This interdisciplinary course explores the psychobiological factors of drug dependence and the effects of various drugs on human behavior. The psychological, neural and social aspects of drugs prescribed for psychiatric disorders are also addressed. Finally, the neuropsychopharmacological bases of addictive behavior and the available treatments are examined. The objective is to develop critical thinking in students so that they are analytical consumers of scientific information from the media.

# BIOL 3701

Physiological Anatomy I

4 credits, 3 hours of lecture and 4 hours of laboratory Requisitos: BIOL 3103 – 3104 from BIOL 3405

This course discusses in an integrated manner the structural and functional plan of the human body from the cellular level to the level of organ systems. The course emphasizes the integrated functioning of a select group of organ systems to regulate physiological processes and maintain body homeostasis. The systems studied are: integumentary, bone, muscle and nervous. The course laboratory provides active and interactive experiences that allow the student to describe and manipulate histological, macro-anatomical and physiological aspects of the systems studied, using demonstrations, anatomical models, simulations and organ dissections.

### **BIOL 3702**

Physiological Anatomy II

4 credits, 3 hours of lecture and 4 hours of laboratory Requirement: BIOL 3701

This course discusses in an integrated manner the structural and functional plan of the human body from the cellular level to the level of organ systems. The course emphasizes the integrated functioning of a select group of organ systems to regulate physiological processes and maintain body homeostasis. The systems studied are: integumentary, bone, muscle and nervous. The course laboratory provides active and interactive experiences that allow the student to describe and manipulate histological, macro-anatomical and physiological aspects of the systems studied, using demonstrations, anatomical models, simulations and organ dissections.

# **BIOL 3705**

General Microbiology

4 credits, 3 hours of lecture and 2 laboratory periods of 2 hours

Requirement: BIOL 3305

Fundamentals of the study of the biology of microorganisms. It includes knowledge of their morphological and physiological characteristics; and the effect they have on humans and the environment

environment. The laboratory concentrates on conventional techniques and procedures used for the culture, purification and identification of microorganisms.

# **BIOL 3706**

Medical Microbiology

4 credits, 3 hours of lecture and 2 laboratory periods of 2 hours

Requirements: BIOL 3305, QUIM 3132-3134

The study of the biology of organisms pathogenic to humans. The virulence and pathogenicity factors of representative organisms are discussed, with emphasis on bacteria, viruses, fungi and ricketsias. Pathological conditions caused by representative microorganisms are presented and their pathology, epidemiology and prevention are discussed. The laboratory concentrates on the techniques and procedures used for the cultivation and identification of common pathogens.

### **BIOL 3755**

Biology of Human Sex and Behavior 3 credits, 3 hours Prerequisite: BIOL 3103-3104 or CIBI 3002 Study of the most significant aspects of human sexology, its normal and pathological behavior. Its complications in man and in society. The course emphasizes all those clinical alterations that are related to this science.

### **BIOL 3936**

#### Neuroendocrinology

Requisitos: BIOL 3103 of BIOL 3104 of BIOL 3405

Animal behavior is the producer of the dynamic interactions between hormonal factors, the brain and sensory sensory systems. This course discusses the neuroendocrine basis of behavior by discussing how hormones act on the structure and function of the brain. The course includes an overview of the nervous system with an emphasis on cell physiology and neuroanatomy of the brain. It also describes the anatomy and physiology of the endocrine system, the chemistry of hormones, and their mechanisms of action and regulation. The course will use a comparative approach to study the neuroendocrine regulation of a select group of behaviors. Emphasis will be placed on behaviors for which sex differences have been documented in the scientific literature. We will study different reproductive, social, affective and cognitive behaviors. The course promotes the critical analysis of classic and recent scientific literature, as well as the development of novel research questions and experimental designs to answer them.

# **BIOL 3955**

Biology Research Seminar 3 credits, 3 hours of lecture Requirement: BIOL 3095

The course provides the knowledge and skills necessary to apply the scientific method to research in biology, including important techniques and data interpretation. It also provides experiences for the development of writing and science communication skills for application in the preparation of proposals, science notebooks, and oral presentations. The course provides the student with skills for the management and presentation of experimental data. It will also include the ethical and legal aspects applicable to biological research. The particular topic varies according to the professor in charge of the course.

# **BIOL 4014**

Introduction to Molecular Systematics

4 credits, 3 hours of lecture and 4 hours of laboratory Requirements: BIOL3031, BIOL3033 and BIOL3305, be a student classified in the third or fourth year in Natural Sciences or Biology and/or permission from the Instructor or the Director of the Department. The course presents an introduction to molecular systematics, emphasizing the methods and computer programs currently used for the phylogenetic reconstruction of the various groups of organisms. The teacher and the students will discuss how molecular systematics has changed and transformed the taxonomy of microorganisms, animals and plants. The laboratory component provides the student with the opportunity to put into practice the phylogeny programs discussed in class.

#### **BIOL 4018**

### Cell and Molecular Biology

4 credits, 3 hours of lecture and 4 hours of laboratory Requirements: BIOL 3305, QUIM 3121-3122

Study of the ultrastructure, composition and molecular organization of prokaryotic, eukaryotic and viral cells. The most recent scientific literature is used to make a more accurate interpretation of cell function as a consequence of its structural components. In the laboratory, emphasis is placed on the scientific methods used in deriving the relationship between cell structure and function.

#### **BIOL 4048**

#### Medical Mycology

4 credits, 3 hours of lecture and 4 hours of laboratory Requirements: BIOL 3031, BIOL 3033 and BIOL 3305, be a student classified in the third or fourth year in Natural Sciences or Biology and/or permission from the Instructor or the Director of the Department.

The Introduction to Medical Mycology course will expose the student to the interesting world of fungi that turn out to be pathogenic to humans. The student will learn basic concepts of mycology such as identification and classification, in addition to knowing the various types of mycoses that exist. Fungal diseases will be discussed, emphasizing the most common and most relevant to Puerto Rico. In addition, attention will be given to airborne pollutants, space will be provided for scientific discussions on the subject and research related to microscopic fungal pollutants will be incorporated.

### **BIOL 4056**

General Immunology Credits, 3 hours of lecture

Requirement: BIOL 3305

The general content of this course includes the study of those innate and acquired processes used by an organism to maintain a constancy in its internal environment when confronted with substances, both of endogenous and exogenous origin, that are not recognized as its own.

## BIOL 4135

Cellular Biochemistry

credits, 3 hours of lecture and 4 hours of laboratory Requirement: QUIM 3121-3122

The course is designed for students interested in pursuing studies in the area of health-related sciences and students whose inclination is between the disciplines of Biology and Chemistry. The course attempts to stimulate scientific curiosity through questions and answers on topics characteristic of the basic sciences: cellular recognition of extracellular signals, the principle of optimization of function, transformation and biological adaptation of metabolic intermediates, metabolic reactions (biocatalysis), physicochemical conditions within cells and other cellular/chemical processes. Clinical cases involving errors in metabolism are discussed. In the laboratory, students are exposed to the practice of purification techniques and characterization of proteins, enzymes and nucleic acids.

#### **BIOL 4136**

Biotechnology: Concepts and Fundamental Basis 3 credits, 3 hours

Requisitos: BIOL 4135 o BIOL 4018

This course presents an overview of the various biotechnological processes, fundamental concepts and technological applications in the following areas: molecular biology and genetic engineering, tissue culture, genetics and human health, animal and plant production, transformation and environmental biotechnology. Ethical issues or dilemmas in this field will be studied.

#### **BIOL 4308**

Methods and Techniques in Biotechnology 3 credits, 3 hours

Requirement: BIOL 4136

In this course, the student practices and integrates knowledge of the different branches of science that make up biotechnology. The course is based on the application of the scientific method, therefore the use of critical thinking and analysis in decision-making is essential when selecting laboratory techniques that are useful to respond to a given hypothesis during research, The intention is to create a practical laboratory based on molecular biological techniques.

### **BIOL 4356**

Human Genetics credits 3 hours of lecture Requirement: BIOL 3305 Application of genetic concepts to human beings and society. Detailed study of the inheritance of characteristics and individual genetic differences at the cellular, molecular and population levels. Controversial topics related to genetics in contemporary society are presented.

# **BIOL 4370**

#### Bioinformatics

4 credits, 4 lecture and practice hours (computer lab) Requirement: BIOL 3305 and/or Instructor's Permission The Bioinformatics course provides the student, through lectures, presentations, workshops, and individualized projects, with the basic concepts and skills necessary to evaluate and critically and effectively use genetic information. Bioinformatics is about the management and analysis of all biological information. This information includes sequences of nucleic acids (DNA and RNA) and amino acids (proteins); RNA and protein structures; evolutionary conservation, phylogenetic trees and groupings of organisms; gene expression patterns, functional interactions between molecules and metabolic pathways, among other topics.

#### **BIOL 4430**

Parasitology

4 credits, 3 hours of lecture and 4 hours of laboratory Requisito: BIOL 3103, BIOL 3104, BIOL 3033 of QUIM BIOL 3405 3132-3134

Through this course, the biology of parasites that are directly or indirectly related to humans and other animals will be studied. Parasites within the following groups will be studied: Protozoa, Trematodes, Cestodes, Nematodes and Arthropods. The course will be complemented with laboratory exercises related to each group of parasites studied in the conference.

#### **BIOL 4555**

Human Embryology

2 credits. 2 hours

Requisitos: BIOL 3103 of BIOL 3104 of BIOL 3405

Study of the mechanisms of human development, including congenital malformations. This course will provide the student with an understanding of the prenatal period of human development, particularly between the time of fertilization and the end of the embryonic period. It is oriented from the point of view of the development of the main systems of the body. The student will also learn the major abnormalities that can occur during early human development that can result in birth defects.

## BIOL 4727

Comparative Endocrinology 3 credits, 3 hours

Requirements: BIOL 3031-3103, QUIM3131-3132

This course studies the chemical coordination of hormones, neurohormones, and neurohumors. Emphasis is placed on the study of endocrine glands and their mechanism of action in vertebrates and neurosecretion mechanisms in invertebrates.

#### **BIOL 4746**

Medical Mycology 4 credits, 3 hours and 4 lab hours Requisitos: BIOL 3305

Description: The Introduction to Medical Mycology course will expose the student to the interesting world of fungi that turn out to be pathogenic to humans. The student will learn basic concepts of mycology such as identification and classification, in addition to knowing the various types of mycoses that exist. Fungal diseases will be discussed, emphasizing the most common and most relevant to Puerto Rico. In addition, attention will be given to airborne pollutants, space will be provided for scientific discussions on the subject and research related to microscopic fungal pollutants will be incorporated.

### **BIOL 4758**

Neurobiology

3 credits, 3 hours

Requisitos: BIOL 3031-3033 of BIOL 3103-3104 of BIOL 3405

To deepen the study of the nervous system as one of the systems of control and integration of all the activities of the organism, particularly with regard to the higher mental activities of man. Intended for students with further study interests in biomedical areas.

Description: To deepen the study of the nervous system as one of the systems of control and integration of all the activities of the organism, particularly with regard to the higher mental activities of man. Intended for students with further study interests in biomedical areas.

### **BIOL 4915**

Integrative Seminar on Topics in *Biology-Capstone* 3 credits, 3 hours

Requirement: BIOL 3031/3033, BIOL 3305, BIOL3405, BIOL 3415, QUIM 3132/3134, FISI 3012/3014. Be

classified in the fourth year. Permission from the Biology Department Chair

The course provides knowledge and skills necessary to apply the scientific method to research in Biology,

including important techniques and data interpretation. The course provides the student with skills for the management and presentation of experimental data. It offers experiences for the development of writing and scientific communication skills in various aspects, including proposals, scientific notebooks and oral presentations. It will also include the ethical and legal aspects applicable to biological research. The particular topic varies according to the student's interest and the teacher's specialty.

#### **BIOL 4990**

#### Introduction to Biology Research

1 to 3 credits, 3 to 9 hours. It can be repeated up to a maximum of nine credits. A student with a grade of incomplete will not be able to enroll until he or she completes the previous course.

Requirement: Permission of the Instructor. Be a student of Natural Sciences, Psychology or Secondary Education in Science. The course introduces students to research by emphasizing the methodologies used in different areas of Biology.

#### **BIOL 4997**

Seminar in Biology

1 to 3 credits, 15 to 45 semester hours.

Requirement: Permission from the Instructor or Director of the Department. 3rd or 4th year students in Natural Sciences Discussion of literature and recent publications in the various areas of Biology. The seminar will focus on one specific topic per semester. Students will be assigned specific topics for discussion.

It contemplates the participation of visiting professors.

#### CIBI 3001

Fundamentals of Biology I 3 credits, 3 hours.

Requirement: None

Several study trips. Not validable by BIOL 3031. Only for Art and Business Administration students. The main purpose of this course is to introduce those students whose academic interest does not lie in biology to the biological applications for those problems that affect our daily lives and in which these students have an interest. By this means it is intended to awaken curiosity about biology in these students and make them aware of their internal and external biological environment.

#### CIBI 3002

Fundamentals of Biology II 3 credits, 3 hours.

Requirement: CIBI 3001

Several study trips. Not validable by BIOL 3103. Only for Art and Business Administration students.

The main purpose of this course is to introduce those students whose academic interest does not lie in biology to the biological applications for those problems that affect our daily lives and in which these students have an interest. By this means it is intended to awaken curiosity about biology in these students and make them aware of their internal and external biological environment.

#### CIFI 3001

Introduction to the Physical Sciences I

3 credits, 3 hours

Requirement: MATE 3041

It exposes non-natural science students to the concepts and theories that the physical sciences use to describe and explain the natural world, provides a coherent and balanced presentation of the most important theories of the physical sciences, familiarizes them with scientific methodology, and relates these sciences to other areas of knowledge. The first part deals with topics of mechanics, heat, sound, thermodynamics, electricity, magnetism and waves.

#### CIFI 3002

Introduction to the Physical Sciences I 3 credits, 3 hours

Requirement: CIFI 3001

Continuation of CIFI 3001. It studies topics in modern physics, energy, geology, geomorphology, chemistry, meteorology, and astronomy.

#### CIMI 3011

Introduction to Military Sciences

2 credits

Introduction to the fundamental concepts and principles of military science. A brief history of the Army-ROTC program. Emphasis on the principles of leadership and land navigation.

#### CIMI 3012

Basic Military Dexterity 2 credits

Development of basic military skills such as first aid, physical training, military ceremony and how to navigate the terrain using a map and compass. Emphasis on the development of leadership and military knowledge.

# CIMI 3021

Fundamentals of Military Tactics I 2 credits

Requirement: CIMI 3012

Study of the basic tactics of the rifle squad. Introduction to military geography and military cartography. Advanced techniques in the improvement of oral expression. Leadership lab or workshop.

# CIMI 3022

Fundamentals of Military Tactics II 2 credits

Requirement: CIMI 3012

Continuation of the study of military tactics at the unit level. Principles of military strategy. Study of military formations. Military collateral support and communication.

# CIMI 3041

Speak and Understand English

Today's Beginner Level (Beginner Level) I

1 credit, 1 hour

Requirement: Take placement test to establish a corresponding level according to your English language skills.

The course is designed for military science students who have demonstrated deficiencies in English language skills in the result of the English *Comprehension Level* (E.C.L.) test provided by the *Defense Language Institute*.

# CIMI 3042

Speaking and Understanding English Beginner Level II 1 credit, 1 hour

Requirement: CIMI 3041

The course is designed for military science students who have demonstrated deficiencies in English language skills in the English Comprehension Level (E.C.L.) test result provided by *the Defense Language Institute*, English *Language Center at Lackland Air Base*, San Antonio, Texas.

# CIMI 3043

Speaking and Understanding English Intermediate Level I 1 credit, 2 hours

Requirement: Take placement test to establish a corresponding level according to your English language skills.

The course is designed for military science students who have demonstrated deficiencies in English language skills in the English *Comprehension Level* (E.C.L.) test result provided by the *Defense Language Institute, English Language Center at Lackland Air Base*, San Antonio, Texas.

# CIMI 3044

Speaking and Understanding English Intermediate Level II 1 credit

Requirement: CIMI 3043

The course is designed for military science students who have demonstrated deficiencies in English language skills in the English *Comprehension Level* (E.C.L.) test result provided by the *Defense Language Institute*, English *Language Center at Lackland Air Base*, San Antonio, Texas.

# CIMI 3051

Speaking and Understanding English Advanced Level I 1 credit, 1 hour

Requirement: Take placement test to establish a corresponding level according to your English language skills.

The course is designed for military science students who have demonstrated deficiencies in English language skills in the English *Comprehension Level* (E.C.L.) test result provided by the *Defense Language Institute*, English *Language Center at Lackland Air Base*, San Antonio, Texas.

# CIMI 3052

Speaking and Understanding English Advanced Level II 1 credit, 1 hour

Requirement: CIMI 3051

The course is designed for military science students who have demonstrated deficiencies in English language skills in the English *Comprehension Level* (E.C.L.) test result provided by the *Defense Language Institute, English Language Center at Lackland Air Base*, San Antonio, Texas.

# CIMI 4011

Communication and Psychology in Military Leadership 4 credits,

Advanced course in written and oral communication techniques. Leadership of 2 hours a week; a leadership workshop one Saturday a month and a 3-day camp training exercise (one weekend).

# CIMI 4012

Fundamentals of Military Strategy 4 credits, Requirement: Study of the principles and foundations in the development of military strategy; responsibilities and functions of officers in the management of military units. Principles for the defense of a country. Leadership laboratory.

#### CIMI 4021

History, Leadership and Military Administration 4 credits,

**Requirement:** 

Writing in military style. Military administration. Compendium of military and world history that begins with the principles of warfare and basic military movements and ends by reviewing the Spanish-American War, World War I and II, Korea and Vietnam. Leadership laboratory.

#### CIMI 4022

Seminar: Military Leadership and Administration 4 credits,

Requirement:

Analysis of leadership and management problems in the administration of military units and personnel. Fundamentals of the military judicial system, principles of supply management, command and staff operations. The duties and responsibilities of army officers. Leadership laboratory.

#### CIPO 3011

Principles of Political Science I 3 credits, 3 hours Requirements: CISO 3121, CISO 3122

Study of the different visions of political life and conceptions that demarcate political science as an autonomous field. It includes the analysis of processes and institutions, decision-making and dynamic aspects, and universal mechanisms that are used in the preservation of social order through political structures. The analysis is applied particularly to Puerto Rico.

### CIPO 3035

Puerto Rican Political System 3 credits, 3 hours Requirements: CISO 3121, CISO 3122

It studies the historical development of the Puerto Rican political system, its antecedents under the Spanish regime, the emergence of a political consciousness, the period of domination of the United States, the Constitution of the Commonwealth, the system it creates and the organs of power it constitutes, with special consideration to the problem of Puerto Rico's political status and its relationship with the United States. **CIPO 3036** Sexual Politics in Puerto Rico 3 credits, 3 hours Requirements: CISO 3121, CISO 3122

The material and ideological causes that condition the political behavior of Puerto Rican women are studied.

## CIPO 3075

Introduction to Public Administration 3 credits, 3 hours

Requirements: CISO 3121, CISO 3122

The field of public administration is delimited in the political context, taking into account the difference and relationship between politics and administration, and considering the cultural, general and public bases. The internal aspects of the public bureaucratic organization are studied, as well as the organizational theories that explain it. The process of generalization and implementation of public policy is analyzed, emphasizing responsibility in the exercise of public function.

#### CIPO 3085

Theories and Methods of Political Sociology 3 credits, 3 hours

Requirement: MEMBERS 3261

The effects of politics on social behavior are studied. The areas of political behavior are demarcated through methodological knowledge. It studies different theories and concepts, institutions, groups and political movements in the social framework and how their expression and action achieve permanence and social change.

#### **CIPO 4006**

Seminar: Public Opinion and Propaganda 3 credits, 3 hours

Requirements: CISO 3121, CISO 3122

It contains a definition of public opinion and its function in democratic and totalitarian systems; psychosociological determinants of public opinion, how it is communicated and measured, what is its influence on political action; agitation operations, propaganda, and mass persuasion techniques, and the role of the media, including radio, television, and print.

#### CIPO 4175

Civil Rights in Puerto Rico 3 credits, 3 hours Requirement: CISO 3121, CISO 3122 Study of the origin, content, and evolution of civil liberties, with emphasis on the Magna Carta, the Constitution of the United States, the Universal Declaration of Human Rights of the United Nations, the Pact of San José de Costa Rica, and the Puerto Rico Bill of Rights, as well as other legal instruments such as the Puerto Rico Civil Rights Commission and the Investigative Commission, Prosecution and Appeal (CIPA).

#### **CIPO 4995**

Special Topics in Political Science 3 credits, 3 hours Requirement: Discussion of various topics in political science, and incorporating recent literature for it. Topics may vary from semester to semester.

### **CISO 3085**

Society and Culture of Puerto Rico 3 credits, 3 hours

Requirements: CISO 3121 and CISO 3122 Semester: First A comprehensive social science course derived from the different disciplines that facilitate the understanding of a special area: Puerto Rico. It includes the analysis of Puerto Rico's basic institutions, structures, and systems and their functional nature.

#### CISO 3121

Introduction to Social Sciences I

3 credits, 3 hours

Requirement: None

Study of General Education in the Social Sciences; Analytical study of the most important areas of anthropology, sociology, psychology, political science and economics. The main themes of each subject and concepts such as culture, society, personality, organization, power, human and productive resources, structure and system, among others, are analyzed. The student will understand what human society is and how it works.

### CISO 3122

Introduction to Social Sciences II 3 credits, 3 hours Requirement: CISO 3121

Study of General Education in the Social Sciences; Analytical study of the most important areas of anthropology, sociology, psychology, political science and economics. The main themes of each subject and concepts such as culture, society, personality, organization, power, human and productive resources, structure and system, among others, are analyzed. The student will understand what human society is and how it works.

### CISO 3155

Fundamentals of Statistical Reasoning

3 credits, 3 hours

Requirements: CISO 3121, CISO 3122, MATE 3041 and MATE 3042

Reasoning, computation and limitations of elementary statistics applied to experience and research in Psychology and Social Sciences. Without forgetting the theory, the practical aspects are emphasized and include graphs, z, t, chi-square tests, correlations and experimental design.

#### **CITE 4005**

Introduction to Earth Sciences

4 credits, 4 hours (40% class and 60% lab)

Requirements: FISI 3011 and QUIM 3131

It is a study of the physical and chemical phenomena that occur on land, in the oceans and in the atmosphere, as well as in space. It includes the study of: measurements of space and time, earth materials such as minerals, rocks, soils, waters, and atmosphere, physical and chemical processes such as tectonism, volcanism, metamorphism, weathering, erosion, sedimentation, and climatological phenomena such as temperature, pressure, winds, cloud formation, rain, and hurricanes. The course emphasizes the dynamics of the processes of materials from the earth and space. Whenever feasible, the topics will be illustrated with their manifestations in Puerto Rico. Includes excursions.

### **CONT 3005**

Introduction to the Fundamentals of Accounting I 4 credits, 4 hours

Requirement: None

It involves familiarizing the student with the nature, scope, and objectives of accounting, and how it has been affected in its development by the various sectors of society. The theory and methodology are studied, emphasizing the recording of income and expense transactions, and the forms used for the presentation of financial information. The student is related to the uses and importance of accounting for owners, management, creditors and the general public, who have diverse interests in financial information.

# **CONT 3006**

Introduction to the Fundamentals of Accounting II 4 credits, 4 hours

Requisitos: CONT 3005

Study of the concepts and principles of financial accounting and their application in business operations. Internal control systems, cost determination, and depreciation methods are discussed. Familiarize them with the different organizations (corporations, commercial companies and own business) by analyzing the components of capital, characteristics and differences. The student applies the knowledge acquired in the analysis of financial statements using proportional measures of the surrounding and immediate solvency indices.

# **CONT 3016**

Accounting for the Administrative Professional 3 credits, 3 hours

Requirement: None

The course studies the basic elements of double-entry accounting with application to special wages, subsidiary ledgers, and other related books. In addition, the procedure for the control of the small cash system, the preparation and analysis of payroll and financial statements, the preparation of adjustments, closing entries, worksheets, checks, reconciliation, invoices, purchase orders, among other commercial documents manually and electronically are included. The general aspects of income tax and its implications in commercial and individual organizations are studied.

# **CONT 3025**

Cost Accounting 4 credits, 4 hours Requirement: CONT 3006

Study of the principles of cost accounting and its role in administrative decisions. The different techniques for accounting for the costs applicable to the various forms of production are studied. It includes budgeting principles and methods for establishing the basis on which cost is determined and discusses routine procedures for collecting cost information.

# CONT 3101

Philosophy, Theory and Problems of Financial Accounting I

3 credits, 3 hours

Requirement: CONT 3006

The course comprises the study of generally accepted principles in financial accounting. The pronouncements

issued by the governing organizations of accounting and their application to business transactions and the presentation of financial statements of mercantile industries are analyzed.

It includes transaction analysis, accounting records, adjustments, worksheets, and preparation of financial statements. Pronouncements related to current asset topics are evaluated.

## **CONT 3102**

Philosophy, Theory and Problems of Financial Accounting II

3 credits, 3 hours

Requirement: CONT 3101

The pronouncements issued by the accounting governing bodies and their application of land, buildings, machinery, furniture, equipment, intangible assets, current liabilities, contingencies and long-term debts are analyzed. It also includes the evaluation of depreciation, amortization and asset depletion methods, the valuation and presentation of the capital structure of corporations and short- and long-term investments.

# **CONT 3103**

Philosophy, Theory and Problems of Financial Accounting III

3 credits, 3 hours

Requirement: CONT 3102

The pronouncements issued by the accounting governing bodies and their application to the revenue recognition transactions of different businesses and industries and their presentation in the financial statements are analyzed. It also includes accounting topics for income taxes, pensions and other employee retirement systems, leases, changes in accounting principles and other disclosures in the financial statements. Complex cases and problems in these topics are analyzed and the knowledge of the statement of cash flows is expanded.

### **CONT 4006**

Accounting Management 3 credits, 3 hours Requirement: CONT 3006

It studies the need for management to know the uses of accounting, the techniques used in it to understand and appreciate the value of this information in decisionmaking. The student is related to the basic functions of management in the planning, organization, direction, supervision and controls of the company's activities. The concepts and principles of accounting, accounting systems, managerial control, programming and budget preparation, and analysis of financial information used by management in the development of the company's operations are discussed.

## **CONT 4007**

Federal Income Tax 3 credits, 3 hours Requirement: CONT 3006

Analysis of the Federal Income Tax Law. It includes inclusions and exclusions to gross income, allowable deductions, capital assets, withholding tax, credits for contributions paid to foreign countries, and determining the contribution to be paid.

## **CONT 4008**

Government Accounting 3 credits, 3 hours Requirement: CONT 3006

The course is designed to analyse the accounting procedures and methods and financial reporting of public entities and the different funds used in government and municipalities. In addition, the analysis of the pronouncements promulgated by the professional organizations "*Governmental Accounting Standard Board (GASB)*" and "*Financial Accounting Standard Board (FASB)*" is included.

# **CONT 4009**

Income Tax in Puerto Rico 3 credits, 3 hours Requirement: CONT 3006

Analysis of Puerto Rico's income tax law and its regulations, including taxable income, inclusion and exclusion of items, allowable deductions, current and accelerated depreciation; bases for computing the statement of capital gains or losses; credits; Calculations of the normal contribution and the additional contribution as they affect individuals. Practical problems and the preparation of spreadsheets.

### **CONT 4015**

Advanced Accounting Theory and Problems 4 credits, 4 hours

# Requirement: CONT 3102

It includes the study of financial accounting concepts and the analysis of problems arising from the application of these concepts in specialized organizations (corporations, branches, affiliated companies, and nonprofit institutions) and bankrupt organizations.

### **CONT 4026**

Internship in Accounting

4 credits, 350 hours.

The student must complete a total of 350 hours during the internship period. The student will attend a boarding school 23 hours per week for a period of 14 weeks. In addition, the student will attend 28 hours in seminar meetings.

Requirement: CONT 3005, CONT 3006, CONT 3101, CONT 3102 and CONT 3025 with a rating of "C" or higher. The Auditing (CONT 4040) and Puerto Rico Income Tax (CONT 4009) courses may be required at some boarding schools. To apply for the course you must have an average of 25 hours per week available or the two months of the summer so that the student can fulfill the required internship time.

It consists of a full-time internship in a workplace where the student has the opportunity to apply the theoretical concepts they acquire in the classroom. The student is exposed to a series of situations that only a center of this nature can provide, and that serve to develop in him the confidence and emotional maturity that he needs to successfully develop in his professional life. The course also facilitates that students acquire more elements of judgment to determine the particular area within the field of Accounting in which they want to develop their professional practice.

# **CONT 4028**

Federal Income Tax - Corporations, Partnerships, and Consortia

3 credits, 3 hours

Requirement: CONT 4007

The course is aimed at preparing and familiarizing accounting students who wish to gain a broader and more detailed knowledge about the Federal Income Tax Act. It is designed to present a research approach to the following topics: Corporate Contribution, Corporate Income Contribution, and Consortia Income Contribution.

### **CONT 4037**

Accounting Information Systems

3 credits: 3 hours

Requisitos: CONT 3006, CONT 4006 o CONT 3025

During the course, the functions and usefulness of computerized information systems applied to accounting are studied. Fundamental aspects of the development, analysis, risks and controls of these systems are discussed. The student is introduced through practical exercises to the use of tools and programs in the processes of recording, accumulating, analyzing, interpreting, synthesizing, and presenting accounting information, and to identify, collect, organize, and evaluate accounting information effectively and efficiently using electronic spreadsheet tools, programs, and auditing applications.

### **CONT 4040**

Business Enterprise Audit and Other Professional Services-Capstone

4 credits, 4 hours

Requisitos: CONT 3025, CONT 3102

The course has been designed to cover the testimonial services provided by public accounting professionals. It includes the study of contemporary auditing practices, compilations and reviews. Emphasis is placed on knowledge of Generally Accepted Auditing Standards (GAAS) and their application to business enterprises. The student is trained in the preparation of audit programs and in the procedures used to obtain and evaluate evidence related to accounting events and transactions and that serve as a basis for the issuance of an opinion on the content of the financial statements of these companies. The student is familiarized with other attestation services, emphasizing financial statement compilation and review services. The course also includes discussion of the Code of Professional Conduct governing the profession of CPA issued by the American Institute of CPAs

#### **CONT 4049**

Principles for Examining Fraud 4 credits, 4 hours Requirement: CONT 3006

The course considers contemporary principles and practices for identifying and examining fraud through lecture, discussion, and case studies. It includes the examination of the most recent and relevant legislation, case law, accounting principles and information analysis systems. The main purpose is to prepare people who will help avoid the consequences of losses due to fraud in public and private entities. This course is aimed at Business Administration students and other students interested in enriching themselves intellectually and ethically.

#### **CONT 4056**

Business Enterprise Audit & Other Professional Services-Capstone 4 credits, 4 hours Requisitos: CONT 3025, CONT 3102 The course has been designed to cover the testimonial services provided by public accounting professionals. It includes the study of contemporary auditing practices, compilations and reviews. Emphasis is placed on knowledge of Generally Accepted Auditing Standards (GAAS) and their application to business enterprises. The student is trained in the preparation of audit programs and in the procedures used to obtain and evaluate evidence related to accounting events and transactions and that serve as a basis for the issuance of an opinion on the content of the financial statements of these companies. The student is familiarized with other attestation services, emphasizing financial statement compilation and review services. The course also includes discussion of the Code of Professional Conduct governing the profession of CPA issued by the American Institute of CPAs.

## **CONT 4996**

Special Topics in Accounting 3 credits, 3 hours Requisitos: CONT 3006 Discussion of various topics in accounting and finance,

incorporating recent literature for it. Topics may vary from semester to semester.

### **DEME 4005**

Commercial law 4 credits, 4 hours

Requirement: Be classified in 3rd or 4th year

It familiarizes the student with the general principles of public and private law, as well as with the judicial system. In addition, it offers an introduction to Puerto Rican commercial law and discusses: commercial contracts in kind, the legal structure of companies and corporations, and the elements of foreign exchange law (negotiable instruments).

#### ECON 3005

Economy 3 credits, 3 hours

Requirement: CISO 3121-3122

Integrated course in general economics. It covers the basic concepts and principles of micro and macroeconomics that are deemed necessary for adequate preparation at the university level.

#### ECON 3021

Principles of Economics I 3 credits, 3 hours Requirements: CISO 3121-3122 Introduction to the fundamentals of economics and the methods of economic analysis. The purpose of the course is to create in the student an awareness and understanding of the economic world in which he lives and of the phenomena and problems that it poses. It introduces modern microeconomic analysis. It examines the nature of the economic problem, the theory of consumer choice, the analysis of production, and the market mechanism as an instrument for ordering economic activity.

#### ECON 3022

Principles of Economics II

3 credits, 3 hours

Requirement: CISO 3121 and CISO 3122 Semester: Second

Introduction to macroeconomic analysis. It examines the determinants of the level of employment and income in the economy and its monetary organization.

### ECON 3031

Statistical Methods I

3 credits, 3 hours Requirements: ECON 3022 or ECON 3005 and MATE 3042

Analysis of the basic concepts of statistics that have application to the field of economics. Description of frequency distributions, measures of central tendency, measures of dispersion, measures of kurtosis and asymmetry. Probability theory. Theoretical frequency distribution.

#### ECON 3032

Statistical Methods II

3 credits, 3 hours

Requirement: ECON 3031 Semester: Second

Analysis of the concepts of Statistics that have application in the field of economics. Sample selection theory. Statistical inference, hypothesis testing. Small sample theory.

Single and multiple correlation and regression. Analysis of variance, Chi-square and F tests. Analysis of time series.

#### ECON 3085

Economic and Social Development of Puerto Rico\* 3 credits, 3 hours

Requirements: ECON 3005 or ECON 3022\*\*

Analysis of Puerto Rico's economic system, highlighting the economic structure, the country's fundamental problems, and their possible solutions. The most important structural changes during this century and the interaction between economic and social variables are examined. It encourages the acquisition of analytical tools that enable them to understand and systematically examine the economic and social development of Puerto Rico.

#### ECON 4005

Microeconomics 3 credits, 3 hours Requirement: ECON 3021

Analysis of the process of equilibrium of activity, basic economic units and markets. The usefulness of basic economic units and markets. The usefulness of consumer theory. Yields and the theory of production. The conditions of equilibrium in economic analysis. Exchange and general equilibrium in markets.

#### **ECON 4015**

Economic development 3 credits, 3 hours

Requirement: ECON 3021 or 3005

Measurement of development. Non-economic and historical aspects of development. Theories of economic development. Integration of demographic analysis and economic analysis of development.

### ECON 4016

Managerial Economics 3 credits 3 hours Requirements: ECON 3021 or 3005 Study of the decision-making process in companies and application of economic theory and analytical and quantitative methods to this process. ECON 4025 Monetary theory and policy 3 credits, 3 hours

Requirement: ECON 3022 or 3005

The economic principles that govern the organization and operation of the monetary and banking systems. Resources and obligations of banks, banking policy, commercial banking in Puerto Rico, the Federal Reserve system, the value of the currency and its relationship with the general price level.

Post-war monetary problems, relationship between monetary policy and fiscal policy.

#### ECON 4035

Mathematics for Economists

3 credits, 3 hours

Requirements: ECON 3022 or ECON 3005 and MATE 3042 Functions, systems of simultaneous equations and

economic models. Linear economic models and elements of matrix algebra. Elements of differential calculus, staticcomparative economic analysis and optimization. Conditional optimization, inequalities and linear programming.

## ECON 4045

Comparative Economic Systems 3 credits, 3 hours Requirement: ECON 3022

The theory and practice of alternative systems of dynamic organization. Free enterprise and the planned economy: historical origin, institutional structure, organization of production and exchange, distribution of income. Interrelation of government and economy under capitalism, democratic socialism and communism, fascism and Nazi socialism. Analysis of theoretical texts of each of these systems.

### ECON 4075

Intermediate Macroeconomic Analysis 3 credits, 3 hours

Requirement: ECON 3022

Examination of Keynesian thought as the origin of contemporary aggregate reasoning. The business cycle and its classical economic tradition. Economic models and their construction. The economic model of Maynard Keynes and some subsequent modifications. Determination of the level of employment and the general equilibrium. Aggregate demand and its determinations. The

Keynesian theory and the integration of monetary theory and income theory.

### ECON 4085

International Economics 3 credits, 3 hours Requirement: ECON 3022

Theory and practice of international trade and capital movements. It includes: historical development, the monetary mechanism of exchange, the problem of exchange rates, the balance of payments, international monetary problems, economic integration and international trade agreements.

### ECON 4115

Seminar on Contemporary Economic Thought 3 credits, 3 hours Requirement: ECON 3021 Analysis of recent developments in economic thought, as reflected in books, journal articles, speeches, and statements.

#### ECON 4166

Economy of Puerto Rico 3 credits, 3 hours

Requirement: ECON 3022

Analysis of the characteristics and trends of our economy. It covers: geography and economic history; the role of agriculture and specific agricultural products; land tenure: the population and the working group; economic relations with the United States; public revenues and expenditures; banking and credit; transport and communications; net income, gross product and external balance of payments; industrial development and possibilities for future development; Economic Policy of the Government.

#### ECON 4175

Accounting for Economists 3 credits, 3 hours

Requirement: ECON 3021-3022

The fundamental accounting principles that govern the preparation of financial statements and the application of accounting to the various fields of economics.

#### ECON 4355

Introduction to Econometrics

3 credits, 3 hours

Requirement: ECON 4035 and ECON 3031- 3032

Detailed study of the nature of classical linear regression analysis, the assumptions on which it is based, as well as the problems that arise when they are violated: autocorrelation, multicollinearity and heteroskedasticity. Topics such as identification, use of fictitious and instrumental variables, autoregressive models and models with distributed lags and the use of simultaneous equation models are also discussed.

#### EDES 3017

The Arts in Special Education 3 credits, 3 hours

Requirement: EDES 4006 The Exceptional Student

This course will cover the basic principles of using music, arts, and drama with students with special needs. The development of creativity will be emphasized, as well as the use of the arts to develop academic behavioral and language skills in the student with special needs; through the different means of artistic expression. The teacher candidate will apply the knowledge gained by performing ten (10) hours of community service.

#### EDES 3018

Emotional Disturbances 3 credits, 3 hours Requirement: EDFU 3001

This course will deal with the historical and legal development of emotional impairments, as well as their definition, causes, characteristics, and the various theories of treatment including their different methods with a focus on behavior modification techniques. The teacher candidate will learn to plan and implement a behavior modification program. The application of assistive technology will be discussed and services available in the community for these individuals and their families will be examined.

### EDES 3019

Specific Learning Problems 3 credits, 3 hours Requirement: EDFU 3001

The historical development of the condition, the educational intervention for students with specific learning problems, its definitions, causes and characteristics will be studied. The legal basis of special education will be examined with emphasis on the implications for the population of specific learning problems. Topics such as the Individualized Educational Plan (IEP), technological assistance and inclusion for this population will be studied.

#### **EDES 4006**

The Exceptional Student 3 credits, 3 hours Requirement: EDFU 3001

This course will examine the definitions, causes, and characteristics of each of the exceptionalities. The teacher candidate will develop the knowledge, experiences, skills, and attitudes to identify students with special needs. The current laws will be analyzed, planning and applying technological assistance and inclusion to guarantee an appropriate education. It will provide the teacher candidate with the knowledge and tools necessary to work with their families and community agencies that provide services to people with disabilities.

### EDES 4078

Curriculum in Special Education I 3 credits, 3 hours Requirement: EDES 4006 This course prepares the special education

This course prepares the special education teacher candidate in the process of teaching students with special

needs. Learn how to observe children, how to plan and how to use long-term and short-term goals, how to do homework analysis, and how to plan the curriculum and use the individualization materials of the instructions and how to write an Individualization Educational Plan while integrating technological assistance and inclusion. The teacher candidate will apply in pre-practice the knowledge acquired in class by visiting a school with special education groups or the Family Room and will accumulate ten (10) hours.

#### EDES 4079

Curriculum in Special Education II 3 credits, 3 hours

Requirement: EDES 4078

This course develops the knowledge and skills necessary for teaching students with special needs, with an emphasis on teaching mathematics, reading and writing. It includes teaching materials, such as the sequence of skills and the assessment of learning. The theories that underpin teaching methods are discussed and the concepts are applied to practice with students with special needs. The teacher candidate writes the Individualized Education Program (IEP); integrating technological assistance and considering inclusion. The teacher candidate will apply in pre-practice the knowledge acquired in class by visiting a public school with special education groups or the Family Room and will accumulate ten (10) hours.

#### EDES 4086

Mental retardation 3 credits, 3 hours

Requirement: EDES 4006

This course will deal with the history of mental impairments, as well as their definition, causes, characteristics, theories of intelligence, and treatment including their different methods and materials. The legal background of special education will be discussed, emphasizing the application of laws in the development of services to children and youth with mental retardation. The application of Technological Assistance to this population will be studied. The services available in the community for these individuals and their families are examined.

#### EDES 4087

The Disabled Child of School Age 3 credits, 3 hours Requirement: EDES 4006 This course studies different areas of learning in preschool children with special needs, such as intellectual, motor skills, social-emotional, selfsufficiency, and creativity. The skills that should be taught in each area are discussed, as well as the methods and materials that can be used. The teacher candidate will apply the knowledge acquired in class to visit a school with special education groups or the Family Room and will fulfill ten (10) hours of community service.

#### EDES 4088

Evaluation in Special Education 3 credits, 3 hours

Requirement: EDES 4006

The course gives importance to the study, administration and interpretation of formal and informal assessment instruments used for the collection of data related to the functioning of students with special needs at various educational levels. The various tests are examined, including those of intelligence, perception, motor development, learning skills and academic achievement. The implications of the evaluation process for the diagnosis, location and preparation of the IEP of those with special needs are analyzed. The teacher candidate will develop informal diagnostic tests in the areas of reading, writing, and math proficiency by applying what they have learned. Finally, the use of alternative assessment and assessment techniques is reviewed.

### EDES 4089

### Special Education Practice - Capstone

6 credits, 300 hours (includes a concurrent seminar once a week and insertion into a Teaching Practice Center during the semester)

Requirement: 4th year student, take a comprehensive exam and pass it prior to the semester that enrolls in the EDES 4089 Course to have authorization from the Special Education Program and the Department of Pedagogy.

This course is designed to serve as a link between the theoretical pedagogy received during university preparation and the educational realities of the classroom in which the candidate for special education teacher will be able to experience the diversity of educational strategies and apply the use of technology, research, evaluation, management of the student with special needs, planning and administrative process, effective communication, collaboration with parents, incorporates self-evaluation and reflection in the search for solutions. The teacher candidate will apply the knowledge acquired and complete (300) hours.

#### EDES 4096

Methodology of Teaching Reading and Writing in K-12 Special Education

3 credit, 3 hours

Requirement: EDES 4006, EDES 4078, EDES 4079

This course is designed for the student to apply the theoretical and practical foundations in the process of teaching reading and writing to children and youth with disabilities using the Spanish Curriculum at the Elementary, Intermediate, and Secondary levels. Population-appropriate methods and strategies are examined, taking into consideration the drafting of measurable goals and objectives of the Individualized Education Program (IEP). Work is done on the design of how to plan a unit, including the preparation of teaching materials, technological assistance and the evaluation of learning.

#### EDES 4097

K-12 Special Education Language Arts Teaching Methodology

3 credits, 3 hours

Requirement: EDES 4006, EDES 4078, EDES 4079

This course offers the student the opportunity to handle, understand, and apply the components of Language Arts (listening, speaking, reading, and writing) to Special Education. Examines the remedial methods and strategies that are best suited to the needs of students with Disabilities. Its goal is to integrate the different information competencies into the course content, giving the student the opportunity to expand the skills of identifying, solving and making decisions in the right way, according to the subject of the course.

#### EDES 4098

Methodology of Mathematics Teaching in K-12 Special Education

3 credits, 3 hours

Requirement: EDES 4006, EDES 4078, EDES 4079

This course prepares the teacher candidate in the process of teaching mathematics to children and youth with disabilities in the mathematics curriculum at the elementary and secondary levels. Formal and informal diagnostic tests, methods, and strategies used in mathematics teaching are discussed. The writing of measurable goals and objectives of the service program (PEI) in the area of mathematics is taken into consideration. Work is done on the design of how to plan a unit, including the preparation of teaching materials, technological assistance and the evaluation of learning. Finally, apply the knowledge acquired through an educational intervention.

# EDES 4995

**Special Topics in Special Education** 

Credits: 1 to 3 hours per week: Variable (1 hour/1 credit) Requirement:

Advanced level seminars on selected topics in Special Education.

### EDFI 3025

Voleibol Elemental

2 credits, 2 hours

**Requirement: None** 

Study of the history and development of volleyball. Practice and strategies for teaching the fundamental skills of the sport and the application of the rules. Includes; volleying, bompeo, serves, simple strategies for offense and defense of the game and scoring.

## EDFI 3034

Measurement and Evaluation in Regular and Adapted Physical Education3 credits, 3 hours

Requirement: Measurement and Evaluation in Regular Physical Education

Basic concepts of measurement, appraisal and evaluation in physical education; Design, administration and interpretation of psychomotor and cognitive tests in elementary and adapted physical education. Introduction to research and the use of computers in evaluation.

### EDFI 3035

Basketball

2 credits, 2 hours.

**Requirement: None** 

Study of the history and development of basketball. The practice of the fundamental skills of the sport, and the application of the rules, offensive and defensive strategies, scoring. Includes: passes, dribbles, field goals, free throws, rebounds, etc.

### EDFI 3045

Softball credits, 2 hours

Requirement: None

History and development of the sport, its rules and annotations. Practice in the skills and application of offensive and defensive strategies of the game.

# EDFI 3075

Sports Skills, Training and Techniques (Track and Field) 2 credits, 2 hours

### **Requirement: None**

Study of the history and development of track and field events. Practice and strategies for teaching the technique of the different events. Study and application of the rules. Preparation and training for the following track events: 100 meters, 200 meters, 400 meters, 1,500 meters, longdistance races, relays. Preparation and training in the following field events: balance throwing, javelin throwing, high jump, pole vault, long jump, triple jump and others.

# EDFI 3098

Methods and Techniques in Adapted Physical Education 3 credits, 3 hours

Requirement: EDFI 3395 (Teaching Physical Education for the Disabled)

Methodology in the evaluation, prescription, programming and implementation of physical education programs for people with disabilities from childhood. Emphasis on the administration and interpretation of tests, writing of individual educational plans in physical education within the PEI and PISF. Techniques to individualize teaching and intervention will be elaborated, starting from a developmental and functional model. It includes family- and ecology-centered approaches.

# EDFI 3099

Teaching Practice Seminar 3 credits, hours Requirement: Course Description

### EDFI 3100

Motor Learning 3 credits, 3 hours Requirement: None History and development of motor learning outside and within the area of Physical Education. Definition and explanation of the factors involved in the learning of

motor skills during the development of the human being.

### EDFI 3105

Simple Organization Games 2 credits, 2 hours Requirement: None Study and practice in teaching games that require few facilities or materials. Own games for all levels, with special interest in elementary. At the end of the course, the student will have their own game manual.

# EDFI 3155

History and Principles of Physical Education Credits, 3 hours

Requirement: None

The history of Physical Education from antiquity to the present. The study of the interpretations of the principles and objectives of Physical Education.

# EDFI 3195

Massage and Bandaging 2 credits, 2 hours Requirement:

Practical course that tries to familiarize the student with the elementary concepts of bandages and their physiological effects, as well as the need and application of preventive and protective bandages. (Students must provide their own materials)

# EDFI 3385

Physical Efficiency 2 credits, 2 hours Requirement: None

Knowledge and information about physical efficiency and its affinity to health. Means of obtaining the level of physical fitness necessary to maintain desirable physical proportions.

# EDFI 3395

Teaching physical education for disabled people 3 credits, 3 hours

Requirement: None

Study of the historical aspects of people with physical, mental, emotional, or other handicaps and the activities appropriate for them. It includes the origin and development of physical exercises, rehabilitation methods and recreation, focusing on the educational aspects of Physical Education and in line with current regulations (Public Law 94-142). The course provides opportunities for people with disabilities to practice corrective exercises.

# EDFI 3406

Advanced Volleyball 2 credits, 2 hours Requirement: EDFI 3025

This course will analyse and develop the sport of volleyball at its highest level, as well as its problems, trends and possibilities. It will induce the study of sport and its particularities.

# EDFI 3425

Weightlifting 2 credits, 2 hours Requirement: None

This course aims to expose the Physical Education student to a detailed discussion about the elements that govern strength training, its historical background, basic rules, regulations that govern it and practices of the sport (including Olympic lifts).

### EDFI 3441

Introduction to Swimming 2 credits, 2 hours

Requirement: None

Study and practice of elementary swimming. It includes lectures on the development of swimming, as well as aquatic hygiene and safety measures. Practice in the development of basic swimming skills. Includes: floating, rhythmic breathing, styles ("crawl", backstroke, elemental back, side), exit, turns, simple entries into the water.

## EDFI 3442

Intermediate Swimming 2 credits, 2 hours

Requirement: EDFI 3441

Swimming skills and styles and improvement of them. This course is intended to train the student in the styles that require a greater degree of coordination, such as breaststroke, butterfly, side-on-arms, inverted chest, trudgeon crawl, and trudgeon stroke.

### EDFI 3447

Aquatic Rescue and Safety 2 credits, 2 hours Requirement: EDFI 3442

This course aims to train the student in the techniques and skills required for lifeguard training. It includes: accident prevention, approach to the victim, trailers, defenses, search for missing persons, first aid and cardiopulmonary resuscitation. The student who wishes to do so will be able to take the Red Cross lifeguard exam.

### EDFI 3451

Elementary Tennis

2 credits, 2 hours

Requirement: None

Theory on the history and development of tennis, related terms and concepts, rules, scoring. Individual and group practice of the basic skills of the game: volleying, serving (forehand and backhand), elementary techniques and tactics.

# EDFI 3452

Advanced Tennis 2 credits, 2 hours Requirement: EDFI 3451

Theory and practice of the sport of tennis. This includes: knowledge of fundamental skills, basic techniques, advanced tennis tactics, repair and specialized training.

## EDFI 3465

Personal Health Community 3 credits, 3 hours

**Requirement: None** 

Systematic discussion and understanding of important concepts and aspects in the areas of health that concern us today. The main focus is on emotional, social and environmental aspects. Emphasis is given to the prevention of health problems and their relationship with society so that the individual can develop more skillfully.

# EDFI 3545

Folkloric Dances

2 credits, 2 hours

**Requirement: None** 

A brief history of the origin and development of the dance. It includes the presentation and practice of folk dances from different countries.

EDFI 3555

History and Principles of Physical Education

3 credits, 3 hours

Requirement: None

The history of Physical Education from antiquity to the present. The study and interpretation of the principles and objectives of Physical Education.

### EDFI 3585

**Basic Rhythms** 

2 credits, 2 hours

Requirement: None

Practice of elementary motor skills using music. The purpose is to develop agility, flexibility, and grace in rhythmic activities. It also includes practices of basic skills typical of sports, such as; walking, running, jumping, throwing, catching, manipulating, rhythmic exercises, jumping cuica and others. It provides for students to combine movements and figures, adapting the music.

# EDFI 3645

First Aid & Safety 2 credits, 2 hours

# Requirement: None

The study and application of first aid, procedures in the treatment of wounds and simple injuries in sport. Study together with the appropriate procedures for the prevention and treatment of injuries. It includes: fractures, poisoning, burns, suffocation and others. Certification exam is optional.

### EDFI 3687

Psychological Foundation and Physical Activities 2 credits, 2 hours Requirement: None

## EDFI 4018

Methodology for the teaching of Physical Education for the elementary level

3 credit, 3 hours

Requirements: EDFU 3007, EDFU 4019 and be classified as a 4th year student.

Study of the basic principles of the physical education curriculum for elementary school. Emphasis on designing, reviewing, organizing, and adapting content that best meets student needs, learning styles, and abilities. The theoretical, philosophical and investigative approaches that form the basis of the curricular principles will be discussed. Emphasis on the following topics: teaching strategies and methodologies, group management, assessment and evaluation. Discussion of research principles and ethical issues in elementary education. Use of emerging technology as a teaching strategy at the elementary level. It requires clinical observation experiences in elementary school.

# EDFI 4045

**Evaluation in Physical Education** 

3 credits, 3 hours

Requirement: EDFU 3001-3002 and be classified as a junior or older.

General and fundamental considerations of criteria and motor performance tests, introduction to procedures and analysis, uses and limitations of tests and evaluation, introduction to statistics, qualities of a test and variety of types of tests that are used in the construction of measurement instruments for the analysis of human movement in Physical Education.

# EDFI 4105

Exercise Physiology 3 credits, 3 hours Requirement: EDFI 4115 Introductory course in the theory and practice of exercise physiology, with emphasis on the problems of the participant in sporting events in Puerto Rico. The nature of exercise physiology, energy metabolism, types of muscle fibers, nutrition, the athlete, and the physiological basis for the development of strength and endurance, as well as temperature control, health, and exercise will be examined.

#### EDFI 4115

Anatomy and Kinesiology 3 credits, 3 hours Requirement: CIBI 3002 or BIOL 3012 Introduction to the study of the human body and its movements, based on lectures and demonstrations, followed by the study of the organic system. The mechanism of joints and muscles is studied. Analysis of

#### EDFI 4125

Physical Education Administration and Supervision 3 credits, 3 hours

body movements in relation to Physical Education.

Requirements: EDFI 3555

Study on how to organize and administer Physical Education programs at different levels of education. It includes the study on the management and control of facilities, equipment, budget, intramural and intercollegiate programs, legal aspects and others. This course offers hands-on lab experiences.

### EDFI 4146

Law / Responsibility in Physical Education and SR 3 credits, 3 hours Requirement:

#### EDFI 4157

Physical Activities Mental Retardation 3 credits, 3 hours Requirements:

#### EDFI 4169

Limited Student Physical Activities 3 credits, 3 hours Requirements:

#### EDFI 4199

Special Subject Courses on Offer

### EDFI 4215

Seminar on Curriculum and Teaching Methodology in Physical Education K-12 3 credits, 3 hours Requirements: EDFU 3007, EDFU 4019 and be classified as a fourth-year student

This course will give greater emphasis to the study and analysis of the new role of the Physical Education teacher, as a facilitator of the teaching-learning process, proposed by the new curricular approach of the Physical Education Program of public and private schools in Puerto Rico. The spectrum of teaching styles applied to Physical Education will also be analyzed and developed, as well as some instruments or assessment techniques appropriate for the teaching-learning process. Through the course, the student will demonstrate and demonstrate theoretical and practical mastery of the segments or class sessions, including the planning and development of the work plan (annual plan, unit plan, and daily plan) aimed at meeting the requirements established in the document of the standards of the Physical Education program of the Department of Education of Puerto Rico.

#### EDFI 4216

Physical Education Teaching Practice in High School - Capstone

6 credits, 300 hours (includes a concurrent seminar once a week and insertion into a Teaching Practice Center during the semester)

Requirement: Have completed all Pedagogy and Physical Education courses and be classified as a fourth-year student.

This course will assign the student-practitioner to a duly accredited public or private school in Puerto Rico (practice center) and where there is a Physical Education teacher with the cooperating teacher course, for five days a week in the morning or afternoon school schedule, with the permission of the department director. In addition, it is mandatory to attend a concurrent practice seminar once a week for an hour and a half where you will meet with the teaching practice supervisor of the University of Puerto Rico at Cayey to analyze and discuss the problems, positive aspects, theories and concepts related to the teaching practice process. Through this process, the student-practitioner will develop and implement knowledge, skills, techniques, attitudes and values in a real educational scenario, under a process of systematic supervision. They will develop critical and analytical skills when organizing a Physical Education program considering aspects such as: cultural differences, inclusion processes and the different assessment techniques applied to Physical Education.

#### EDFU 3001

Human Growth and Development

# 3 credits, 3 hours

**Requirement: None** 

To provide future teachers with knowledge about the nature and scope of educational psychology as a background to understanding the educational process. It confronts the student with knowledge about the growth and development of children and adolescents. It examines the natural and environmental forces that contribute to the development of a healthy person.

# EDFU 3002

Educational Psychology 3 credits, 3 hours Requirement: EDFU 3001

It puts the student in contact with the psychological principles that explain the teaching-learning process and the individual and social conditions that affect it. The different theoretical frameworks on learning and teaching and their application to the classroom are analyzed. Part of the time is dedicated to the study of the evaluation process, with special attention to the principles that govern the construction of educational exams and school promotion.

## EDFU 3007

Historical and Social Foundations of Education 3 credits, 3 hours

Requirements: EDFU 3001, EDFU 3002

In this course, an analysis of the fundamental principles of the social sciences and their relationship with the educational process is carried out. In addition, the discussion of the social problems that have conditioned and condition the development of education is a central axis. Both aspects of the course are provided in the application of the historical-sociological context of Puerto Rico.

# EDFU 3017

Learning Assessment 3 credits, 3 hours

Requirements: EDFU 3001; 3002; EDPE 4001 The functions of diagnosing and improving classroom instruction through testing and measurement; elementary techniques with the study of tests prepared for teachers, intelligence tests and others, and their use

# in the classroom.

### EDFU 4005

The Study of Man and His Physical Environment 3 credits, hours Requirement: None Study of the physical environment in which human beings develop by describing, observing, evaluating and comparing the processes that structure and shape the surface of the earth. The atmosphere and its processes, climates, composition and structure of the lithosphere and hydrosphere, biosphere, and the effect of rotation and translation on the planet and human beings as agents of change on the earth's surface. An interdisciplinary vision between the natural sciences that allows the student to integrate theoretical knowledge framed in human reality. Prescribed course in pedagogy.

(Note: This course is the Community Service of Teacher Candidate students.)

## EDFU 4019

Philosophical Foundations of Education

3 credits, 3 hours

Requirements: EDFU 3001, EDFU 3002, EDFU 3007

The relationship between philosophical theories and practice. The great problems caused by conflicting educational philosophies in terms of their historical development and current impact. The role of the teacher in the light of educational objectives, curricula and evaluation. Analysis of basic philosophical problems. Ways in which the development of the scientific method, changes in social and economic institutions, and the advancement of human knowledge demand philosophical attitudes and educational practices.

# EDPE 3002

Language Arts in Elementary School

3 credits, 3 hours

Requirements: ESPA 3101-3102, EDFU 3001-3002

The vernacular as a learning instrument in the elementary school curriculum. The nature of the linguistic process, the importance and function of the vernacular as an instrument of communication and expression, the relationship between the process of developing language skills, the language arts in the total curriculum, the progressive teaching program of the vernacular in its phases of listening, speaking, reading and writing, the techniques, didactic materials and other resources that can be used in the development of fundamental language skills.

# EDPE 3016

Teaching Music in Elementary School 3 credits, 3 hours Requirement: None Development of methodologies to identify and promote the creative expression of children in the area of music. Music as a pedagogical resource.

# EDPE 3018

Teaching English as a Second Language in Elementary School

3 credits, 3 hours

Requirements: Suggested only for candidates in elementary English, INGL 4335, INGL 4326 Introduction to the reflexive application of the purposes, scope, goals, objectives, and methodologies of teaching English as a second language in Puerto Rico.

# EDPE 3046

Health Education in Elementary School 3 credits, 3 hours

Requirements: EDFU 3001, EDFU3002

Theoretical and practical approach to the teachinglearning process of health. Aspects related to the teaching of the health curriculum in elementary school will be studied with the programmatic documents proposed by the Puerto Rico Department of Education (Curriculum Framework, Standards and Expectations, Circular Letters and Maps

Curricular). Emphasis on appropriate strategies, methods, and techniques for teaching health education, appraisal techniques, and use of instructional and technological resources. These experiences will enable the elementary school teacher candidate to develop critical, dynamic, and creative attitudes toward health education and integration.

# EDPE 3087

Theory and methodology of teaching (Experience in the Pre-practice Educational Environment)

1 credit, 30 hours

Requirement: EDFU 3001, EDFU 3002

The course provides a combination of theoretical and practical foundations that enable the student to deal effectively with the responsibilities and attitudes of a teacher at different levels. The philosophical and psychological foundations of teaching and learning, the analysis of the existing curriculum and its projections, the selection, writing and classification of objectives, methodology, preparation and use of resources, teaching materials and evaluation of achievement are studied. Throughout the course, theory and practice are integrated through field experiences in public or private schools. This course will place students in real educational settings that are representative of the diversity of students served by the Department of Education. This process includes visits by the Teacher to the Pre-Practice Center. The integration of information skills into the course content will provide the teacher candidate with the opportunity to develop the skills to identify their need for information in order to offer alternatives, to be able to make informed decisions and solve problems in an accurate way, according to the subject of the course.

# EDPE 3328

Fine Arts in Elementary and Secondary School Requirement: EDFU 3001, EDFU 3002

This course presents artistic creation as a means of plastic, literary, dramatic, musical and kinesthetic communication that are related and articulated with the teaching-learning process of the different disciplines in the school. The different stages of artistic development in childhood and adolescence are studied, as well as various techniques of artistic expression, teaching methods and ways of evaluating work.

# EDPE 4006

High School Teaching Practice - Capstone

6 credits, 300 hours (includes a concurrent seminar once a week and insertion into a Teaching Practice Center during the semester)

Requirement: Department Permit

Teaching practice in the subject of their specialty in middle and high school for a period of not less than three hours per day; five days a week, under the direction, guidance and supervision of cooperative teachers and supervisors in the specialty. Observation of classes, lectures, teaching practice, and participation in other activities inherent to the work of an active duty teacher. Study and analysis of those problems that arise in the practice of teaching in a weekly seminar of one hour under the direction of the supervisor of their specialty.

# EDPE 4008

Teaching Reading in Elementary School

3 credits, 3 hours

Requirement: EDPE 3017

Aimed at familiarizing future elementary grade teachers with basic techniques for learning to read in the mechanical, instrumental and recreational aspects. It includes the study of the skills that a good reading program tries to develop to make the student not only an efficient reader but also one who enjoys it to the fullest of the act of reading. Exposure to the basic reading series in use in the country's schools, as well as to recreational reading and enrichment works. Current methods, problems and approaches to teaching reading will be studied.

### EDPE 4016

Elementary School Teaching Practice - *Capstone* 6 credits, 300 hours (includes a concurrent seminar once a week and insertion into a Teaching Practice Center during the semester)

Students complete a minimum of one semester, morning or afternoon, in a public school. They assume responsibility for teaching duties in a real school situation under the guidance of the University and the cooperating school. One hour per week will be dedicated to interdisciplinary seminars with university supervisors. The student teacher will be governed by the academic semester of his teaching practice.

## EDPE 4115

Science and Math Teaching in Elementary School 3 credits, 3 hours

Requirement: EDFU 3002, CIBI 3002, CIFI 3002, MATE 3042

The course includes the examination of the nature of science and mathematics. In addition, the analysis of their conceptual frameworks including: core concepts, basic and complex mental processes, teaching, learning and active *assessment processes* with emphasis on the factors that affect them. The aforementioned aspects will be studied and practiced within the constructivist theoretical framework.

# EDPE 4117

Teaching Spanish and Social Studies in Elementary School 3 credits, 3 hours

Requirement: ESPA 3201-ESPA 3202, EDFU 3001-3002, HIST 3245, EDFU 4019, EDPE 3002 highly

## recommended.

The course includes analysis and discussion of the Spanish curriculum and Social Studies in elementary school (fourth through sixth grade). Extensive study of the programmatic documents proposed by the Department of Education of Puerto Rico and the strategies, methods, and techniques appropriate for the teaching of these disciplines, as well as of the evaluation techniques with special emphasis on those aimed at achieving the Student Profile of the XXI Century. Special consideration for single-sex education, the importance of the student's school environment during the teaching and learning process, and the role of the teacher in relation to students, the school, and the community. The aforementioned aspects will be studied and practiced within the constructivist theoretical framework. The integration of information skills into the course content will provide the teacher candidate with the opportunity

to develop the skills to identify their need for information in order to offer alternatives, to be able to make informed decisions and solve problems in an accurate way, according to the subject of the course.

### EDPE 4135

Theory and Methodology of Science Teaching in Secondary School 3 credits, 3 hours

Requirement: EDFU 3001, EDFU 3002, EDFU 3007, EDFU 4019.

Theoretical and practical approach to the teachinglearning process. All aspects related to the teaching of Science in secondary school will be studied: planning, innovative education and curriculum analysis; basic content in the area; resource preparation, adaptation and utilization; methodology, techniques and teaching strategies; Fundamentals of measurement and evaluation. Students will complete at least 15 hours of laboratory experiences. These experiences will enable them to develop critical, dynamic, and creative attitudes toward the educational problems prevailing in our Puerto Rican reality.

## EDPE 4145

Theory and Methodology of Mathematics Teaching in Secondary School

3 credits, 3 hours (plus 15 hours of observations at a school during the semester)

Requirements: EDFU 3001, EDFU3002, EDFU 3007, EDFU 4019

Theoretical and practical approach to the teachinglearning process. All aspects related to the teaching of Mathematics at the secondary level are studied, such as: planning, educational innovations, curriculum analysis; core content in the area of specialization, preparation, adaptation, and utilization of resources; methodology, teaching techniques and strategies; and fundamentals of measurement and evaluation. These contents are integrated into a practical base. All students must complete at least fifteen hours of lab experiences in a public or private school. These experiences will contribute to the student's critical, dynamic development and creative attitudes towards Puerto Rico's educational problems.

# EDPE 4155

Theory and Methodology of Teaching History and Social Studies

3 credits, 3 hours (plus 15 hours of observations at a school during the semester)

Requirements: EDFU 3001, EDFU3002, EDFU 3007, EDFU 4019

Theoretical and practical approach to the teachinglearning process. All aspects related to the teaching of Social Studies and History in secondary school will be studied; such as: planning, educational innovations, curricular analysis and basic content in the area, among others. Preparation, adaptation and use of resources, methodology, techniques and teaching strategies as well as measurement and evaluation fundamentals. Students will complete at least 15 hours of laboratory experiences in public or private schools. These experiences will enable them to develop critical, dynamic, and creative attitudes toward the educational problems of Puerto Rico's educational system.

### EDPE 4235

Theory and methodology of teaching Spanish in secondary school

3 credits, 3 hours (plus 15 hours of observations at a school during the semester)

Requirement: EDFU 3001, EDFU 3007, EDFU 4019

Theoretical and practical approach to the teachinglearning process. All aspects related to the teaching of Spanish in secondary school will be studied: planning; innovative education and curriculum analysis; basic content in the area; resource preparation, adaptation and utilization; methodology, techniques and teaching strategies; Fundamentals of measurement and evaluation. Students will complete at least 15 hours of laboratory experiences. These experiences will enable them to develop critical, dynamic, and creative attitudes toward educational issues.

### EING 3515

Teaching methods in TESOL (*Teaching English to speakers of other languages*) elementary and secondary level 3 credits; 3 hours

Requirements: EDFU 3001-3002, 12 credits in English This course explores approaches and methods for teaching English as a second or foreign language to both children and adolescents, as well as establishing the relationship between linguistic theories, research findings, and classroom practices.

### ESCO 3001

Psychology of Communication I 3 credits 3 hours Requirement: ESPA 3102 The Psychology of Communication (Business Spanish) course is designed specifically for Business Administration students. It is an interdisciplinary course. The first part establishes the theoretical foundations of the different disciplines that constitute it, such as: logic, psychology, linguistics and especially stylistics. The aim is to train students in oral and written communication techniques so that they can perform effectively in the professional world.

#### ESCO 3002

Psychology of Communication II 3 credits, 3 hours

Requirement: ESCO 3001

The second part is essentially practical. The student is exposed to certain experiences that enable him to write and analyze various types of messages in which he effectively applies his knowledge of psychology, logic and grammar. Written messages are expected to reveal mastery of the essential requirements of modern professional communication: high ethical sense, care in presentation, appropriate selection of format and style according to content, recipient and social context.

#### ESPA 0002

Remedial Spanish

0 credits, 40 hours

It is offered only in summer.

The course is aimed at addressing those skills in which students have the greatest difficulties, since success in Basic Spanish depends, to a large extent, on the mastery of their vernacular language, the use of it, the propriety and correctness of their oral and written expression. In the Pre-University Spanish course, emphasis is placed on the correctness of the written language: syllabic division, accentuation, words of doubtful writing, punctuation mark and capital letters. In addition, some common expression errors are fixed. The course is required for students to take Basic Spanish.

#### ESPA 0020

Spanish Workshop I 0 credits, 2 hours

Co-Requirements: ESPA 3101 The Workshop provides the student with a space to develop their thinking in writing, so that they can begin in the full capacity of their critical aptitude. In addition, it provides them with basic skills in the management of written discourse, which will allow them to develop the communicative skills of the written language in the course of their professional life and as an integral citizen. The course will have a communicative approach that will be achieved through cooperative learning.

### ESPA 0021

Spanish Workshop II 0 credits, 2 hours Correquisito: ESPA 3102

The Workshop provides the student with a space to develop their thinking in writing, so that they can begin in the full capacity of their critical aptitude. In addition, it provides them with basic skills in the management of written discourse, which will allow them to develop the communicative skills of the written language in the course of their professional life and as an integral citizen. The course will have a communicative approach that will be achieved through cooperative learning.

## ESPA 3101

Basic Spanish I

3 credits, 3 hours

Requirement: Get more than 500 points in the Spanish part of the CEEB or take the ESPA 0002 pre-university course

The basic Spanish course aims to ensure that students master the basic skills of oral and written expression through vocabulary, spelling and language correction exercises. It also aims to interest them in reading literary works and familiarize them with some of the main figures and expressions of Hispanic literature. In the first semester, some works of contemporary Spanish literature are studied, starting with the generation of '98 and reaching the present time.

### ESPA 3102

Basic Spanish II 3 credits, 3 hours Requirement: ESPA 3101

In the second semester, contemporary Latin American literature is studied, with special attention to Puerto Rican literature. The basic Spanish course includes, in both semesters, a workshop on the development of communication skills, in which students work on improving oral and written expression.

# ESPA 3115

Introduction to Linguistics 3 credits, 3 hours Requirement: ESPA 3102

In this course, the different linguistic manifestations of this century will be studied: structuralism, functionalism, generativism and variationism. Phonology, morphology, syntax, semantics and sociolinguistics will be applied theoretically and descriptively.

# ESPA 3201-3202

Introduction to Literary Genres I and II 3 credits, 3 hours (each part, for a total of 6 credits) Requirements: ESPA 3102

Both parts are offered annually. In summer, one of the two parts of the course may be offered.

The Basic Spanish course consists of an exercise in the reading and study of representative Hispanic literary works of the contemporary era. The first semester focuses on the topics of Spanish language and literature. In the second semester, the study is aimed at contemporary Latin American literature. The course aims to develop comprehension and expression skills, both oral and written. In addition, it exposes students to the integration of literary analysis with their social and cultural environment.

# ESPA 3205

Diagnosis and Correction of Common Errors3 credits, 3 hours

### Requirement: ESPA 3102

The course will allow students to detect and correct, based on practical exercises, the most common errors in the use of our language. It will emphasize various registers of the language. It will prepare students to act as proofreaders or editors of a text. It is a course aimed at any student who wishes to improve their oral and written expression.

# ESPA 3211

Introduction to Spanish Literature I

3 credits, 3 hours

Requirements: ESPA 3102

This is a panoramic course that covers the history of Spanish literature from its origin (eleventh century) to the medieval and Renaissance periods.

### ESPA 3212

Introduction to Spanish Literature II 3 credits, 3 hours Requirements: ESPA 3211 This is a panoramic course that covers the history of Spanish literature from the Baroque (19th century) XVII) to the twentieth century. Representative works from each period will be analyzed.

# ESPA 3291

Spanish Grammar I 3 credits, 3 hours Requirements: ESPA 3102 The Spanish Grammar course aims to examine the elements that constitute the language, and the organization and functioning of all these elements. The study of the language as a system begins and the phonological, orthographic and morphological aspects of Spanish are discussed. In addition, the classes of words and their syntactic groups are presented. Language is seen in its communicative function and the act of communication is studied.

#### ESPA 3292

Spanish Grammar II 3 credits, 3 hours Requirement: ESPA 3291

The Spanish Grammar course aims to examine the elements that constitute the language, and the organization and functioning of all these elements. The study of language as a system continues. The verb and its arguments are presented, and the fundamental syntactic constructions are distinguished. Language is seen in its communicative function and the act of communication is studied.

#### ESPA 3299

Special Topics 3 credits, 3 hours Requirement: ESPA 3102

It is a specialized course of study whose subject varies, with the teacher also varying as appropriate. Open to Spanish students and all students from other departments who have satisfactorily completed the core Spanish course and who demonstrate interest in the subject. The purpose of this course is to offer students the opportunity to carry out a more in-depth study than is done in introductory courses, on a particular topic, era or author.

### ESPA 3351

Research Seminar (offered every semester)0 credits, 3 hours

#### Requirements: ESPA 3102

The Research Seminar course is designed for students of the concentration in Hispanic Studies, although we recommend it for all students of the institution. The purpose of the course is for the student to master the different stages in the development and writing of academic research. In this course, you will be able to distinguish the different bibliographic formats, improve your skills in the search for bibliographic sources necessary for your work and be guided, step by step, in the writing of a research essay. At the beginning of the semester, the student will begin their critical work and will be directed and evaluated in each of the stages of research and writing. The course is designed to write a paper in the area of literature or linguistics, however, it is open to any student who wishes to improve their research skills. The Seminar supports all the courses of the Department, so they must take it, at the latest, in the second semester of the second year.

#### ESPA 3358

Female Voices of Puerto Rican Literature of the 70s 3 credits, 3 hours

Requirement: ESPA 3102

The characteristics and themes of the narrative of four Puerto Rican writers of the generation of the 70s are studied: Rosario Ferré, Carmen Lugo Filippi, Magali García Ramis and Ana Lydia Vega.

#### ESPA 4011

Hispanic Linguistics I 3 credits, 3 hours Requirements: ESAP 3102

The origin and development of the Spanish language is studied. During the first semester, the history of the language is studied, with emphasis on phonetic (descriptive and historical) and morphological aspects. In the second semester, the characteristic features of Spanish in Latin America and its Puerto Rican modality are studied.

#### ESPA 4012

Hispanic Linguistics II 3 credits, 3 hours Requirement: ESPA 4011

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In the second semester, the characteristic features of Spanish in Latin America and its Puerto Rican modality are studied.

#### ESPA 4221

Latin American Literature I 3 credits, 3 hours Requirements: ESPA 3102

The process of Latin American literature is studied within the framework of the social history of culture. Aesthetic and thought currents are examined, and texts by authors who stand out in the different periods are analyzed. The first semester starts with pre-Columbian literature and advances to the end of the nineteenth century; in the second semester, the literary creation of the twentieth century is studied.

# ESPA 4222

Literatura Hispanoamericana II 3 credits, 3 hours Requirement: ESPA 4221 In the second semester, the literary creation of the twentieth century is studied.

# ESPA 4231

Puerto Rican Literature I 3 credits, 3 hours Requirements: ESPA 3102

In the course of Puerto Rican literature, the development of our literature is studied through an approach, in the first instance, chronological, that relates the student not only to the main characteristics of the various moments of our literary history, but also to the most representative and best achieved works of our authors. In the first semester, our literary production is studied from its origins to Modernism, and in the second semester it is studied from the Avant-garde to the present day.

# ESPA 4232

Puerto Rican Literature II 3 credits, 3 hours Requirement: ESPA 4231

In the course of Puerto Rican literature, the development of our literature is studied through an approach, in the first instance, chronological, that relates the student not only to the main characteristics of the various moments of our literary history, but also to the most representative and best achieved works of our authors. In the first semester, our literary production is studied from its origins to Modernism, and in the second semester it is studied from the Avant-garde to the present day.

### ESPA 4251

Literature of the Golden Age I 3 credits, 3 hours Requirement: ESPA 3211, ESPA 3212 This course studies Spanish literature of the Renaissance (sixteenth century). The course includes the study of the

(sixteenth century). The course includes the study of the characteristics of the

period and of the most representative authors, linked to the analysis of their literary production.

# ESPA 4252

Literature of the Golden Age II 3 credits, 3 hours Requirements: ESPA 3211, ESPA 3212

This course studies Spanish literature of the Baroque (seventeenth century). The course includes the study of

the characteristics of the period and the most representative authors, linked to the analysis of works of their literary production.

### ESPA 4311

Contemporary Literature of the Twentieth Century 3 credits, 3 hours Requirement: ESPA 3102

This course covers almost a period of one hundred years: from the end of the nineteenth century to the present day. Literary movements such as Realism, Naturalism, Symbolism, Expressionism, Modernism, Surrealism, Existentialism and New Realism are studied, highlighting their generalities and direct influences and analyzing representative works. This course is divided into literary genres. During the first semester, narrative (short story and novel) and theater are studied.

## ESPA 4377

The Puerto Rican Short Story 3 credits, 3 hours

Requirements: ESPA 3102

In this course, Puerto Rican short story production is studied from two aspects. First, the folk tale is briefly commented on, which constitutes, as in all of Latin America, the first manifestation of the island's short stories. Secondly, the story of well-known authors is studied, which emerged as such in the mid-nineteenth century, and which continues increasingly refined and vitalized to the present day.

### ESPA 4496

Research Seminar – Capstone

3 credits, 3 hours and/or individual consultation hours Requirements: ESPA 3102 and be classified as a fourthyear student.

The Research Seminar is designed for students of the concentration in Hispanic Studies, although we recommend it for all students of the institution. The purpose of the course is for the student to master the different stages in the development and writing of academic research. The student will distinguish between the different bibliographic styles, improve their skills in the search for information resources necessary for their work, become familiar with the institutional regulations that regulate research with human participants and will be guided, step by step, in the writing of a research essay. At the beginning of the semester, the student will begin their critical work and will be directed and evaluated at each of the stages of research and writing. The course is designed to write a paper in the area of literature or

linguistics, however, it is available to any student who wishes to improve their research skills. The Seminar serves to strengthen the skills and knowledge acquired in other courses.

## ESTA 3001

Trade Statistics I 3 credits, 3 hours Requirement: None

Statistical Analysis I is aimed at creating in the student a broad and solid base with which they can successfully face the understanding and solution of the quantifiable problems of the company and the market. Part I of the one-year course covers the basics of statistics, data collection, presentation and analysis, probability theory, probability distributions and sample distributions. Part II of the course covers statistical estimation, hypothesis testing, regression and correlation analysis, and projection techniques.

#### ESTA 3002

Statistical Analysis II 3 credits, 3 hours Requirement: ESTA 3001

Statistical Analysis II is aimed at creating in the student a broad and solid base with which he can successfully face the understanding and solution of the quantifiable problems of the company and the market. Part I of the one-year course covers the basics of statistics, data collection, presentation and analysis, probability theory, probability distributions and sample distributions. Part II of the course covers statistical estimation, hypothesis testing, regression and correlation analysis, and projection techniques.

#### ESTA 3026

Statistics for the Administrative Professional 2 credits, 2 hours

It is a lecture and practical course designed for students of the Bachelor of Office Administration Program with the purpose of obtaining basic knowledge of business statistics. Notions of descriptive statistics are presented and applied: frequency distributions, measures of central tendency, measures of dispersion and probability theory.

### FILO 3001

Introduction to Philosophy I 3 credits, 3 hours Requirement: HUMA 3102 It offers an overview of the different problems po

It offers an overview of the different problems posed in the history of philosophy, analyzes their importance and studies the most prominent trends among the philosophical schools and helps to form a serious and rigorous opinion. Without being a history of philosophy, it is intended to highlight the fact that philosophy has developed historically and that understanding it is indispensable to understand the evolution of society. A historical journey is made from the Greek Pre-Socratics to the Late Scholasticism.

### FILO 3002

Introduction to Philosophy II 3 credits, 3 hours

Requirements: HUMA 3102

It is an introduction to Modern Philosophy, but taking into consideration its development from Descartes to the present. Without being a History of Philosophy, this course aims to highlight the fact that Philosophy has developed historically and its understanding is essential to understand the evolution of society.

#### **FILO 4007**

General Logic 3 credits, 3 hours Requirement: None

The course familiarizes the student with the history, language, and most important problems of Aristotelian logic and symbolic logic. It considers knowledge, truth and language as activities that can be explained in the light of logical principles. In addition, it aims to initiate the student in a series of abstract exercises that should serve as instruments for their intellectual task.

#### FILO 4015

Dialectical Thinking 3 credits, 3 hours Requirement: HUMA 3102

The contradictory character of things is studied and how this constant external conflict of things makes possible the change of everything that exists. The different currents within dialectical philosophy and the comparison between classical and dialectical logic are analyzed.

### FILO 4021

Principles of Ethics 3 credits, 3 hours

Requirement: HUMA 3202

General study of the relevant problems of philosophical ethics including issues of social and professional ethics. The following subjects will be analyzed: man as a subject of morality, the existence or non-existence of a universal morality, the norm of morality, the hierarchy of values, the fair distribution of wealth, work and professions, violence and terrorism.

### FILO 4056

Aesthetics

3 credits, 3 hours

# Requirement: None

Critical study of aesthetics as an independent philosophical discipline. The historical development of this discipline and problems such as the foundation of aesthetics, the idea of beauty, aesthetic judgments and the theories of schools such as formalist, intuitionist, psychological, sociological, axiological, etc., will be studied.

## FILO 4261

Philosophy of the Twentieth Century 3 credits, 3 hours Requirement: HUMA 3102

After a historical introduction to twentieth-century philosophy and its main tendencies, special attention will be given to existentialism. In the problem of knowledge, this system coincides with itself as a possible overcoming of the long struggle between realism and idealism. In addition, specific topics such as existentialist ethics, death, nothingness, the existence of God, and absurdity will be analyzed.

### FILO 4265

Puerto Rican Thought 3 credits, 3 hours Requirement: HUMA 3102

A reflection on Puerto Rican thought that takes into consideration, above all, the theoretical logic that characterizes it. Its points of contact with thinkers from abroad and its possibilities of fertility for the future are analyzed, while at the same time referring to the political alternatives with which it identifies.

## FILO 4471

Philosophy of Science I

3 credits, 3 hours

## Requirement: HUMA 3102

Study of the main philosophical concepts for the structure of thought and practice of modern science and understand their success: theory and experience, facts and laws, —convention and —truth, experiment, measurement—observable,

-confirmation, (or alternatively -corroboration), etc.

### FILO 4495

Philosophical Anthropology 3 credits, 3 hours

Requirement: HUMA 3102

After an interpretation of evolution, topics such as who the human being is, the meaning of life, the mission of the human being, individual and society, human values, humanism, the future of the human being, etc., are analyzed.

#### FILO 4535

Philosophy of Religion 3 credits, 3 hours Requirement: None

What kind of discourse has been elaborated around religion? How, where and when? Answering these questions is what this course is aimed at by doing phenomenology of the divine fact and considering it historically, philosophically and literarily, without losing sight of specific traditions such as the Eastern and Mohammedan. The splits that occurred in Christianity, as well as the movements of the Enlightenment and schools such as Liberal Theology, Conservative Theology and Liberation Theology are also analyzed.

#### FILO 4571

Philosophy of Science 3 credits, 3 hours Requirement: HUMA 3102

Study of the main philosophical concepts for the structure of thought and practice of modern science and understand their success: theory and experience, facts and laws, "convention" and "truth", experiment, "observable" measurement, "confirmation", (or alternatively "corroboration") etc.

#### FILO 4581

Philosophy of History credits 3 hours Requirement: HUMA 3102

It analyzes the emergence of conceptions of history from Jewish civilization, its development in the Middle Ages and through Modernity, and the attempt to become the decisive starting point of human endeavor in the last two centuries. It considers the question of whether historical facts, like natural phenomena, are governed by laws that could be called scientific, or if, on the contrary, history resists such an approach and is the product of what has been called the creative freedom of the human being. It also tries to confront current problems in the light of the study of history.

### FINA 3006

Mercantile Finance 3 credits, 3 hours Requirements: ECON 3005, CONT 3006

The course covers the general principles of financial management. It mainly includes the following topics: Legal and operational operation context of the company, financial analysis, financial planning and control techniques, working capital management, capital budget management, cost of capital, sources of financing and general financial concepts of the organization, expansion and liquidation of the company.

#### FINA 3007

Currency and Banking 4 credits, 4 hours Requirements: ECON 3005, CONT 3006

The course aims to bring the student to the knowledge of the fundamental principles that deal with general aspects of the international monetary system to explain economic activity within the context of the monetary object, and fundamentally include the following topics: the concept, development and economic importance of the monetary object, financial institutions and their role in economic development and growth, the structure and behavior of the banking industry, central banking and monetary policy, monetary economic theory and general aspects of the international monetary system.

#### **FINA 3045**

Finance for the Administrative Professional 2 credits, 3 hours

Requirement: None

It is a lecture course designed with the purpose of providing students of the Bachelor of Office Administration with basic knowledge in the area of Finance. This knowledge will enable them to support business managers in financial matters, such as: reporting, analysis, budgeting, and administration.

## FISI 3005

Intermediate Mechanics

3 credits, 3 hours (65% lecture, 35% discussion) Requirements: FISI 3012 and MATE 3053

This course is intended to introduce the student to the concepts, laws, and methods of study and application of classical mechanics. The course is of an intermediate level and immediately after that of an introductory course in general physics. It is aimed at students of Natural Sciences and Pedagogy.

### FISI 3007

**Basic Electronics** 

3 credits, 3 hours (40% Lecture and 60% Discussion) Requirement: FISI 3012 Correct: FISI 3008

This course is an introduction to the field of semiconductors and the detailed analysis of the construction and operation of circuits with semiconductors. It includes diodes, photodiodes, filters, transistors, phototransistor, field-effect transistors, power amplifiers, op-amp, and integrated circuits.

### FISI 3008

Basic Electronics Laboratory 1 credit, 3 hours Correct: FISI 3007

In this course, the student will use the elements, circuits and measuring instruments studied in the Basic Electronics course. Application of the concepts and principles studied in the class.

### FISI 3011

**University Physics I** 

3 credits, 2 hours of lecture, 1 of discussion (67%, 33%) Prerequisites: FISI 3013, MATE 3052

Kinematics and dynamics of the particle and the rigid body. Newton's laws applied to linear and angular motion. Laws of conservation of energy, linear and angular momentum. Calorimetry and the laws of thermodynamics. Calculus and computerization are used.

#### FISI 3012

University Physics II

3 credits. Two hours of lecture and one hour of discussion (67%, 33%)

Requirement: FISI 3011

Correct: FISI 3014

In this course you study electricity and magnetism: Electric and magnetic fields and the laws of electromagnetism. Waves, string waves, sound, and electromagnetic waves. Modern physics, relativity and the bases of quantum theory.

#### FISI 3013

University Physics Laboratory I

1 credit, 3 hours (80% practice and 20% discussion) Correct: FISI 3011

This course complements the skills acquired by the student in the Physics 3011 course. Through the laboratory practices, the student will acquire a greater understanding of the concepts learned in class, learn

various experimental methods in physics and be able to analyze the results of a given experiment.

#### FISI 3014

University Physics Laboratory II

1 credit, 3 hours (80% practice and 20% discussion) Correlation: FISI 3012

This course complements the skills acquired by the student in the FISI 3012 course. Through the laboratory practices, the student will acquire a greater understanding of the concepts learned in class, and will become familiar with various instruments and methods for taking electrical measurements.

#### FISI 3016

Modern Physics credits, 3 hours Requirement: FISI 3012

The course covers concepts of special theory of relativity, corpuscular properties of waves and wave properties of particles, *Schrodinger*'s equation, spin, structure of the atom, nucleus, and elementary particles.

#### FISI 3060

University Physics III

3 credits

Requisitos: FISI 3012, FISI 3014, MATE 3053

This course is an introduction to fundamental topics in general physics that are not taught in the University Physics I and II courses. The topics covered in this course complete the essential basis of the physics heritage necessary to understand part of the advances in the different fields of Natural Sciences, Health Sciences and Technology. Emphasis will be placed on the development of analytical and computational skills for solving physics problems. At the same time, attendance at scientific seminars, techniques for disseminating the information presented in them and reading of scientific articles will be encouraged. In general, the topics to be covered are: Fluid Mechanics, Oscillations and Waves, Thermodynamics, Introduction to Quantum Mechanics and Applications (atoms and molecules) and Introduction to Nuclear Physics and Radioactivity.

#### FISI 3191

University Physics I Integrated

4 credits, 6 hours per week (3 lecture hours and 3 laboratory hours)

Requirement: MATE 3052

Course where several natural phenomena are explained on a macroscopic scale using the basic concepts and laws of Classical Mechanics, including; the concepts of property, center of mass, vector quantity and interaction, laws of force and laws of motion, principle of superposition, and principles of conservation of energy, translational and rotational momentum. Modern technology (computers, programs, and others) is used as a scientific tool to take, organize, and visualize, and model real data.

#### FISI 3192

Integrated University Physics II

4 credits, 6 hours per week (3 lecture hours and 3 laboratory hours)

Requisitos: FISI 3191 OF FISI 3011/FISI3013 Y MATE 3052 Course in which various natural phenomena are explained on a macroscopic scale using the basic concepts and laws of Electromagnetic Theory, such as; electric charge, polarization, time-varying fields, electromagnetic induction, electromagnetic wave radiation, and Maxwell's laws in a vacuum. Microscopic models are incorporated to explain phenomena at the macroscopic level. Modern technology (computers, programs, and others) is used as a scientific tool to take, organize, analyze, visualize, and model real data.

#### FISI 4000

Elements of Quantum Mechanics 3 credits, 3 hours (80% lecture, 20% discussion)

Requirements: FISI 3012, MATE 3053.

It relates the student to the concepts and laws of quantum mechanics and their application to motion and interactions in the submicroscopic world.

#### FISI 4005

Mathematical Physics Methods 3 credits, 3 hours (80% lecture, 20% discussion) Requirements: FISI 3012, MATE 3053 This course is intended to introduce the student, through unifying development, to the language, content, style, and attitude of the physicist toward those areas of mathematics that have contemporary relevance to physics.

#### FISI 4006

Introduction to Materials Science 3 credits

Requisitos: FISI 3012, QUIM 3132

In this course, basic principles responsible for the behavior of materials are introduced. It provides the scientific foundation for understanding the relationships between material properties, microstructure and behavior of metals, polymers, ceramics and semiconductors. Students are expected to develop basic concepts and principles related to different levels of structure: from atoms, defects in crystals, to the larger-scale morphology of materials.

### FISI 4075

Methods of Experimentation 1 credit, 3 hours Requirements: FISI 3012, MATE 3053

Study of the methodology, instruments, design, implementation and communication of the results of the experimental examination in the laboratory of hypotheses proposed as solutions to the physical problems of science and technology.

### FISI 4441

Research Bachelor's Degree in Physics 3 credits

Requirements: FISI 3012, MATE 3052, approval of the researcher and the coordinator of the physics area

This course is designed to provide students with the opportunity to participate in research activities in Physics, Materials Science or related areas. Most of the course activities will take place at the facilities of the Department of Mathematics-Physics of the UPR Cayey, at other universities, in and outside of Puerto Rico, or in national laboratories. Throughout the course, the student will be exposed to skills and content that are used in scientific work. The student who chooses to enroll in this research course must have the supervision of a physician in the area of Natural Sciences to work on a research project.

#### FISI 4995

**Special Topics in Physics** 

1 to 3 credits. One hour per week per credit Requirements: FISI 3012, MATE 3053

This course is intended to familiarize the student with the concepts and methods of specific areas of physics through a formal course or supervised scientific research and experimentation.

Aimed at applications of Physics to specific interests of students of Natural Sciences and Pedagogy in Natural Sciences.

## FRAN 3021

Experimental French I 3 credits, 6 hours Requirement: Sophomores and upwards The study of the French language with an emphasis on communication, addressing various and varied aspects of French society and the Francophonie. Approach and use of technology in French.

### FRAN 3022

Experimental French II 3 credits, 5 hours and 1 lab Requirement: FRAN 3021

Continuation of the study of the French language with an emphasis on communication, addressing various and varied aspects of French society and the Francophonie. Approach and use of technology in French.

### FRAN 3033

Experimental French III 3 credits, hours Requirement: FRAN 3022

To broaden the student's knowledge of the French language in its oral and written expression through the analysis of literary texts from France, as well as from other countries belonging to the Francophonie.

### FRAN 3036

Conversational French 3 credits, 3 hours Requirement: FRAN 3022 The course enables the student to use French as an instrument of oral communication.

## GEOG 3155

Elements of Geography 3 credits, 3 hours Requirement: CISO 3122

It deals with the physical environment where human groups develop. The study will emphasize physical and geographical factors such as climate, soils, vegetation and relief, among others, and their relationship with human societies. In addition, he is interested in spatial organization, geopolitics, economics, urbanization and the urban phenomenon, the metropolitization of regions and cities, the location, size and territorial structure of human societies, and the influences that natural conditions have on this organization. In this course, emphasis will be placed on the impact of human spatial behavior and its decisions on natural environments.

#### **GEOG 3165**

Geography of Puerto Rico 3 credits, 3 hours Requirement: GEOG 3155

It covers problems of location, size and shape, and landscape elements including natural resources and the

need for their conservation; the population and the economic and social structure, as well as the geographical regions derived from the human organization of space.

### GEOG 3175

Political geography 3 credits, 3 hours Requirement: GEOG 3155

Analysis of the geographical bases of the State, including, among other topics, the study of geographical patterns and structures. It investigates the organic relationship between natural and political phenomena.

#### GEOG 4105

Economic geography 3 credits, 3 hours Requirement: GEOG 3155

It studies the spatial structure of economic activities, analysing population and technological development in relation to the need for a broad knowledge of the physical environment, including the more rational use of natural resources and the conservation of the ecological balance established by nature.

#### GEOG 4115

Urban Geography 3 credits, 3 hours Requirement: GEOG 3155

It studies human settlements, urban areas, and cities. The course will present a comprehensive analysis of the urban phenomenon. Its purpose is to study the origin, development, spatial variation between and within cities. Theories describing urban-economic and environmental problems, growth, function and spatial organization of cities will be discussed. In addition, it studies the phenomenon of urbanization, metropolitization, industrialization and the phenomenon of shopping centers.

## GEOG 4125

Geomorphology 3 credits, 3 hours Requirement: GEOG 3175

Study of landforms on the earth's surface in terms of age, structure and the fundamental processes of their formation. The emphasis is on processes that include the human as a geomorphic agent and the relationships between certain landforms and types of land use. Physical landforms in Puerto Rico are examined.

### GEOG 4135

Evaluation, Management and Conservation 3 credits, 3 hours

Requirement: GEOG 3155

The primary objective of this course is to achieve an objective picture of physical, biotic and human resources, so that a deep concern for their use and disuse is cultivated. The economic and aesthetic qualities are studied, along with the methods for the management of resources and their conservation.

#### **GEOP 4315**

Production and Operation Management

3 credits, 3 hours

Requirement: ADMI 4006

Study of the company's operational problems and the analysis techniques available for their solution. It includes the design, operation, and review of production systems and operations.

#### HIST 3111

History of the United States: From Colonial Times to the Civil War

3 credits, 3 hours

Requirement: Students from the second year onwards. Study of the history of the United States of America from colonial times to the Civil War.

#### HIST 3112

U.S. History: From the Civil War to the Present Day 3 credits, 3 hours Requisito: HIST 3111 Study of the history of the United States of America from the post-Civil War era to the present day.

#### HIST 3115

Compendium of U.S. History 3 credits, 3 hours Requirement: None Study of the history of the United States of America from the time of its independence to the present time.

#### HIST 3121

The United States in its diplomatic relations until 1900 3 credits, 3 hours

Requisito: HUMA 3201, HUMA 3202 o HIST 3111

Study of the emergence and transformation of diplomatic relations of the United States from the beginning of its revolutionary process until the year 1900 and its manifestations today.

### HIST 3145

History of Spain 3 credits. 3 hours

Requirement: HUMA 3102

A general study of the processes that in Antiquity and the Middle Ages gave rise to the appearance of Spain and the consequent historical action that materialized from Modernity to the present day.

## HIST 3155

Europe in the Nineteenth Century

## 3 credits, 3 hours

Requirement: HUMA 3102

Study of historical events in the socio-political field, revolutions, tensions, and conflicts of the nineteenth century.

## HIST 3165

History of the Renaissance

3 credits. 3 hours

**Requirement: None** 

Socio-economic transformations of Europe in the Renaissance. Emergence of the new states and their conflicts. The struggle for hegemony. Geographical discoveries and colonizations. Reform and Counter-Reformation. The Puritan Revolution.

## HIST 3185

The Medieval World

3 credits, 3 hours

**Requirement: None** 

Discovery of the values of a geocentric Christian society, mainly the great influence of this society and of other peoples, whose history takes place in this period, in our current society: Advantages and setbacks of the medieval invasions; the Byzantine Empire; Islam and its expansion; the Carolingian Empire; Feudalism; the Holy Roman Empire; the Church: its spirituality, its powers, the Inquisition, the crisis (the Iron Age); the City and Urban Planning; the University and Scholastic Philosophy; Commerce and the Leagues of Workers and Merchants; the arts and sciences; political and military power; the wars (the Hundred Years' War) and the origin of the Modern Nations.

## HIST 3195

Ancient history 3 credits, 3 hours Requirement: Be a sophomore

Discovery of the values of ancient civilizations, in whose institutions our current ways of life are more or less remotely found: Egypt, Mesopotamia, Mediterranean cultures, Greece, Roman Empire, Christianity.

## HIST 3205

Problems of the Contemporary World 3 credits, 3 hours

Requirement: HUMA 3102

The intention of the course is to show the distant origins of the major problems and conflicts of immediate history. Thus, for example, we study the mechanisms of underdevelopment, the Israeli-Palestinian conflict, the great revolutions, the Cold War, etc. In view of the impossibility of exhausting the endless list of problems of the twentieth century, the main emphasis falls on the clarification of concepts and the development of a historical vision that goes beyond the episodic and journalistic conception of contemporary conflicts.

## HIST 3211

Spanish-American History (Colonial Period)

3 credits, 3 hours

Requirement: Be a sophomore

Study of the development of Spanish colonization in America from the time of the conquest to the Independence movements.

### HIST 3212

History of Spanish-American Independence 3 credits, 3 hours Requirement: Be a sophomore Study of the development of Spanish colonization in America from the time of the conquest to the independence movements.

## HIST 3241

History of Puerto Rico I 3 credits, 3 hours Requirement: None This course studies the basic elements of Puerto Rico's geography and geology and its historical development from pre-Columbian times to the present.

#### HIST 3242

History of Puerto Rico II 3 credits, 3 hours Requisitos: HIST 3241 This course studies the bas

This course studies the basic elements of Puerto Rico's geography and geology and its historical development from pre-Columbian times to the present.

## HIST 3245

Compendium of Puerto Rican History 3 credits, 3 hours Requirement: None This course studies the historical development of Puerto Rico from its discovery to 1952.

## HIST 3265

The Arab World and its Culture 3 credits, 3 hours Requirement: None

Given the political-economic importance of Arab countries in the past and present, this course presents a possible characterization of Islamism and an overview of the origin and historical-cultural development of Arabicspeaking peoples, their relations with the Western world and their relevance in the contemporary world.

## HIST 4090

History of Women in Latin America 3 credits, 3 hours Requirements: HUMA 3102 Study of the work and contribution of women in the historical development of pre-Hispanic and Hispanic

## HIST 4150

History of the Modern and Contemporary Caribbean 3 credits, 3 hours

Requirement: None

American America.

Study of the evolution of societies belonging to the Caribbean region. The course will take as its starting point the Spanish colonial system and its concept of *—Mare Clausum*, the system of plantations and the British, French and Spanish trade that developed in the region will be analyzed. The distinctive elements of the ethnic diversity of the Caribbean will be discussed. In particular, the historical, economic, geopolitical and cultural importance of the Caribbean will be analyzed.

## HIST 4173

History of Modern Russia and the Soviet Union 3 credits, 3 hours

Requirements: HUMA 3202

Study of the most outstanding historical processes that occurred in Russia/Soviet Union, with special consideration of the contemporary period.

## HIST 4225

Theory of History 3 credits, 3 hours

## Requisito: HUMA 3101 o HIST 3245

It is a series of conceptual considerations on historiographical work as it has been understood, especially in the last two centuries. The theoretical interpretations that have most influenced current historical notions and the concrete methodologies that make them possible are analyzed.

It culminates with some reflections on the latest developments in the study of history in Puerto Rico.

## HIST 4226

Seminar on Methodology and Techniques of Historical Research 3 credits, 3 hours

Requisitos: HIST 3241-3242 o HIST 3245

Use of methods and techniques of historical research.

## HIST 4230

Three Independence Movements in the History of America

3 credits, 3 hours

Requisito: HIST 3245 o HIST 3241 o HIST 3111 o HIST 3212 o HUMA 3202 (HIST 3245, HIST 3112)

Study of the origin, development, consequences and influences of the most significant independence movements in America: War of Independence of the Thirteen English Colonies, Haitian Revolution and the Independence of Ibero-America.

## HIST 4305

Seminar on the Puerto Rican Historical Present from a Legal-Political Perspective

3 credits, 3 hours

Requirements: HIST 3242/ Teacher authorization.

Seminar in which the most important dimensions of Puerto Rican historical current affairs in a Legal-Political context will be studied. Incidentally, the significant events that through the twentieth century lay the foundations for our present reality will be analyzed in retrospect.

## HIST 4315

Seminar on the Historical Interpretation of the International Financial Order in the Nineteenth and Twentieth Centuries

## 3 credits, 3 hours

It will include the study of readings and discussion of the concepts, notions and vocabulary of economic history. And it will deal with nineteenth-century issues such as trade, currency, credit, banking, and the depression from 1873 to 1895. For the twentieth century, topics such as

wars and international economics will be discussed. Changes in national and international capital markets. The external debt of the third world.

#### HUMA 3010

Study Trip to Europe 6 credits Includes summer study trip Requirement: None

The historical, political and artistic processes of a selection of European countries are studied in a panoramic way. A trip will be made as a complement to theoretical knowledge. At the end of the trip, it is intended that the student learn about the artistic and cultural manifestations and socio-political institutions that have emerged as a result of these processes within the cultural mosaic that Europe represents, their transformations in today's society, as well as their relevance in the Puerto Rican national culture.

#### HUMA 3101

Study of Western Culture I 3 credits, 3 hours Requirement: None

Critical reflection on the most important foundational aspects of Western culture from the perspective of the various humanistic disciplines such as art, history, literature, philosophy and religious ideas through the analysis of the most significant works and original texts, with particular emphasis on ancient Greece and its relationship with the current era.

#### HUMA 3102

Study of Western Culture II 3 credits, 3 hours Requirement: HUMA 3101

Critical reflection on the most important foundational aspects of Western culture from the perspective of the various humanistic disciplines such as art, history, literature, philosophy and religious ideas through the analysis of the most significant works and original texts, particularly emphasizing ancient Rome, the origins of Christianity and the passage from the Hellenistic era to the Middle Ages and its relationship with the current era.

#### HUMA 3111

Compendium of Western Culture I and II 3 credit, 3 hours Requirement: None

Study of the most representative aspects of Western Culture throughout the periods: Greek, Roman and medieval, through the critical analysis of the great literary, philosophical, artistic and religious works.

#### HUMA 3112

Compendium of Western Culture III and IV 3 credits, 3 hours

Requirement: HUMA 3111

Study of the most representative aspects of Western Culture from the Renaissance to the present day, paying special interest to the modern era. Great literary, philosophical, artistic and religious works will be studied through analysis.

#### HUMA 3201

Study of Western Culture III 3 credits, 3 hours Requirement: HUMA 3102

Critical reflection on the Western cultural process from the Middle Ages to the Renaissance, emphasizing the areas of literature, philosophy, art, history and religious ideas through the analysis of the most representative works and texts of those periods and their relationship with the Contemporary World.

#### HUMA 3202

Study of Western Culture IV 3 credits, 3 hours

Requirement: HUMA 3201

Critical reflection on the Western cultural process from the eighteenth century to the present day, emphasizing the areas of literature, philosophy, art, history and religious ideas through the analysis of the most representative works and texts of those periods.

#### HUMA 4105

Seminar on Research or Creation in Humanities – Capstone

3 credits, 3 hours

Requirement: HUMA 3202, be classified as a fourth-year student and permission from the Director. It is offered in the second semester, each year. This course is aimed at the development and application of research methods and techniques in the various areas of the Humanities (History, Literature, Philosophy, Theatre, Art, Music and Cultural Theory).

The course allows the student to complete their sequence of studies in either of the two Humanities programmes. It is open to the exploration of the work of art, with or without aesthetic specificity, its organization, its symbols, or its recipient audience. Through this course, students can research or research by creating artistically, contributing to the development of visual arts, music, theater, history, art history, literature, philosophy, and cultural studies.

#### HUMA 4995

Special Topics.

3 credits, 3 hours per week

Requirement:

Advanced level seminars on selected topics in the Humanities.

#### **INCO 3005**

**Commercial Communication I** 

3 credits, 3 hours

Requirements: INGL 3102; INGL 3104 or higher than 4 on the advanced level exam

Introductory Business Communication course designed for students with a concentration in Business Administration and Office Administration (TAOF). It offers practice of correct use of English grammar, English structure, business vocabulary, writing techniques for business letter, and the basic principles of business communication.

#### **INCO 3006**

**Commercial Communication II** 

#### 3 credits, 3 hours

Requirements: INCO 3005. Second semester of each year. This course is a continuation of INCO 3005. It is designed for students with a concentration in Business Administration and Office Administration (TAOF). The course focuses on the writing of commercial messages by applying the basic principles of written communication and the indirect and persuasive method of communication.

#### **INCO 4005**

**Pronunciation Techniques** 

3 credits, 3 hours

Requirements: INGL 3102; 3103; 3104, or 4-5 in Advanced Placement Test. It is offered every semester, every year.

This course is designed for students with a concentration in Business Administration. The course is aimed at developing interpersonal communication skills for the commercial and/or business scenario and acquiring the necessary skills to turn them into effective communication.

### INGL 0002

Pre-Basic English

0 credits, 40 hours of class and 2 hours of laboratory per week. It is offered only in summer.

Requirements: 450 or less on the CEEB English Proficiency Test

This is a preparatory course designed to enable the student to meet subsequent English requirements. They will develop listening, speaking, reading and writing skills. In addition, it aims to change attitudes towards learning this language.

### INGL 0010-0011

#### **Basic English Laboratory**

0 credits, 20 hours of language lab during the semester.

It complements the basic English course where students must complete one hour of reading in the language laboratory and/or one hour of tutoring to students recommended by the department. It constitutes between 10 and 15% of the grade of the INGL 3101-3102 courses.

\*From 1995 onwards, students who previously took English 3011 and 3012 (those who scored between 641-800 on the CEEB English test) will take sophomore courses to pass their first six credits of English. To fulfill their last six credits of English these students will take courses of the second level, that is, third or fourth year courses.

#### INGL 3001

English Literature to Neoclassicism

3 credits, 3 hours

Requirement: 3104, 4/5 on the Advanced Test in English, or permission from the Department of English. It is offered in the first semester, in alternate years.

This course studies English Literature from its beginning to the Neoclassicism period (18th century). Literature is offered in its intellectual and cultural context, and its relationship to historical and political events of the time is examined. The student is expected to formulate an idea about the movements and/or trends in literature during these periods and from one period to another. In addition, the student is expected to explore the main genres represented, and particularly how these genres are conceived in the different literary eras.

#### INGL 3002

English Literature from Romanticism to the Present 3 credits, 3 hours Requirement: INGL 3104; 4/5 on the Advanced Test in English, or Department Permit. It is offered in the second semester, in alternate years.

This course studies English Literature from Romanticism to the Present. Literature is offered in its intellectual and cultural context, and its relationship to historical and political events of the time is examined while exploring biographical details relevant to it.

### INGL 3021

Oral and Written English I

3 credits, 3 hours

Requirements: INGL 3102; 3104 or 4/5 on the Advanced English Test. First semester of each year.

This course is prepared for future elementary school teachers. It is designed to help the student improve their level of competence and performance in the area of oral and written communication in English.

### INGL 3022

Oral and Written English II

3 credits, 3 hours

Requirements: INGL 3102; 3104, INGL 3021 Second semester of each year.

This course is prepared for future elementary school teachers. It is designed to help the student improve their level of competence and performance in the area of oral and written communication in English. This part of the course gives greater attention to writing in English.

### INGL 3055

Film and Literature

#### 3 credits, 3 hours

Requirements: 3104; Score between 641-800 on the English portion of the CEEB, 4/5 on the Advanced English Test; or permission from the director of the department. This course explores what makes film a literary art by taking into consideration the similarities and differences in literary techniques, styles, and genres and cinematic narrative. Cinema will be studied as an independent art form. Works of written fiction will be compared to their film version.

#### INGL 3101

Basic English I

3 credits, 3 hours

Requirements: 450-539 at CEEB. Students with 450 or less must pass INGL 0002

This course is designed for the student to improve reading and writing skills for academic purposes. The course content focuses on topics relevant to academic studies and today's society. The course includes three hours a week of oral and written analysis of texts and one hour of reading in the language laboratory and/or one hour of tutoring to students recommended by the department.

## INGL 3102

Basic English II

3 credits, 3 hours

Requirements: INGL 3101 or equivalent. It is offered in the second semester, each year.

This course is designed for the student to improve reading and writing skills for academic purposes. The course content focuses on topics relevant to academic studies and today's society. The course includes three hours a week of oral and written analysis of texts and one hour of reading in the language laboratory and/or one hour of tutoring to students recommended by the department.

#### INGL 3103

Intermediate English I

Requirement: 540 to 640 in the CEEB test. It is offered in the first semester, in each year.

This course is designed for first-year students who have an intermediate level of proficiency in English. The emphasis of the course is to improve reading and writing skills so that students can demonstrate better performance in the academic environment.

### INGL 3104

Intermediate English II

3 credits, 3 hours

Requirement: INGL 3103, 540-640 in CEEB test.

This course is a continuation of INGL 3103. The course is designed for first-year students who have an intermediate level of proficiency in English. The emphasis of the course is to improve reading and writing skills so that students can demonstrate better performance in the academic environment.

## INGL 3145

Juvenile Delinquency in the Twentieth-Century American Novel and Film

3 credits, 3 hours

Requirements: 6 credits of English (3103-3104 preferred), Score between 641-800 in the English part of the CEEB; 4 or 5 on the Advanced English Test, or Department Permit. This course is designed for students with a concentration in English, and for those students interested in analyzing what juvenile delinquency is and the function of the juvenile justice system. The definition and legal and social conception of juvenile delinquency will be explored; how they evolve and change in twentieth-century America, as well as the trajectory of juvenile delinquency as the subject of novels and films.

### INGL 3155

Immigrant Voices from London

3 credits, 3 hours

Requirements: 3104; Score between 641-800

in the English part of CEEB; 4/5 on the Advanced English Test. Alternate years.

This course offers the student the opportunity to explore twentieth-century English literature through the reading of English texts produced by immigrants to Britain, particularly London, their intellectual capital of life. Issues of state, such as the role of language and education in previous colonies, and the history of former British colonies, will provide context for the exploration of audience, literary impact, and the role of the immigrant writer in England.

## INGL 3191

Introduction to Verbal Communication: Conversational English

3 credits, 3 hours

Requirements: 6 credits in English and an interview with the professor. It is offered each semester according to academic demand.

This course is designed for students who are not proficient in English, particularly in oral communication. The course emphasizes the skills essential to interpersonal communication.

#### INGL 3201

Composition and Reading I 3 credits, 3 hours

Requirements: 3102

This course focuses on the development of three main skills: critical thinking, analytical reading, and objective writing.

#### INGL 3202

Composition and Reading II 3 credits, 3 hours Requirements: 3201

This course focuses on the development of three main skills: critical thinking, analytical reading, and objective writing.

### INGL 3205

Syntactic Characteristics of Modern English

Requirements: 6 credits in English or proficiency in English as a first language. It is offered in alternate years. This course aims to develop in students a level of knowledge of the grammatical structures of English. The generative syntax transformation method directs question formulation and research.

### INGL 3221

Introduction to Literature I

3 credits, 3 hours

Requirements: 6 credits in English, Score between 641-800 on the English portion of the CEEB, or 4-5 on the Advanced English Test. It is offered every year, during the first semester.

Introduction to the appreciation and analysis of the short story, essay and novel.

#### INGL 3222

Introduction to Literature II

3 credits, 3 hours

Requirements: 6 credits in English, Score between 641-800 on the English portion of the CEEB, or 4-5 on the Advanced English Test.

It is offered every year, every second semester. INGL 3221 is not required. Introduction to the appreciation and analysis of poetry and drama.

#### INGL 3225

Introduction to Language

3 credits, 3 hours

Requirements: INGL 3104 or 4/5 on the Advanced English Test; Score between 641-800 on the English portion of the CEEB, or 4-5 on the Advanced English Test.

This course is an introduction to the field of linguistics. It covers the basics of English morphology, syntax, and phonology. The course includes topics on language meaning trends, language use, language acquisition, variation and changes in language, language and cognition, and the basics in the area of psycholinguistics.

#### INGL 3229

The Caribbean Experience in Literature

3 credits, 3 hours

Requirements: 3104/3012; Score between 641-800 on the English portion of the CEEB, or 4-5 on the Advanced English Test. It is offered in alternate years, first or second semester according to course rotation.

This course is an introduction to Caribbean-Anglo-Saxon Literature with an emphasis on the contemporary period.

It includes the reading and discussion of poetry, essays, short stories, novels, and dramas. The writers discussed in the course are:

V.S. Naipaul, Derek Walcott, George Lamming, Wilson Harris, Kamau Brathwaite, Michael Anthony, Jamaica Kincaid, Jean Rhys, Lorna Goddison, Errol John, Earl Lovelace, Dennis Scott, Merle Hodge, Velma Pollard, y otros.

## INGL 3231

Advanced Composition I: Introduction to Rhetoric and Composition

## 3 credits, 3 hours

Requirements: 3104; Score between 641-800 on the English portion of the CEEB, or 4-5 on the Advanced English Test. Based on the fundamentals of rhetoric—the art of persuasive communication—this course invites the student to consider written language as a function of social motive and purpose. The course concentrates on the analysis and understanding of social issues and the written arguments aimed at resolving them. The student will analyze and discuss various texts, applying what they learn about rhetoric, and contributing to the ongoing debate of a particular issue by writing their own argument.

## INGL 3232

Advanced Composition II: Introduction to Rhetoric and Composition

3 credits, 3 hours

Requirements: INGL 3231, 3103, 3104; Score between 641-800 on the English portion of the CEEB, OR 4-5 on the Advanced English Test. Second semester, every year. The work of INGL 3231 continues. This course gives the student the opportunity to improve their writing skills by

using writing and composition models while interacting in a workshop.

## INGL 3246

Modern Literature by and about Women 3 credits, 3 hours

Requirements: 6 credits in English; Score between 641-800 on the English portion of the CEEB, or 4-5 on the Advanced English Test, or department permit. Can be validated by INGL 3201, 3202, 3221, 3222. It is offered in the first or second semester in alternate years according to the rotation of the course.

This is a course of reading, analysis and interpretation of stories and novels written by women. It also explores a collection of essays and literary criticisms that examine the popular stereotypes, myths and ideals that permeate the concept of "woman" in contemporary society.

## INGL 3251

American Literature I

3 credits, 3 hours

Requirements: 3104; have scored between 641-800 on the English portion of the CEEB, or 4/5 on the Advanced English Test.

The course is aimed at the study of American literature from the colonial period to the Civil War period. The course concentrates on the study of cultural politics and identity as seen in the relationship between politics and literary art. This is achieved by exploring various subthemes such as religion, idealism, individualism, slavery, history, and law, among others. The concept of "American" literature as a dissident and radically individualistic literature is a question and issue to examine.

## INGL 3252

American Literature II 3 credits, 3 hours

Requirement: 3104; Score between 641-800 on the English portion of the CEEB, or 4/5 on the Advanced English Test.

This course covers American literature from 1850 to the present. Through a multicultural method, it examines how American literature responds to the transformation of the United States into a modern society and world power. Topics include the interrelation of race, class, gender, and nationality, and the question of the existence of an American identity. The authors studied are: Whitman, Twain, Hemingway, Wright, Faulker, Morrison, Rich, Yamamoto, Pynchon, Islas, among others.

#### **INGL 3265**

English Through Culture

3 credits, 3 hours

Requirement: 6 credits in English; Score between 641-800 on the English portion of the CEEB, or 4/5 on the Advanced English Test. It is offered in alternate years according to the rotation of courses.

This is a language and culture course. Throughout the course, cultural patterns mediated by language and cultural differences between the United States and other countries, including Puerto Rico, are studied. This course may be replaced by INGL 3202-3202 or other intermediate level courses (3000).

## INGL 3295

Principles of Oral Communication 3 credits, 3 hours

Requirements: 6 credits of English. It is offered according to academic demand.

This course is an introduction to the basic principles of verbal communication. It is designed to help the student increase their knowledge and understanding of the impact that the outcome of verbal communication has by focusing on activities and strategies that enrich their ability to communicate effectively on a professional and social level. Topics such as non-verbal communication, diction, organization of ideas, and small group communication are part of the course curriculum.

#### INGL 3319

Caribbean Women Writers

#### 3 credits, 3 hours per week

Requirement: Six credits in English; INGL 3103-3104; 3229; Score between 641-800 on the English portion of the CEEB, or 4/5 on the Advanced English Test; or permission from the department.

Introductory course that studies the main works of women writers from the English-speaking Caribbean. It familiarizes the student with leading and secondary writers whose works consist of essays, short stories, novels, poems, and plays. It emphasizes contemporary writers as precursors of the literature of the region and as well as those who elaborate critical and literary theory. It studies some of the main themes and issues facing women in the region.

### INGL 3329

Sound Passages; Poetry and Music of the Caribbean and its Diaspora

3 credits, 3 hours

Requirement: Six credits in INGL; INGL 3103-3104; 3229; Score between 641-800 on the English portion of the CEEB, or 4/5 on the Advanced English Test, or department permit.

Introductory course to Caribbean poetry of oral tradition and its correlation with regional music in the region, its production, dissemination in the region and the diaspora. It familiarizes the student with leading poets, composers, and exponents of their work. It emphasizes past eras as well as contemporary ones and works made within the Caribbean such as the Diaspora. It examines the characteristics, influences, and themes it covers, across various historical periods and their impact on the region and diaspora.

## INGL 3335

Literature for Teens 3 credits, 3 hours Requirement: INGL 3103; 3104; Score between 641-800 on the English portion of the CEEB, or 4/5 on the Advanced English Test. It is offered in alternate years.

After an introduction to adolescent psychology, it focuses on literature: its history, genres, literary aspects, its evaluation and relationship with the media and its censorship. Selected readings from a multicultural bibliography that includes works by Hispanic and Caribbean writers.

#### INGL 3360

Video, Culture and Literature

3 credits, 3 hours

Requirements: 3102 or 3104; Score between 641-800 on the English portion of the CEEB, or 4/5 on the Advanced English Test or permission from the Department. It is offered according to academic demand.

This course provides the student with the opportunity to examine how the concept of meaning is produced in the study of academic disciplines and forms of cultural production in mass media. Through the reading of popular texts such as television programs, movies, magazines, and music videos, students will analyze how the commercial product and reception of cultural texts are produced based on market demands, and how these texts influence the daily lives of the audience.

### INGL 3365

The Literature of the Puerto Rican Experience in the United States

3 credits, 3 hours

Requirements: INGL 3103, 3104; Score between 641-800 on the English portion of the CEEB, or 4/5 on the Advanced English Test, or department permit. It is offered in alternate years.

Can be validated by INGL 3201, 3202, 3221 or 3222.

Introduction to Puerto Rican writers born or raised in the United States who write mostly in English (though not exclusively). The course covers autobiography, novel, drama, short story, essay and poem. Some of the authors being studied include Judith Ortiz-Cofer, *Piri Thomas*, Miguel Algarín, Miguel Piñero, *Nicholasa Mohr*, among others.

#### INGL 3367

The Vietnam War in U.S. Popular Culture 3 credits, 3 hours

Requirements: INGL 3103, 3104; 4/5 on the Advanced English Test, or Score between 641-800 on the English portion of the CEEB, or permission from the department. Offered in alternate years

Can be validated by INGL 3201, 3202, 3221 or 3222

This course examines the image of the Vietnam War and its veterans as they are presented in films, books, and music. The topics are organized based on trends and questions, rather than a chronology to make the student aware of the presumptions and hidden agendas of the writers and producers of the films. The works included represent various periods, from the innocence of the fifties and sixties to the second current flowering of films, books and television programs.

### INGL 3370

She Said, He Said: Language and Gender 3 credits, 3 hours

Requirements: 6 credits of INGL (3103-3104); 4/5 on the Advanced English Test, or Score of 641-800 on the English test at the CEEB or permission from the Director of the Department.

This is an intermediate-level course that examines the relationship between language and gender. It includes topics on the role of language in creating and maintaining gender differences. It also examines trends in sexism in language.

#### INGL 3375

Gay and Lesbian Narratives

3 credits, 3 hours

Requirements: INGL 3103, 3104; 6 credits in INGL, score between 641-800 on the English portion of the CEEB, or 4/5 on the Advanced English Test, or permission from the Director of the Department.

A theoretical framework is established on what constitutes Gay and Lesbian Literature, in particular narrative in order to analyze and discuss short stories, films, autobiographical writings and novels that fall within the definition of the genre.

#### INGL 3385

Detective Fiction as a Genre

3 credits, 3 hours

Requirements: INGL 3103, 3104; Score between 641-800 on the English portion of the CEEB, or 4/5 on the Advanced English Test, or department permit. Can be validated by INGL 3201, 3202, 3221 or 3222.

Detective literature, beginning with Edgar Allan Poe, and ending with contemporary works of the genre. Film and television representations will be studied in this course.

#### INGL 3429

Caribbean Drama and Performance: Across the Caribbean and Its Diaspora

### 3 credits, 3 hours

Requirements: 6 credits in INGL; INGL 3103-3104; 3229; Score between 641-800 on the English portion of the CEEB, or 4/5 on the Advanced English Test; or permission from the department.

Introductory course to the dramatic arts and performance (carnival traditions, cultural expressions...) in the Caribbean, both regionally and in the diaspora. It familiarizes the student with principal and secondary playwrights, and their works. Emphasizes the main themes and issues developed by them in their work. It examines the characteristics, influences, and themes it covers, and the impact and reflections of Caribbean society through various historical periods to the present and its repercussions on both the region and the diaspora.

#### INGL 3515

**Special English Topics** 

3 credits, 3 hours

Requirements: 6 credits of INGL; Score between 641-800 on the English portion of the CEEB, or 4/5 on the Advanced English Test, or department permit. Can be validated by INGL 3201, 3202, 3221, or 3222. It is offered in alternate years according to the rotation of courses. This is an intermediate-level course that serves as an umbrella for various topics related to the literatures, languages, and cultures of English speakers. The student will explore specific topics as a way to refine their English writing, reading, and oral communication skills.

#### INGL 3517

Special Themes in English Literature Before 1800 3 credits, 3 hours

Requirements: 3104; 6 credits in INGL; score between 641-800 in the English part of the CEEB; 4/5 on the Advanced English Test, or department permit. Validable by 3201, 3202, 3221 or 3222. It is offered in alternate years according to the rotation of courses or academic demand.

Courses under this heading will include English literature before 1800. They will focus on a writer, a literary movement, a genre, a theme, or some other aspect of literature, language, or culture.

#### INGL 4011

Phonetics and Phonology of English 3 credits, 3 hours

Requirements: 12 credits in INGL; Second-year Honours English Learners (Score between 641-800 CEEB and 6 credits passed). This course involves a study of the sound system of English. It is based on traditional, structural and early principles and concepts of modern linguistics. Examines the production and inventory of English sounds; assimilation, phonetics and their relationship between spelling and pronunciation and accentuation and intonation.

### INGL 4185

Seminar in Cultural Studies

### 3 credits, 3 hours

Requirements: 12 credits in INGL; Second-year Honours English Learners (Score between 641-800 CEEB and 6 credits passed).

This seminar combines the study of elitist culture and popular culture with questions about social and individual identity. Students read written, visual, cultural, as well as theoretical texts to examine how the cultural studies project operates within an interdisciplinary framework.

### INGL 4195

Seminar on Feminism, Gender and Literature 3 credits, 3 hours

Requirements: 12 credits in INGL; Second-year Honours English Learners (Score between 641-800 CEEB and 6 credits passed).

It examines the role of literary discourse in creating, perpetuating, and challenging a signifier, perhaps the fundamental organizing principle of human society: gender.

## INGL 4210

Discourse and Grammar

3 credits, 3 hours

Requirements: 12 credits in INGL including 3 credits in an intermediate-level linguistics course; or permission from the Department.

This course explores English grammar in an oral and/or written context as used by people in real-life situations. The aim of the course is to establish a link between discourse and grammar theories, research results and classroom practices.

#### INGL 4245

Comparative Analysis of English and Spanish

3 credits, 3 hours

Requirements: INGL 3205 or 4206, or preliminary examination given by the English Department; ESPA 3101, 3102.

This course makes a comparative analysis of the linguistic

foundations of Puerto Rican Spanish and North American English, with an emphasis on morphology and syntax. Its focus is for elementary and secondary school teachers, although it may be of interest to any student of linguistic analysis.

### INGL 4275

Seminar on the History of Literature

3 credits; 3 hours per week

Requirements: 12 credits of INGL; Second-year Honours English students (Score between 641-800 in the English part of the CEEB, with 6 credits passed).

The development of literary practices within their historical frameworks. One can study the literature of an era or movement, theories of literary history as a method of organizing the study of literature, and/or the works of writers selected for their influences on the development of literature.

#### INGL 4290

Seminar in Linguistics

3 credits, 3 hours

Requirements: 12 credits in INGL; Second-year Honours English Students (Score between 641-800 CEEB and 6 credits passed, preferably at least one of the following: INGL 3205, 3225, 4011, 4210, or 4245.

Each seminar will present a particular area of linguistic study and its relationship to topics such as cognitive process, culture, gender, social stratification, and nonverbal communication. Possible topics of the seminar could include: Semantics, Pragmatics, Functional Syntax, Language and Communication between Cultures, Discursive Analysis, Linguistic Theory

#### INGL 4295

Composition and Advanced Rhetoric Seminar

3 credits, 3 hours

12 credits of INGL; 3231 or 3232 or any other composition course, intermediate level; Honors Student (641+ in English in the CEEB test) with 6 credits of English; o Permission from the Department. In some cases, an example of their writing is required.

Rhetorical theory (rhetoric is understood as the art of persuasive communication) is studied and applied within specific contexts to improve writing. In this seminar you can cover topics such as: Classical Rhetoric and Modern Writing, Writing for the Magazine, The Roots of the Rhetoric of the Essay, Forensic Rhetoric and Forensic Eloquence, among others.

### INGL 4326

Children's Literature

3 credits, 3 hours

Requirements: 6 credits of INGL or Department permit This course examines children's literature that combines a literary and pedagogical approach to the study of representative works of traditional literature, fantasy, and realism.

## INGL 4335

Second Language Acquisition

3 credits, 3 hours

Requirements: 6 credits in INGL; INGL 3205 or 4210.

After an introduction to research methods, the course focuses on language acquisition; theories and factors related to the acquisition of a first and second language, similarities and differences between the two processes; relevant studies in the field. Students do their own research.

## INGL 4370

Seminar on Modes and Genres

3 credits, 3 hours

Requirements: 12 credits of INGL; Second-year Honours English students (Score between 641-800 CEEB and 6 credits passed).

The role of genres, such as the novel, and/or modes, such as narrative, in the study of literature is examined.

## INGL 4375

Seminar on Race, Ethnicity and Literature

3 credits, 3 hours

Requirements: 12 credits of INGL; Second-year Honours English students (Score between 641-800 CEEB and 6 credits passed).

Literature from a perspective of race and/or ethnicity, literature by and about an ethnic or racial group; theories of race and ethnicity as a critical approach; racial or ethnic literature in dialectic with other political and cultural formations.

## INGL 4380

Seminar in Critical Theory

3 credits, 3 hours

Requirements: 12 credits of INGL; Second-year Honours English student (Score between 641-800 from the CEEB and 6 credits passed), or permission from the Department.

The course will be offered in the second semester, alternate years according to the course rotation.

This seminar gives the student the opportunity to study

critical theory as a particular type of reading experience different from reading literary texts. The student will read critical theory and develop their own analysis by working with the ideas from the readings. Seminars in this area could include: It is literature study; Theory and Criticism; Gender Problems: Readings on Feminist Theory;

What is/was Postmodernism? Cultural Marxism, among others.

## INGL 4407

**Closing Experience Seminar in English** 

## 3 credits, 3 hours

Requirements: This course is for students who have achieved credit equivalent to their eighth academic semester (having completed 105 credits); including 24 credits in the concentration, particularly INGL 3231 (Advanced Composition); have participated in annual counseling meetings and have completed the mid-career training assessment (between 45-60 credits), i.e., at least 45 credits prior to enrolling in said seminar. The seminar is offered once a year during the second semester (when required by students who are nearing completion of their studies).

This course provides a closing experience for students in the Baccalaureate Program with a concentration in English. Through a portfolio development project, its presentation, and verbal and written presentation of the portfolio, and through other additional work, students will: integrate interdisciplinary knowledge with general education skills; they will make interdisciplinary connections, demonstrate the progress they have made in developing their skills and abilities; and demonstrate the breadth of knowledge and skills they have developed in the field of English through their years of study at the University of Puerto Rico at Cayey.

## INTD 3009

## INTD 3027

First Year Interdisciplinary Seminar

3 credits, 3 hours per week during the second semester. Requirements: Be a new student. This seminar promotes interdisciplinary discussion and execution as part of the student's training within the framework of the skills and contents associated with the general education component.

## INTD 3029

### INTD 3175

Principles of Informatics in the Health Sciences 3 credits, 3 hours

Requirements: MATE 3171 or MATE 3041 and BIOL 3103 or CIBI 3002

Introduction to the study of computer applications in the Health Sciences (*—medical/health informatics*). It includes hands-on experience with tools for creating and handling documents and computational tools for storing, processing, and analyzing data. Emerging computer technologies in the field of health are studied.

### INTD 3407

#### INTD 4116

Interdisciplinary Research Experiences for Students 1 to 3 credits, 3 to 9 hours (Each credit is equivalent to a minimum of 3 hours per week of research work. Students with an incomplete grade will not be able to enroll again in it until the incomplete grade is removed.)

Requirement: None. Only the professor in charge of the course will be required to authorize the student to take the course. Authorization will depend on the topic of the research by the professor and the courses approved by the student. The professor, on the other hand, must have a research project or proposal endorsed by an institutional body (FIDI Program, Institute or Department) or by an agency external to the UPR (federal agency, foundation, government agency, etc.). In addition, the professor must submit the course outline to the Advisory Board of the Institute for Interdisciplinary Research for approval.

The course will offer students research experiences and skills in various disciplines through their participation in research designed by the lecturer in charge. The student will participate as a research assistant in one or more phases of the professor's research project. In this teaching and learning process, the student will become familiar with various theoretical aspects, methodologies and techniques of the professor's research project.

#### INTD 4994

First Work Experience

3 credits, Semester: 15 weeks-20 hours per week, Summer: 8 weeks-37.5 hours per week

Requirements: Have passed 60% of the credits required in their study program.

This course offers a first foray into the world of work in the discipline of the academic program of the student at the University of Puerto Rico at Cayey. The supervised work experience will be in a government agency, private agency, or non-profit institution in Puerto Rico, according to the student's academic preparation and the requirements of the participating entity. The course aims for the student to develop the general and specific skills of their area of study to integrate the theoretical learning of the classroom to the real scenario of the work environment, themselves exposing to labormanagement relations under the supervision and evaluation of a professor of their academic discipline. The student will receive a stipend in accordance with the federal minimum wage. The internship experiences required in the student's curriculum do not qualify as first work experience.

### INTD 4995

Special Subjects in Interdisciplinary Studies Credits: Variable (1 to 6 credits)

Weekly hours: Variable (1 hour/credit) at the conference in addition to the hours of workshops and research papers. Requirements: Classified students from sophomore year onwards. Additional requirements will be established according to the topic and level of the course.

The topics respond to the thematic and methodological diversity of interdisciplinary studies and research that are of interest to the University of Puerto Rico at Cayey.

### INTD 4996

**Requirement: Teacher Authorization** 

#### ITAL 3071

Italiano Experimental I

3 credits, 6 hours

**Requirement: None** 

Oral and written bases of the Italian language. Reading elementary level texts and conversation emphasizing the most common idiomatic expressions.

#### ITAL 3072

Italiano Experimental II 3 credits, 6 hours Requirement: ITAL 3071

Oral and written bases of the Italian language. Reading elementary level texts and conversation emphasizing the most common idiomatic expressions.

### LITE 3011

Modern Literature 3 credits, 3 hours Requirement: HUMA 3102 A panoramic study of literature in the West from the end of the Middle Ages to the eighteenth century, from a comparative perspective and highlighting the genres, current movements and figures of greatest influence in later periods and literatures.

## LITE 3012

Comparative Literature 3 credits, 3 hours Requirement: HUMA 3102

The panoramic study of literature in the West from the nineteenth century to the present, from a comparative perspective and highlighting the genres, movements, currents and figures of greatest influence.

#### **MATE 0005**

Pre-University Mathematics 0 credits Requirement: None

In this course the student will acquire and apply the basic concepts of elementary algebra necessary for the precalculus course and subsequent courses. It includes sets, number systems and their properties, algebraic expressions, linear equations in one and two variables, systems of linear equations in two variables, exponents, algebra of polynomials, factorization, algebraic fractions, literal equations, and applications.

### **MATE 3004**

Algebra 3 credits, 3 hours

Requirement: None

Basic operations with algebraic expressions and polynomials, factorization, basic operations with algebraic fractions, systems of linear equations with two variables, radicals, application problems.

#### **MATE 3011**

Quantitative Methods I

3 credits, 3 hours

Requirement: Mate 3004 or its equivalent (650 points or more in the CEEB achievement test, pass Pre-University Mathematics MATE 0005, pass the placement test or permission of the Department Director).

Linear and quadratic equations, linear and quadratic inequalities, relations and functions, polynomial and rational functions; Applications.

### MATE 3012

Quantitative Methods II 3 credits, 3 hours Requirement: MATE 3011 Matrices and determinants, Systems of equations, unequals and systems of linear unequals in two variables, Linear programming, Exponential and logarithmic functions, Sequences, Binomial theorem. Applications to Commerce.

#### **MATE 3013**

Quantitative Methods III 3 credits, 3 hours

Requirement: MATE 3012 or equivalent

Review of Functions, Limit and Successions, Differential Calculus and Introduction to Integral Calculus and its use in the commercial field.

### **MATE 3015**

Elemental Stat

3 credits, 3 hours

Requirement: MATE 3172 or MATE 3212

Techniques for summarizing and presenting statistical data. Introduction to probability theory: additive and multiplicative laws of probability; conditional, marginal and combined probability, Bayes' theorems. Probability distributions: binomial, hypergeometric, multinomial, Poisson's and normal. Point and interval estimation of averages and difference in proportions. Statistical inference through confidence intervals and point hypothesis testing. Brief introduction to small sample theory; distribution.

### **MATE 3019**

School Geometry

3 credits, 3 hours

Requirement: MATE 3172 or MATE 3212

Course for future teachers of mathematics at the secondary level. The focus is transformational geometry. Study of affine groups, Euclidean, similarities, rotations and their main invariants in plane and spatial situations. Applications to geometric drawing. Measurements of sets, distances, areas, volumes.

#### **MATE 3038**

Discrete Mathematics 3 credits, 3 hours

Requirement: MATE 3212 or MATE 3172 or equivalent This course is an introduction to several discrete mathematics topics that should serve to enrich the academic training of future mathematics teachers at the secondary level. Topics such as: logic and inductive reasoning are studied; combinatorics and probability; and an introduction to graph and tree theory.

#### **MATE 3041**

Introduction to Mathematics I 3 credits, 3 hours Requirement: None

This course is intended to provide basic math concepts and skills to liberal arts students. It includes elementary set theory and mathematical logic; the complete and ordered body of the real numbers; mathematical systems; metric system. Geometry concepts.

#### **MATE 3042**

Introduction to Mathematics II 3 credits, 3 hours Requirement: MATE 3041

This course is intended to provide basic math concepts and skills to students of free arts. It includes: equations and inequalities with and without absolute value, graphs, linear and quadratic functions, solution of quadratics using the formula, systems of linear equations, solution by elimination and substitution, basic concepts of probability and statistics, most common graphs in statistics. Elementary instructions on how to operate a computer.

#### **MATE 3046**

Math for High School Teachers 3 credits, 3 hours

Requirement: MATE 3212 or MATE 3172 or equivalent.

Course for high school students in secondary education in mathematics. The content of mathematics at the secondary level is reviewed and applied, such as functions, polynomials, graphs of functions, solution of equations and inequalities, basic concepts of probability and statistics and the use of the graphing calculator in problem solving, among others. Activities will be presented and designed to develop conceptual understanding of secondary level content through the appropriate use of technology, assessment techniques, and problem-solving strategies.

### **MATE 3052**

Calculus I 3 credits, 3 hours

#### Requirement: MATE 3172 or MATE 3212

In this course, the student will acquire and apply the basic concepts of differential and integral calculus. Includes: Notions of limit and continuity, derivatives, slope of curves, rates of variation, kinematics; Rules of derivation, statements of the theorems of the mean value, delimitation of continuous functions, theorems of the average value with applications to the theory of extremes; Maximum and minimum, function graphs; Antiderivatives and differentials; Integration as antireferral; Integration rules; Calculation of areas and volumes of solids of revolution; Interpretation of the integral as limits of Riemann sums; Fundamental Theorem of Calculus; The inverse function and its derivative; Exponential and logarithmic functions. This course is required for all science and math students.

#### **MATE 3053**

Calculus II

3 credits, 3 hours

Requirement: MATE 3052

Integration techniques: algebraic and trigonometric substitutions, by parts, partial fractions. First and second order differential equations, applications to growth problems and periodic movements. Sequences and series, convergence theory, polynomial approximations, Taylor series, indeterminate forms. Improper integrals.

#### **MATE 3054**

Calculus III

3 credits, 3 hours

Requirement: MATE 3053

This course contains the following topics: Euclidean space Rn. Trajectory, curves and tangent vectors. Differential of an application as a linear application. Partial, maximum and minimum derivatives. Taylor series. Statements of the theorems of the inverse function and the implicit function. Multiple integrals, integration techniques. Curvilinear integrals, differential shapes, and exact and closed vector fields. Green's and Stokes' theorems.

#### **MATE 4057**

Seminar on Topics in the History of Mathematics 3 credits, 3 hours

Requirement: Be classified in the fourth year and consent of the director of the department.

This course is an introduction to the history of mathematics that should serve to enrich the academic training of future mathematics teachers at the secondary level. The historical development of numbers, number systems, algebra, Euclidean and non-Euclidean geometry, calculus, discrete mathematics, measurement, systems of measurement, statistics and probability are studied, including the contributions of various cultures.

#### **MATE 3171**

Precalculus I 3 credits, 3 hours Requirements: MATE 0005 or MATE 3004 or its equivalent (650 points or more for achievement in mathematics in the CEEB entrance exam).

Linear and quadratic equations in a variable. Systems of linear and quadratic equations in two variables. Application problems. Linear and quadratic inequalities in a variable, absolute value. Relationships, algebraic and graphical functions. Conics.

#### **MATE 3172**

Precalculus II

3 credits, 3 hours

#### Requirement: MATE 3171 or MATE 3211

The body of complex numbers. Polynomial equations. Inverse, exponential and logarithmic function. Exponential and logarithmic equations. Application problems. Systems of equations, matrices, determinants. Trigonometric functions, polar coordinates. Arithmetic and geometric progressions. Introduction to two-variable functions.

#### **MATE 3211**

Pre-Calculus with Experiments I

3 credits, 5 hours

Requirement: MATE 0005 or MATE 3004 or equivalent (650 points or more on the CEEB Achievement test, passing the Department placement test or permission from the Department director).

This course is a practical introduction to the study of functions. Students will learn to use mathematical functions, with special emphasis on linear and exponential cases, as instruments to describe and analyze processes of (dynamic) change. The course emphasizes problem solving in context and prepares students for the study of Calculus and for scientific research tasks. The fundamental concepts of the course are: function, rate of change, model, continuous-discrete and limit. The fundamental skills for problem solving are: identification of patterns, abstraction, approximation and identification of scale effects. The main topics are: the set of reals, functions and their multiple representations, the rate of change, linear, exponential and logarithmic functions, arithmetic and exponential sequences, linear regression t exponential, inverse functions and growth models.

### MATE 3212

Pre-Calculus with Experiments II 3 credits, 5 hours Requirement: MATE 3211 This course is a practical introduction to the study of

functions. Students will learn to use mathematical

functions, with special emphasis on trigonometric and polynomial cases, as instruments to describe and analyze processes of change (dynamic). The course emphasizes problem solving in context and prepares students for the study of Calculus and for scientific research tasks. The fundamental concepts of the course are: function, reason of change, model, continuous-discrete and limit. The fundamental skills for problem solving are: identification abstraction, approximation of patterns, and identification of scale effects. The main topics are: operations with functions, trigonometric functions and their inverses, periodic phenomena, triangle trigonometry and analytical trigonometry, polynomial and rational functions, extremes and zeros of polynomial functions.

### **MATE 4009**

Ordinary Differential Equations 3 credits, 3 hours

Requirement: MATE 3053

The purpose of this course is to expose the student to the study of differential equations, particularly as the natural way of modeling dynamical phenomena. It includes: introduction to fundamental concepts of linear algebra, definitions and preliminary concepts about differential equations, existence and uniqueness theorems, nonlinear first-degree differential equations, solution of differential equations by series, numerical methods, Laplace transform.

Applications.

#### **MATE 4026**

Math for Elementary School Teachers

3 credits, 3 hours

Requirement: MATE 3172 or MATE 3212 Session: first semester

This course includes decimal numbering and other numbering systems. Properties and operations with integers and rational numbers, operations with numerals in other bases. Modular arithmetic and congruence. Divisibility, prime numbers, composite numbers, greatest common divisor, least common multiple, Fundamental Theorem of Arithmetic. Euclid's algorithm. Perfect, deficient, abundant and friendly numbers. Fermat's factorization method. Concepts of elementary Euclidean geometry of plane and space, constructions.

#### **MATE 4031**

Pseudogebra Lineal 3 credits, 3 hours Requirement: MATE 3172 or MATE 3212 This course contains linear vector spaces over IR. Linear transformations. Eigenvalues and vectors. Matrix algebra. Determining function. Systems of linear equations. IR vectors. Function spaces.

### **MATE 4032**

Álgebra Superior I 3 credits, 3 hours Requirement: MATE 3172 or MATE 3212

This course aims to provide the student, through concrete examples, with the language and mathematical rigor, which will enable him both to generate demonstrations and to understand the bases of more general theories. It includes set nomenclature, applications, number systems, algebraic structures: groups, rings, and fields. Theory of divisibility of integers. Polynomial ring and theory of polynomial equations. A field of algebraic fractions and extensions.

#### **MATE 4033**

Álgebra Superior II 3 credits, 3 hours Requirement: MATE 4032

Groups, rings and bodies. Homomorphisms and quotient structures. Isomorphism theorem. Euclidean rings, polynomials over commutative rings. Extensions of bodies, elements of Galois theory and constructions with ruler and compass. Finite bodies.

### **MATE 4035**

Real Analysis 3 credits, 3 hours Requirement: MATE 3054

This course contains the following topics: Metric Spaces. Limit, continuity, open and closed sets. Connected spaces, compact spaces. Topology of Rn. Continuous functions and their properties. Derivable functions and their properties. Function spaces.

### **MATE 4110**

Mathematical Epidemiology 3 credits, 3 hours Prerequisites: MATE 3052, or director's approval.

This course deals with a variety of topics in mathematics applied to epidemiology through the study of literature related to the area. Different theoretical and methodological aspects based on the theory of dynamic systems applied to epidemics, infectious diseases, vectorborne or pathogenic diseases, among others, that affect the population, as well as recent lines of scientific research, are addressed. The course promotes the articulation and synthesis of ideas that combine mathematical and computational modeling with skills (computational and mathematical) and content learned in their science and mathematics courses with an interdisciplinary approach. To this end, students will work on a small research project during the semester in which they will apply the concepts and techniques they learn in class. The topic must be of interest to the student and approved by the course instructor.

#### **MATE 4125**

**Mathematics Seminar** 

1 credit, 1 hour

Requirement: Be a 3rd or 4th year student.

This course is intended to stimulate students in the research, discussion, and development of some mathematics topics.

### **MATE 4160**

Biomathematics

## 3 credits

In this course, various topics of mathematics applied to biology are discussed through the study of literature related to the area of dynamical systems. Different theoretical and methodological aspects based on the theory of dynamic systems applied to biological processes such as epidemics, predator-prey dynamics and population growth are addressed, as well as recent lines of scientific research. The course promotes the articulation and synthesis of ideas that combine mathematical and computational modeling with skills and content learned in their science and mathematics courses with an interdisciplinary approach. To this end, students will work on a small research project during the semester in which they will apply the concepts and techniques they learn in class. The topic must be of interest to the student and approved by the course instructor.

#### **MATE 4997**

Special Topics in Mathematics Course

1 to 3 credits. One hour per week per credit.

Requirements: Permission from the Director of the Department and the professor. When offered as a Capstone course, the student must be classified in the fourth year.

Discussion of various topics in mathematics, incorporating recent literature for it. Topics may vary from semester to semester.

## **MERC 3115**

Marketing Principles 3 credits, 3 hours Requirements: None

Introduction to the study of the marketing process as a general function. Emphasis on the analysis, planning, implementation, organization and control of marketing programs.

## **MERC 4006**

Sales Principles and Practices 3 credits, 3 hours Requirement: MERC 3115

Analysis of personal selling as a marketing phase: product knowledge, study of the consumer and their needs, sales planning, salesperson personality, sales presentation, closing and follow-up to the customer.

## **MERC 4027**

Advertising 3 credits, 3 hours

Requirement: MERC 3115

Development and implementation of marketing strategies in the context of a retail business. Emphasis on the effective analysis of the environment in which the company competes and on the marketing strategies that derive from the changes that occur in that environment.

## **MERC 4215**

Retail Sales Management 3 credits, 3 hours Requirement: MERC 3115

Development and implementation of marketing strategies in the context of a retail business. Emphasis on the effective analysis of the environment in which the company competes and on the marketing strategies that derive from the changes that occur in that environment.

## **MERC 4219**

Intermediate Marketing 3 credits, 3 hours

Requisitos: MERC 3115, ADMI 4005, CONT 3006

Application of administrative functions to marketing; strategic planning for marketing; organization, direction and control of marketing operations. Management of the elements of the marketing mix; product, price, distribution and promotion.

## **MERC 4226**

Public relations 3 credits, 3 hours

Requirements: MERC 3115

Study of planning, development and administration of public relations in the organization.

### **MERC 4227**

Marketing Research 3 credits, 3 hours Requirements: MERC 3115 and ESTA 3001 Study of the tools and methods of public relations. Emphasis on the design of activities aimed at supporting marketing strategies.

## MUSI 3046

History of Puerto Rican Music 3 credits, 3 hours Requirement: None

A panoramic study of Puerto Rican music, its elements, traditions, and development: pre-Columbian and Conquest music; European and African contributions; popular traditions; typical instruments; Music and musicians of the twentieth century: modernism, nationalism and post-nationalism. It will be supplemented by attendance at class-related events.

## MUSI 3181

Band I

1 credit, 4 hours per week

Requirement: Audition and authorization of the director of the Band.

Develop theoretical and practical knowledge in the playing of a musical instrument. Develop excellence in the interpretive quality and analysis of musical literature through progressive essays. Performance of works and repertoires of a Concert Band, both folkloric and popular. Concerts and presentations for the university community and community in general. MUSI 3182

## MUSI 3182

Band II

1 credit, 4 hours per week

Requirement: Audition and authorization of the director of the Band.

Develop theoretical and practical knowledge in the playing of a musical instrument.

Develop excellence in the interpretive quality and analysis of musical literature through progressive essays. Performance of works and repertoires of a Concert Band, both folkloric and popular. Concerts and presentations for the university community and community in general.

#### MUSI 3183

#### Band III

1 credit, 4 hours

Requirement: Hearing and authorization of the teacher. Develop theoretical and practical knowledge in the playing of a musical instrument. Develop excellence in the interpretive quality and analysis of musical literature through progressive essays. Performance of works and repertoires of a Concert Band, both folkloric and popular. Concerts and presentations for the university community and community in general.

## MUSI 3184

Band IV

#### 1 credit, 4 hours

Requirement: Hearing or authorization of the teacher. Develop theoretical and practical knowledge in the playing of a musical instrument. Develop excellence in the interpretive quality and analysis of musical literature through progressive essays. Performance of works and repertoires of a Concert Band, both folkloric and popular. Concerts and presentations for the university community and community in general.

## MUSI 3195

Theory and Solfeggio 3 credits, 3 hours Requirement: None

Study of the musical elements of rhythm, melody and basic harmony through the development of both theoretical concepts and audio-perceptive, musical reading, eurythmic and singing skills. The activities of rhythmic, melodic and harmonic performance by the student are of fundamental importance during the learning process since the application of musical concepts through their corresponding skills constitutes the basis of the course.

## MUSI 3201

CHORUS I

1 credit

Requirement: MUSI 3195 Hearing or authorization of the teacher.

Theoretical and practical knowledge of the voice in order to sing. Auditions of the most famous vocal musical works. Vocal exercises. Rehearsals of secular, classical, religious, folkloric and popular vocal musical works. Choral concerts: soloists, "a cappella" songs and with musical instruments.

## MUSI 3202

CHORUS II

1 credit, 4 hours

Requirement: MUSI 3195 Teacher Hearing or Authorization

Theoretical and practical knowledge of the voice in order to sing. Auditions of the most famous vocal musical works.

Vocal exercises. Rehearsals of secular, classical, religious, folkloric and popular vocal musical works. Choral concerts: soloists, singing—a cappella and with musical instruments.

## MUSI 3203

CHORUS III

1 credit

Requirement: MUSI 3195 Hearing or authorization of the teacher.

Theoretical and practical knowledge of the voice in order to sing. Auditions of the most famous vocal musical works. Vocal exercises. Rehearsals of secular, classical, religious, folkloric and popular vocal musical works. Choral concerts: soloists, singing—a cappella and with musical instruments.

## MUSI 3204

CHORUS IV

1 credit

Requirement: MUSI 3195 Hearing or authorization of the teacher.

Theoretical and practical knowledge of the voice in order to sing. Auditions of the most famous vocal musical works. Vocal exercises. Rehearsals of secular, classical, religious, folkloric and popular vocal musical works. Choral concerts: soloists, singing—a cappella and with musical instruments.

## MUSI 3225

Musical Culture: Appreciation of the elements of music 3 credits, 3 hours

Requirement: None

Formative value of music. Music theory. History of musical instruments and forms. Appreciative auditions of the most outstanding works. History of music: Ancient Age, Christian Medievalism, Renaissance, Baroque, Classicism, Romanticism, Nationalism. The music of the twentieth century in Europe and America. Current music in Puerto Rico.

### MUSI 3226

Musical Culture: History of Musical Styles 3 credits, 3 hours

Requirement: None

History of musical styles: Ancient Age, Christian Medievalism, Renaissance, Baroque, Classicism, Romanticism, Nationalism. The music of the twentieth century in Europe and America. Current musical in Puerto Rico. Auditions of the most representative works.

### MUSI 4037

Vocal Technique

### 3 credits, 3 hours

Requirement: Hearing or authorization from the teacher Basic training of the vocal apparatus for use in singing. Basic training of the vocal apparatus for use in singing. Study of the elements of artistic vocal production: correct use of the physical apparatus and techniques for interpreting repertoire. Practice of vocalization exercises and interpretation of repertoire both individually and in groups.

### NUTR 4177

Nutrition & Health - Capstone

3 credits, 3 hours

Requirement: BIOL 3103, BIOL 3104, MATE 3053, QUIM 3132, QUIM 3134, FISI 3012, FISI 3014, CISO 3122.

Average in these courses of 2.50 or higher. Be a classified student in the fourth year. Permission of the Program Coordinator in Natural Sciences.

This seminar aims to introduce students to topics on nutrition and health in an interdisciplinary way. Situations will be analyzed through the integration of theories and methods from different scientific disciplines and other branches of knowledge. This seminar is intended for students in their final year of undergraduate studies.

#### **PREH 4996**

#### **PREH 4980**

#### **PSIC 3001**

Introduction to Psychology I 3 credits, 3 hours Requirement: CISO 3122

The various areas and methods of study of Psychology are presented. It mainly deals with history, methodology, biological bases of behavior, principles of learning, emotion, sensation and perception.

### PSIC 3002

Introduction to Psychology II 3 credits, 3 hours

Requirement: PSIC 3001 (Continuation of PSIC 3001) Study of the various areas of Psychology. It includes analysis of the main theories of human development, intelligence and problem solving, theories and evaluation of personality, psychopathology, psychotherapy and social psychology.

### **PSIC 3005**

General Psychology 3 credits, 3 hours Requirement: CISO 3122

Presentation of the basic concepts of human behavior based on the theories that make up traditional and contemporary scientific psychology. Emphasis on learning processes, stimulus, perception, attitudes, personality, social behavior and the applicability of such knowledge to the understanding of human behavior.

### **PSIC 3006**

Social psychology 3 credits, 3 hours

Requirement: PSIC 3001 Semester: First

Extensive study of the formation, aspects and determinants of interpersonal relationships. Among the phenomena studied are: interpersonal attraction, nature and change of attitudes, prejudice and aggression, cooperation and morality in society, group behavior, social classes, leadership and conformity, institutional change and effectiveness of organizations.

#### **PSIC 3009**

Psychology and Personal Development 3 credits, 3 hours

Requirements: PSIC 3001

A course of discussion to help the student understand the principles of hygiene and mental health through participation and personal development. It is conducted in small groups that allow for experience and interaction.

### PSIC 3015

Personality Theories 3 credits, 3 hours Requirements: PSIC 3001

It studies the development and structure of normal personality from the point of view of dynamic psychology. It analyzes the main current theories on personality, while seeking a synthesis that clarifies the process of differentiation, integration and maturation of

the person.

### **PSIC 3016**

Psychopathology Credits, 3 hours Requirement: PSIC 3001 Semester: second.

It attempts a psychological analysis of the dynamics, diagnosis and prognosis of individual and group abnormal behavior. Specifically, it analyzes major neuroses and psychoses, personality disorders such as sociopathies, drug and alcohol addiction, sexual deviations, etc., and acute and chronic disorders of the brain. It presents a global vision of the various psychotherapies used in the treatment of abnormal behavior.

## PSIC 3017

Personality Measurement

3 credits, 3 hours

Requirements: PSIC 3001, CISO 3155 Semester: first

Introduction to measurement theories and techniques in order to understand the principles and problems of testing and demonstrate general psychological testing techniques in areas such as intelligence, adjustment, personality, vocational and personal orientation of the worker, and how questionnaires and projective tests are used.

### **PSIC 3018**

Physiological Psychology

3 credits, 3 hours

Requirements: PSIC 3001, CIBI 3002 Semester: first It includes the study of the physiological bases of human behavior. The structure and functioning of the nervous system; cortical and autonomic functions; related body systems; its concomitance with such psychological phenomena as sensation, perception, learning, thought, motivation and emotion; psychosomatic disorders and others.

## PSIC 3019

Clinical and Community Psychology 3 credits, 3 hours Requirement: PSIC 3001 Semester: first

An introduction to the history, current state, and future prospects of the field of Clinical Psychology. The aspects of diagnosis, psychotherapy, research and problems of this discipline. New aspects of community psychology will be examined.

#### **PSIC 3025**

Human Development

3 credits, 3 hours

Requirement: PSIC 3001 Semester: second

It studies the development of the human being from childhood to adulthood, clarifying the importance of genetic and environmental factors in the evolutionary process. It describes the facts that characterize the physical, intellectual, emotional, moral and social aspects of the different stages of development; exposes the most recognized theories in the interpretation of it.

### **PSIC 3118**

Physiological Psychology Laboratory 1 credit, 3 hours

Requirement: CIBI 3002

Correction: PSIC 3018 Semester: first

Through demonstrations, experiments and practice exercises, the student will apply the knowledge acquired in the Physiological Psychology course. The student will use the editorial style of the American Psychological Association for report writing. The student will describe and identify the functions of the neuroanatomical systems that

influence behavior. The course includes the study of the physiological bases of human behavior such as: motivation, emotion, learning, psychosomatic disorders, sleep, memory, sensation and perception among others. The knowledge acquired is applied to various areas of Psychology.

#### **PSIC 3127**

Language Development 3 credits, 3 hours Requirement: PSIC-3001

Developmental models, basic neurolinguistics, social aspects of language, and stages of linguistic development are examined. The course integrates the different perspectives that affect the study of language development, emphasizing the classic methods and studies of the area.

#### **PSIC 3128**

Theories of Human Learning

3 credits, 3 hours

Requirement: PSIC 3001

Course where they present and analyze the classical theories of human learning, as well as contemporary models. The theories of E.L. Thorndike, C.L. Hull, I.P. Pavlov, E.R. Guthrie, W.K. Estes, J. Piaget, E.C. Tolman and others are examined.

### **PSIC 3129**

Motivation and Human Emotion 3 credits, 3 hours

Requirement: PSIC 3001

Discussion of theories and approaches in the study of human motivation. The topics of adaptation, stress, central mechanisms of motivation and emotion, aggression, sex, development and expression of emotions, learned motives and social influences on human motivation are examined.

### **PSIC 3135**

**Health Systems** 

#### 1 credit, 1 hour

Requirement: PSIC 3001, Belong to the Community Psychology and Mental Health program. Semester: First Principles, Philosophy and Administration of the Mental Health Program in Puerto Rico. Emphasis will be placed on the study of the services offered by the mental health centers of the community, among others: education and consulting, primary prevention, emergency, outpatient clinic, children's clinic, intermediate homes, day centers and other direct and indirect services.

#### PSIC 3137

Non-Experimental Methods of Psychology 3 credits, 3 hours

Requirements: PSIC 300, CISO 3155

Study of non-experimental research methods in psychology. It examines research terminology, the main paradigms, ethical principles applicable to psychological research and techniques for reviewing scientific literature. The student becomes familiar with the main features, advantages, disadvantages, reliability, external validity, and internal validity of the following methods as used in psychology: case studies, natural observation, surveys and questionnaires, correlational research, field studies, quasi-experimental studies of few subjects, development methods, focus groups, and interpretive frameworks.

### **PSIC 3145**

Women's Psychology 3 credits, 3 hours Requirement: CISO 3122

Examine various ways in which the category of woman has been shaped by some psychological theories. Together, the historical conditions that have served as the basis for the production and reproduction of the subordinate forms of this genre will be addressed, as well as the multiple resistances that emerge.

#### **PSIC 3166**

Research Practice in Psychology 1 credit, 3 hours

#### Requirements: PSIC 3001, PSIC 3137, CISO 3155

Course designed for psychology students to practice and apply the research skills required in the use and application of the non-experimental research methods of psychology. The ethical principles of research are applied, the writing format of the American Psychological Association (APA), techniques for the collection of references, interview techniques, techniques for discourse and content analysis. Through simulations, the principles of the administration of standardized tests, their use, development, as well as the administration of questionnaires and protocols for data collection are practiced. The principles of questionnaire construction and validation are practiced using various techniques, including the use of databases and statistical programs.

#### **PSIC 4003**

Experimental psychology

3 credits, 3 hours

Requirements: PSIC 3001, CISO 3155, PSIC 3137 or SOCI 3265

Correction: PSIC 4004 Semester: first

Experimental Psychology course that includes discussion of the fundamentals of research, its relevance, and impact on psychology as a scientific discipline, history, laboratory methods, experimental design, control techniques, and analysis techniques commonly used in psychology. The designs of two independent groups, paired and repeated measures, are discussed; functional, factorial, VI x VS, of few subjects, others. Control techniques are highlighted, as well as data interpretation skills.

#### **PSIC 4004**

Experimental psychology laboratory

1 credit, 3 hours

Requirements: PSIC 3001, CISO 3155 and PSIC 3137 Co-Requirement: PSIC 4003 (or previously approved) Semester: first

This course complements the knowledge and skills acquired in the Experimental Psychology course (PSIC 4003). Through laboratory practices, the student will acquire a greater understanding of the concepts learned in class, apply the techniques of experimentation and analysis. Independent, repeated-measure designs, simple analysis of variance, and two-factor analysis of variance are highlighted.

#### **PSIC 4008**

Mental retardation

3 credits, 3 hours

Requirement: PSIC 3001 or EDFU 3001 Semester: first Comprehensive study of mental retardation. It considers the scope and nature of the problem, the etiology of the retardation, the evaluation, diagnosis and education or training of the retarded person, his/her personality and conflicts, and the role of parents and the community.

#### **PSIC 4009**

Industrial Psychology 3 credits, 3 hours Requirement: PSIC 3001 or PSIC 3005 Study of psychological techniques and

Study of psychological techniques and their application to the field of industry and business. It includes, among other topics: procedures for the promotion, promotion and selection of employees, study of psychological factors that contribute to effectiveness in an industrial commercial organization.

### **PSIC 4015**

Internship in Social Psychology 3 credits, 6 to 10 hours Requirement: PSIC 3006 Semester: second

The application of knowledge acquired in the area of social psychology. The practice will take place in a specific community. The student will identify a problem, develop an action plan for solving it, and evaluate the results. The practice will be directed towards the development of primary prevention programs. Among the problems that deserve greater attention are: violence and aggression, discrimination, inter-group tension, drug addiction and other social problems.

#### **PSIC 4016**

Psychology of Learning

4 credits, 4 hours

Requirements: PSIC 3001, PSIC 3137 or SOCI 3265, CISO 3155

Study of learning theories in their empirical framework and their application to therapy. Upbringing and teaching. In the experimental part, emphasis will be placed on modern experimental trends and the design of original experiments, as well as replications.

#### **PSIC 4055**

Behavior Modification 3 credits, 3 hours Requirement: PSIC 3001 Course that exposes the fundamentals of behavior modification covering the philosophical conceptions from which it arises, its origin and development, the five modalities that compose it, the multiple techniques derived from psychology and their applicability. This course emphasizes the diversity within behavior modification, the effectiveness of each of the techniques in relation to particular problems, and the biological components that are responsible for behavior problems, as well as their solution.

#### **PSIC 4065**

Seminar in Psychology

3 credits, 3 hours

Requirement: CISO 3155, PSIC 3001, PSIC 3137 or SOCI 3265 Professor's Authorization Semester: Second

Seminar for students who are concentrating on this discipline. Research projects will be carried out in selected areas of Psychology.

### **PSIC 4067**

Goal Therapy Credits, 3 hours

Requirements: PSIC 3019

It is a theoretical course designed to train future therapists in their counseling work. Familiarize them with the general postulates of Goal Therapy and develop the necessary skills for the solution of psychological problems. The course is developed through teaching hours and simulation workshops.

#### **PSIC 4069**

Psychology of Old Age 3 credits, 3 hours Requirement: PSIC 3001

Biological, social and psychological theories of old age. Study of the behavior associated with developmental changes, personality; personal and social adjustments; Psychopathology of old age. Observation visits to senior centers are required.

#### **PSIC 4095**

Counseling and Short Therapies 3 credits, 3 hours

Requirement: PSIC 3016 Semester: first

Oriented to the knowledge and development of skills in counseling and short-term therapeutic techniques aimed at patients who seek prompt relief from their symptoms, the immediate solution to the problems that cause crises and that do not require basic personality changes, nor the resolution of unconscious conflicts. The student is trained to discriminate between patients who may benefit from short-term therapies, perform psychodiagnostics, and develop an action plan. The training is carried out through the group dynamics model. The following therapies are studied: rational emotive, reality therapy, crisis intervention, short hospitalization, behavioral therapies and others.

### **PSIC 4097**

Internship in Clinical Psychology and Mental Health 3 credits, 10 hours of practice per week Requirements: PSIC 3016 and PSIC 4095 Semester:

second

Requires placement of the student in a Community Mental Health Center or psychiatric hospital. The objectives of the practice are: to know the performance of various professional specialists in their interpersonal relationships and with clients and their families; progressively practice and demonstrate proper competence in interviews, counseling, and group and individual therapy; and learn how to solve a clinical problem, from initial contact to evaluation of outcomes.

### **PSIC 4106**

Systems and Theories of Psychology 3 credits, 3 hours Requirement: PSIC 3001

It presents the systems and theories of classical psychology from a historical-critical perspective. It examines the areas of study of sensation, perception, learning, cognitive processes, thought, emotion, personality, quantitative and physiological psychology. The impact of the classical schools as they are integrated into contemporary psychology through the synthesis of their fundamental contributions is discussed.

#### **PSIC 4145**

Experimental Design and Inferential Statistics Applied to Psychology

3 credits, 3 hours

Requirement: CISO 3155

Course designed for psychology students who are required to undergo a second semester of statistics for graduate school admissions purposes. The following topics are examined: experimental design and statistics, inferences about averages (z, t) inferences about variances (Chi2,

F) analysis of variance, post-hoc comparisons, rudiments of correlation and multiple regression, analysis of qualitative data: chi-square and other tests. The concepts are applied to psychology.

### PSIC 4995

Special Topics in Psychology

3 credits, 3 hours

Requirement: Permission from the Instructor or the Director of the Department

Discussion of various topics in psychology, and incorporating recent literature for it. Topics may vary from semester to semester.

### **QUIM 3006**

Bibliography, Chemical Literature and Seminar 2 credits, 2 hours

Requirements: QUIM 3152, QUIM 3154, QUIM 3025

Through this course, students will be able to develop the skills and abilities for the management of scientific information and bibliographic resources on Chemistry topics. Through various activities they will be able to: identify their need for information, locate, access, analyze, evaluate, summarize primary sources of information and produce new knowledge for the preparation and oral and written presentation of a "Review Paper". In turn, they will incorporate new information technologies such as: Databases, Internet, Moodle and "Power point" and text presentation programs.

#### QUIM 3015

Compendium of Organic Chemistry

credits, 3 hours of lecture and 3 hours of laboratory Requirements: QUIM 3132, QUIM 3134

General study of the chemistry of carbon compounds emphasizing structures, stereochemistry, nomenclature, functional groups, reactions and synthesis. The structure of simple compounds will be determined by analyzing the IR and NMR spectra. The structure and function of biomolecules such as lipids, proteins and carbohydrates will also be studied. An overview of the relevance of organic chemistry to daily life will be presented. The student will discuss the relevance and relevance of the topics studied by creating an activity on an assigned topic.

### QUIM 3025

#### Analytical chemistry

credits, 3 hours of lecture and 6 hours of laboratory Requirements: QUIM 3132, QUIM 3134

A review of the fundamental concepts of General Chemistry related to Analytical Chemistry is made and an introduction to the problems associated with the evaluation of experimental data. The general issues of gravimetric analysis and volumetric analysis are discussed. Electroanalytical and optical methods and basic chromatography methods will be considered. The importance of laboratory methods is emphasized and sufficient experiments are considered for the semester course. Volumetric, gravimetric, optical and electrochemical methods of analysis are included. Some chromatographic methods are also considered.

### QUIM 3121

Organic Chemistry I 3 credits, 3 hours Requirements: QUIM 3132, QUIM 3134 Prerequisite: QUIM 3123

Study of the three-dimensional structure and electronic distribution of organic molecules and how they relate to their chemical and physical properties. The reactions of: acids and bases, electrophilic addition of alkenes, alkynes, dienes, and electrophilic substitution of aromatic compounds and their reaction mechanisms are studied. You learn to predict the reactivity of organic species and the main product of the reactions studied. Introduction to infrared and proton nuclear magnetic resonance techniques, and mass spectrometry.

#### QUIM 3122

Organic Chemistry II 3 credits, 3 hours Requirements: QUIM 3121, QUIM 3123 Prerequisite: QUIM 3124

It is the integration of the principles that relate the structure of organic compounds to their reactivity. It includes the study of nucleophilic substitution, elimination, nucleophilic addition, oxidation and reduction reactions. Spectroscopic analysis techniques are integrated. It is the application of the concepts learned to the study of biological transformations.

#### **QUIM 3123**

Organic Chemistry Laboratory I 1 credit, 4 hours Prerequisite: QUIM 3121 It is the study of the theory and practice of techniques for the isolation, separation and purification of organic solids and liquids. It is also qualitative and quantitative analysis

and liquids. It is also qualitative and quantitative analysis using chromatographic methods. In addition, stereochemistry and spectroscopy workshops are included.

### QUIM 3124

Organic Chemistry Laboratory II 1 credit, 4 hours Requirements: QUIM 3121, QUIM 3123

### Prerequisite: QUIM 3122

This laboratory complements the Organic Chemistry II course. The isolation, separation and purification techniques studied in the organic chemistry I laboratory applied to organic synthesis reactions are used. Some reactions are made in the context of projects with a research focus. Quantitative, spectroscopic and qualitative analysis of biomolecules are performed.

### QUIM 3131

General Chemistry I

3 credits, 3 hours

Requirements: MATE 3171 and QUIM 3133

The course represents an introduction to the fundamental principles of chemistry. Among the main topics are significant figures, dimensional analysis, atomic theory, chemical properties, stoichiometry, nomenclature, gas properties, thermochemistry, quantum theory, atomic structure, and periodicity. In addition, the course emphasizes the study of ionic and covalent bonds, molecular structure, molecular geometry, polarity and hybridization.

#### QUIM 3132

General Chemistry II

3 credits, 3 hours

Requirements: QUIM 3131, QUIM 3133, MATE 3171 Prerequisites: MATE 3172, QUIM 3134 The intermolecular forces of liquids and solids, changes in state, the physical properties of solutions, kinetics and chemical equilibrium, acid-base, acid-base and solubility equilibrium, oxidation-reduction reactions, electrochemistry and thermodynamics will be studied.

#### QUIM 3133

General Chemistry Laboratory I 1 credit, 3 lab hours Correct: QUIM 3131, MATE 3171 Development of basic laboratory techniques and skills of General Chemistry and application and/or demonstration of some of the concepts studied in the Quim 3131 course.

#### QUIM 3134

General Chemistry Laboratory II 1 credit, 3 hours Co-requisite: QUIM 3132 The course focuses on the development of basic laboratory skills and the application of the principles studied in the CHEM 3132 course

## QUIM 3151

Organic Chemistry (course for Chemistry concentration students)

3 credits, 3 hours Requirements: CHEM 3132 and CHEM 3134

Co-requisites: CHIM 3153

Study of the structure, stereochemistry, nomenclature and factors that determine the physical properties of organic compounds. Emphasis is placed on the relationship between structure and reactivity, study of reaction mechanisms (acid-base, addition, substitution and elimination) of functional groups (alkanes, alkenes, alkynes, alcohols, alkyl halides) and the thermodynamic and kinetic aspects that affect each type of reaction. This course is for students concentrating in Chemistry. The topics presented have the depth and scope required to pursue a career in the fields of research, teaching, industry and government work, among others.

### QUIM 3152

Organic Chemistry (course for Chemistry concentration students)

3 credits, 3 hours

Requirements: QUÍM 3151 and QUÍM 3153.

Co-requisites: CHIM 3154

Course for students of concentration in Chemistry with emphasis on the study of reactivity and spectroscopic analysis of organic compounds. This course integrates the study of reactions (aromatic substitution, nucleophilic addition, C $\alpha$  substitution, oxidations, reductions and condensations), mechanisms and organic synthesis of carbonyl compounds, nitriles and aromatic compounds. Determination of the structure of organic compounds by analyzing the mass (MS), infrared (IR), nuclear magnetic resonance (NMR), and ultraviolet (UV) spectra. Application of knowledge of functional group chemistry to the study of synthetic polymers and biomolecules such as proteins and polysaccharides.

## QUIM 3153

Organic Chemistry Laboratory 1 credit, 4 hours Prerequisite: CHIM 3151

Practice and theory of the main techniques for identifying, separating, purifying, and isolating organic solids and liquids. Qualitative analysis using chromatographic methods.

#### QUIM 3154

Organic Chemistry Laboratory (course for Chemistry concentration students)

1 credit, 4 hours Requirement: CHEM 3151 & CHEM 3153 Prerequisite: CHIM 3152

Course based on multi-step synthesis projects, which include reactions studied in class, and in which the techniques and procedures of preparation, separation, purification and identification of organic compounds are applied. A distinctive aspect of this course is that it includes the development of a research project on selected topics where the student working in a team, does a literature search, presents a research proposal, carries out the project and presents the results in oral and written form. In addition, the analysis of spectroscopic data (IR, NMR-1H, NMR-13C and MS) for the determination of the structure of organic compounds is emphasized.

### **QUIM 4000**

Inorganic chemistry 3 credits, 3 hours

Requirements: QUIM 3152, QUIM 3154

Discussion of modern inorganic chemistry based on: atomic structure, symmetry, bonding theories, structures, solid state, chemical forces, acid-base concept, reduction-oxidation concept, coordination compounds and descriptive chemistry. In addition, different techniques for elucidating structural forms of inorganic compounds will be presented.

#### **QUIM 4007**

Inorganic Chemistry Laboratory

1 credit, 4 hours per week

Requirements: QUIM 4000 or QUIM 4000 concurrent A practical application of the chemical principles studied at the conference (Chemistry 4000) is carried out. The use of techniques, skills and instrumentation for the synthesis of inorganic compounds is emphasized. They are characterized by determining the physical properties.

### **QUIM 4015**

Instrumental Analytical Chemistry

4 credits, 3 lecture hours, 6 lab hours

Requirements: QUIM 3006, FISI 3012-3014

In this course, students apply instrumental methods and techniques to qualitative and quantitative chemical analysis. The experiments emphasize the practical applications of various instrumental methods and the criteria used to choose these methods. The similarities and differences between the analyses carried out in academic laboratories and quality control and research laboratories are highlighted. In the laboratory, the following are developed:

experiments using the analytical techniques discussed in class. Laboratory experiences allow the student to apply the methods learned in the development of a research project. This research project includes: Research proposal, method selection, method validation, sampling, data collection and analysis, and the writing of a scientific article where you will present the results of your research.

### **QUIM 4017**

#### **Industry Practice**

credits, 120 hours (100 in the industry) credits. 180 hours (150 in industry)

Requirements: To be a student of concentration in Chemistry, to have a minimum average of 2.00 in the Chemistry courses and to have passed Analytical Chemistry (QUÍM 3025) and Instrumental (QUÍM 4015).

The course consists of a supervised practice of the procedures that are carried out in an industrial chemical laboratory applying the theory involved in them

#### **QUIM 4019**

Industrial Practice Preparation

#### 3 credits, 3 hours

Requirements: Be a student of the Department of Chemistry, have taken the courses: QUIM 3152, QUIM 3154, QUIM 3025 Co-requisites: QUIM 4015

Study of the fundamental regulations and practices of analytical quality control laboratories in the chemical industry. Application of regulations and procedures to validations and transfer of methods. In the course, industry and academic resources present the topics that prepare the student for the job market through workshops, seminars and conferences.

#### **QUIM 4025**

Spectrometric Methods Applied to Organic Chemistry 3 credits, 3 hours

Requirement: CHIM 3152, CHIM 3154

This course complements the spectrometric methods presented in the Organic Chemistry course. The analysis and integration of the information acquired from mass spectrometry (MS), infrared (IR), nuclear magnetic resonance (1H NMR, 13C NMR and two-dimensional NMR) and ultraviolet-visible (UV-VIS) spectra is deepened to achieve the determination of chemical compound structures. In addition, examples reported in the literature of compound structure elucidation using spectrometric techniques are discussed.

#### **QUIM 4041**

Physical Chemistry I

3 credits, 3 hours

Requirement: CHEM 3025, CHEM 3152-3154, FISI 3012-3014, MATE 3054 or MATE 3054 together. Study of the behavior of ideal gases, real gases, liquids and solids. Laws of Thermodynamics and their applications. Standard thermodynamic functions of chemical reactions. Chemical Equilibrium.

Phase Balance. Ideal and real solutions. Phase diagrams of pure substances and mixtures.

#### **QUIM 4042**

Physical Chemistry II

3 credits, 3 hours

Requirement: QUIM 4041, MATE 3054 Offered once a year, second semester.

Postulates of Quantum Mechanics. Schrödinger's equation. Discussion of the following models: particle in the box, harmonic oscillator, rigid rotor, hydrogen atom, helium atom. Rotational and vibro-rotational spectroscopy of diatomic molecules. Molecular Kinetic Theory of Gases. Distribution functions. Chemical kinetics. Integration of speed laws. Methods for determining the law of speed.

Derivation of the law of speed from the reaction mechanism. Theory of the Transitional State. Collision Theory.

### **QUIM 4065**

Biochemistry

3 credits, 3 hours

Requirements: 3122-3124, BIOL 3102 - 3104

This course will help students acquire a basic understanding of the underlying chemistry in biological systems (microorganisms, plants, and animals). The student will learn the chemical composition of living systems at the micromolecular level (water, amino acids, carbohydrates, fatty acids, nucleic acid bases) and at the macromolecular level (proteins, polysaccharides, lipids, nucleic acids). It will be possible to obtain knowledge of the biochemical sequences related to the physiology of family activities such as digestion, breathing and exercise. Emphasis on the interrelationship between structure and function and their regulation.

#### **QUIM 4066**

Biochemistry Laboratory 1 credit, 4 hours Prerequisite: QUIM 4065 Students will learn how to make gualitative and quantitative estimates of biological molecules. Students will be provided with training in modern experimentation in biochemistry and molecular biology. Experimental elucidation of the structure and basic mechanism of action of the molecular components of living systems will be carried out.

## **QUIM 4101**

Physical Chemistry Laboratory I 1 credit, 4 hours

Requirement: QUIM 4041 or QUIM 4041 concurrent. It is offered once a year, first semester.

Practical application of the chemical-physical principles studied at the conference (Chemistry 4041). Use of techniques, skills and instrumentation for the determination of the thermodynamic and physical properties of matter. Thermodynamic and physical properties will be determined using instruments specific to the discipline of thermodynamics.

## QUIM 4102

Physical Chemistry Laboratory II

1 credit, 4 hours

Requirement: Chemistry 4101, Chemistry 4042, or Chemistry 4042 concurrently. It is offered once a year, second semester. Practical application of the chemicalphysical principles studied at the conference (Chemistry 4042). Study of the techniques and instrumentation used in the determination of the kinetic and quantum parameters of matter.

## QUIM 4116

Credit, Hours Requirement:

## **QUIM 4166**

Special Topics in Chemistry: Medicinal Chemistry 3 credits, 3 hours

Requirements: CHEM 3152, CHEM 3154 (For other topics presented under the Special Topics in Chemistry course, the CHEM 4015 course may be required)

A selection of medicinal and pharmaceutical chemistry topics are discussed in this course. The study of the relationship between physicochemical properties and the structure of drugs, the action and the pharmacological effect on the living organism is emphasized. In addition, knowledge of the basic and biomedical sciences is integrated for the analysis of functional groups and pharmacophomes that explain the pharmacological action of drugs. The student will apply chemical fundamentals and learn the relationships between the various structures found in drugs. The design and synthesis of selected drugs is discussed.

### QUIM 4166

Special Topics in Chemistry

1 to 3 credits

Requirements: CHEM 3152, CHEM 3154, CHEM 4015 (It may be required according to the topics presented in the course)

This course will discuss topics related to the fundamental areas of chemistry that are relevant and topical for the scientific community. Topics may be in the area of forensic chemistry, polymer chemistry, food chemistry, industrial chemistry, green chemistry, toxic waste management and disposal, drug analysis, explosives analysis, chemistry education, among others.

#### QUIM 4170

**Environmental Chemistry** 

3 credits 3 hours

Requirements: CHIM 3025, CHIM 3152, CHIM 3154, CHIM 4015

This course covers the chemistry of some of the environmental processes. In this context, the environment is divided into three matrices: water, air and soil. Emphasis is placed on the study of the sources, reactions and effects of chemical species in water, soil and air, as well as on the chemical analysis of the main environmental pollutants in the air, soil, water matrices and in anthropogenic sources of environmental pollution. The results will be interpreted in accordance with the normal values in natural systems and with those of the regulations in force, as well as the discussion of the study of cases of environmental contamination. Concepts on solid waste management are included. The concept of Green Chemistry is introduced as an alternative to reduce pollutants of anthropogenic origin. This course integrates chemical, biological, and regulatory concepts, among others.

#### **QUIM 4999**

Investigación Sub Graduada I

2 o 3 credits, 6 o 9 hours

Each credit is equivalent to a minimum of three hours per week of research work. The number of credits is decided by the student, professor and Director of the Department.

Requirements: QUIM 3025, QUIM 3122, QUIM 3124. Be a third or fourth year student of Chemistry, 2.50 average in Chemistry and permission from the teacher.

Supervised research in an area of Chemistry or Chemistry Education, where the student is provided with

experiences and skills in the development of a theoretical, experimental, qualitative or quantitative research project. The student will make an oral or poster presentation of his/her research work in departmental seminars or in the Science Area. In addition, he will deliver a written report of the investigation. If the research does not proceed beyond the search for bibliographic data, no credit will be given for the course. Students are encouraged to make oral or poster presentations at local and international conferences.

#### **RECR 3705**

**Community Recreation** 

**Requirement:** 

Study and discussion of recreational programs for the community. It includes planning and organization of recreational programs according to existing facilities, studies, and characteristics of the leadership in charge of these programs.

#### **REHU 4405**

Human Resource Management 3 credits, 3 hours Requirement: ADMI 4005

Analysis of the principles and techniques applied by companies to attract and retain their human resources. It includes the study of government labor laws and regulations, as well as the functions of recruitment, selection, personnel development, employee relations, and compensation administration.

#### **REHU 4406**

Labor-Management Relations 3 credits, 3 hours

Requirement: REHU 4405

Analysis of the interaction between companies and organizations that represent their employees. It studies the historical development of the organized labor movement, labor unions, labor laws (both Puerto Rican and federal), and the collective bargaining process.

### **REHU 4407**

Administration of Wages and Wages 3 credits, 3 hours Requirement: REHU 4405

Detailed study of the processes and techniques that make up the administration of employee compensation. The various compensation systems and the functions of job analysis, job evaluation, employee evaluation, construction of the salary scale and benefit and incentive plans are analyzed.

#### **REHU 4408**

Organizational Behavior 3 credits, 3 hours Requirement: ADMI 4005

Study of human behavior in the context of commercial organizations. It includes the analysis of the various theories, techniques, and systems of motivation at work used in the modern company: Two-Factor Theory, Theory X and Y, Management Grid, Work Enrichment, and Management by Objectives.

#### **REHU 4409**

Human relations

3 credits, 3 hours

Requirement: ADMI 4005

Study and objective presentation of the nature of human relations in industry. It deals with the influence of individual personality, formal and informal organization, organizational communication, leadership and supervision, group dynamics and employee participation on the climate of interpersonal relationships existing in the organization. Through the discussion of cases and experiences of group work, some of the most common human relations problems in organizations and the way in which a Manager should try to solve them are analyzed.

### **REHU 4415**

Collective bargaining 3 credits, 3 hours Requirement: REHU 4406

Study of the Puerto Rican labor movement and the collective bargaining process. It includes the analysis of current labor legislation, especially the Taft-Hartley Act and the Puerto Rico Labor Relations Act, and the discussion of cases in which such legislation has been applied.

#### SICI 3006

Principles of Computerization 3 credits, 3 hours

Requirement: None

It provides an introduction to the field of computers: historical development, types, operation, architecture, programming language, design, applications and social impact. You will learn how to use at least three general application packages: word processor, electronic sheet, and a database program. The course has an interdisciplinary approach

## SICI 3007

**Basic Programming** 

3 credits, 3 hours of combined class and lab Requirements: MATE 3172 (Precalculus II) or MATE 3212 (Precalculus with Experiments II)

Solving problems in natural sciences, mathematics and business administration through the use of the computer using the algorithmic method and a high-level computer programming language.

### SICI 3055

**Computers in Education** 

3 credits, 3 hours (1 hour lecture + 2 lab hours) Requirement: None

Provides basic knowledge about computer use in education and general knowledge of the computer field.

## SICI 4001

Stochastic Models in Biology

3 credits, 3 hours

Prerequisites: MATE 4160, statistics course or director's approval.

The course introduces the student of Natural Sciences to the study of stochastic models in biology using interdisciplinary tools that complement the study of epidemics in the population. Specifically, we will study epidemiological models of infectious diseases and their random effect on the progress of the epidemic in the population. It will present essential concepts such as discrete and continuous Markov chains, random walks, Brownian motion, Poisson processes among others, as well as recent lines of scientific research. It promotes the articulation and synthesis of ideas that combine mathematical and computational modeling with skills (computational and mathematical) and content learned in their science and mathematics courses with an interdisciplinary approach. To this end, students will work on a small research project during the semester in which they will apply the concepts and techniques they learn in class.

## SICI 4045

Numerical analysis

3 credits, 3 hours

Requirements: SICI 3007 (Basic Programming) and MATE 3053 (Calculation II)

It trains the student of Natural Sciences in the use of the computer to apply numerical methods. Problems of approximation, interpolation, differentiation, integration, linear equations and curve adjustments are solved.

## SICI 4995

Special Topics in Computer Science

Requirements: Permission from the Instructor or Department Director

Discussion of various topics in computer science, incorporating recent literature for it. Topics may vary from semester to semester.

### SOCI 3005

Criminology 3 credits, 3 hours Requirement: MEMBERS 3261

Using social structures and/or personality as criteria of analysis, the forms, causes and effects of delinquency are analyzed. Social resources are considered for the solution of crime problems.

## SOCI 3006

Sociology of Science 3 credits, 3 hours Requirement: CISO 3121-3122

Sociological analysis of the generation, development and consequences of Science as a social institution and of the dynamic interdependence between science and society.

### SOCI 3015

Industrial Sociology 3 credits, 3 hours Requirement: MEMBERS 3261

Process of industrialization as social change and social institutions and forms of communication. Effects of industrialization: social mobility and migration phenomenon. Industrialized society and its diffusion in non-industrialized areas. Social conflicts between the industrialization process and the developing society.

## SOCI 3025

Sociology of Violence 3 credits, 3 hours Requirement: MEMBERS 3261

Concept of reform, social change, obedience and revolution, interaction between victim and victimizer. Concept of violence in societies such as Anglo-American and Hispanic-American. Nature of violence in Puerto Rico: cause and effect, future process of violence.

## SOCI 3045

Sociology of Religion 3 credits, 3 hours Requirement: MEMBERS 3261 Reflections on the concept —religious experience. Its expansion in ideas in relation to the circumstances surrounding historical and modern life. Manifestations of Enlightenment rationalism in the attitude towards magic, tradition and the disposition to innovation. Analysis of prophecy and asceticism. Religion in modern society.

### SOCI 3055

Juvenile delinquency 3 credits, 3 hours Requirements: SOCI 3261

Juvenile delinquency as a social phenomenon, its incidence. Analysis of factors that influence crime. The role of the police, the courts, control and prevention agencies; system of probation and parole; influence of individual groups and the community in the prevention and treatment of the juvenile offender. Discussion of cases, visits to institutions for minors and conferences by authorities in the field.

### SOCI 3185

Penology

Requirements: SOCI 3261

At the end of the course, the student will be able to have a broad knowledge of penological science, learn about the historical development of this institution, learn about the structure and functions of this institution, learn about the prison experience in various social scenarios and the prison experience in Puerto Rico.

## SOCI 3261

Introduction to Sociology 3 credits, 3 hours

Requirement: CISO 3121-3122

Once the field of Sociology is defined, social interaction is studied: its organization, maintenance and change, emphasizing the analysis of culture, the socialization process and personality. Social stratification, social control and deviance, and racial ethnic minorities are also studied.

## SOCI 3265

Social Research Techniques 3 credits, 3 hours of lecture and practice Requirement: MEMBERS 3261

Critical analysis of the foundations and techniques of research in the various fields of social sciences; discussion of its historical development to the present, application of basic research methods in field work; tabulation, analysis and reporting.

### SOCI 3266

Sociology of Drug and Alcohol Addiction 3 credits, 3 hours

Requirement: MEMBERS 3261

The course in Sociology of Drug Addiction and Alcoholism deals with these phenomena from economic, physiological, psychological and social perspectives. It is related to the study of the basic concepts, processes and explanations of the individual and collective behavior of drug addicts and alcoholics. The course places particular emphasis on Puerto Rican society.

### SOCI 3270

Social Institutions 3 credits, 3 hours

Requirement: MEMBERS 3261

In this one the concept of social institution in Sociology is defined. The functions, organization and development of the fundamental institutions are analyzed. Using the comparative approach between the traditional and the contemporary, the following are studied: the family, education, economy, religion and politics as social institutions. In addition, medicine, bureaucracy and recreation are considered.

### SOCI 3285

Group Dynamics

3 credits, 3 hours

Requirements: SOCI 3261, CISO 3121-3122

Philosophy and basic concepts operating in the groups of our democratic system of life. Group dynamism, cohesion, structure, emotional factors, leadership, communication and their effects. The class will be a laboratory for the study of these topics.

#### SOCI 3305

Demography 3 credits, 3 hours Requirement: MEMBERS 3261

Analysis of the changes, structure, composition and dynamics of the population, its characteristics and demographic factors, such as birth rate, mortality, migration, population policies and others. Emphasis is placed on economic, political, cultural and environmental factors and effects on the population.

## SOCI 3315

Sociology of the Family

Requirement: MEMBERS 3261

Analysis of the fundamental structures of the institution of the family. It includes a comparative approach

between the traditional family and the contemporary family. Topics such as courtship, marriage, divorce, among others, are discussed.

### SOCI 3325

Urban Sociology 3 credits, 3 hours

Requirement: SOCI 3270, CISO 3122, PSIC 3002

A theoretical-practical formulation of the phenomenon of the city and urban life is presented, emphasizing the process of urbanization in the development of industrial areas. It analyzes topics such as: structure and social function of modern cities, social stratification, customs and patterns of urban life, and cultural integration between the city and the countryside. Comparative studies will be made of metropolitan areas of various cultures.

### SOCI 3335

Social Problems 3 credits, 3 hours Requirements: None

The course is based on a sociological orientation on the conceptualization of what a social problem is. The different aspects of the concept are analyzed, especially by whom and why social problems are considered. The different factors that explain the causes of social problems such as social disorganization, deviant behavior and value conflicts are studied.

### SOCI 3355

Juvenile delinquency 3 credits, 3 hours Requirements:

#### SOCI 3386

Love, Power and Dating Violence 3 credits, 3 hours

Requirement: Any of the introductory courses to the social disciplines (sociology, psychology, social psychology, anthropology, economics, politics, etc.)

This course examines the relationship between love, power, and dating violence in contemporary societies. Love is examined as a relational code that fulfills the function of fixing identities and subjecting bodies to the various routes of power. It also studies the ways in which power is articulated in couple relationships, and how this, in its articulation with modern understandings (from the sixteenth century) on love, is one of the sources that lead to dating violence. The forms of dating and dating violence in Puerto Rican society are examined.

#### SOCI 4005

Contemporary Sociological Theory 3 credits, 3 hours

Requirement: SOCI 3261 Semester: Second

The study of the origin, nature and origin of the types of sociological theory from the mid-nineteenth century to the present. The basic sociological schools and their greatest exponents are analyzed.

### SOCI 4015

Rural Sociological Principle 3 credits, 3 hours Requirements:

#### SOCI 4155

Social and Cultural Change Requirements: SOCI 3261

Specialized analysis of social and cultural change. Differentiation and assimilation. Causes, effects and process. Theory and practice based on theoretical and empirical knowledge using data offered by various branches of the Social Sciences. Transculturation process; effects of economic development and political evolution.

#### SOCI 4995

Special Topics in Sociology 1 to 3 credits, 15 to 45 hours Requirements: CISO 3122 Discussion of various topics in sociology, and incorporating recent literature for it. Topics may vary from semester to semester.

### **TAOF 3005**

Shorthand in Spanish 5 credits, 5 hours Requirements: ESPA 3101 (Baccalaureate Program Students) Learning the principles of shorthand in Spanish. Development and mastery of dictation-taking skills, reading and transcription by hand. Review and application of the grammatical rules of the Spanish language.

#### **TAOF 3006**

Teaching the Keyboard and its Applications on the Computer for Personal Use

4 credits, 4 hours

Requirements: None

This course is aimed at students who have no knowledge of computer keyboard operation. Therefore, it is expected that by the end of the course, students will have developed the correct techniques and basic skills necessary for handling the keyboard. Also, you will master the basic functions of the computer using up-todate programs. The writing of simple documents and communications will be introduced, such as: personal letters, business letters, resumes, reports and tables.

### **TAOF 3008**

Office Systems and Technology Concepts 3 credits, 3 hours Requirements: None This course studies the theory and evolution of

information processing as a system, its cycle and the human aspect in the use of this technology. It includes the study of the subsystems of information processing and the concept of telecommunications.

#### **TAOF 3009**

Document Management, Management and Preservation 3 credits, 3 hours

**Requirement: None** 

Teaching the importance of documents in companies and public and private institutions. Learning of the different systems of receipt, classification, processing, control, archiving and disposition of documents, as well as the acquisition of theoretical concepts related to the operation of manual, mechanical and automated systems in the process, location and storage of information.

### **TAOF 3015**

Personal development

2 credits, 2 hours

Requirements: None

Learning, development and application of the basic concepts of personality, personal appearance, image and behavior as vital and important aspects in the performance of every office employee.

#### **TAOF 3016**

Learning the Keyboard and its Applications 4 credits, 4 hours Requirements: None

Learning and mastery of the alphabetic, numeric, symbol and function keyboard. Learning the basic functions of the computer. Development of the ability to write by touch for professional and personal use; and of the dexterity of speed and accuracy with emphasis on modern typing techniques. Learning of theoretical aspects related to the application of the skill. The software that is frequently used and current in the contemporary office is used.

### TAOF 3017

Document Formats and Production

4 credits, 4 hours

Requirements: TAOF 3016

Consolidation and development of the techniques, skills, aptitudes and knowledge acquired in the TAOF 3016 course. Development of speed and accuracy at higher levels. Application of typing skills in the production, collation, and evaluation of business documents. The programs (software) frequently used in the contemporary office are used.

### **TAOF 3018**

Document Production 4 credits, 4 hours

Requirements: TAOF 3017

Expansion and integration of typing knowledge of the style rules applicable in the preparation of complex business documents. Development of the capacity to produce these documents quickly, efficiently and correctly. Development of the skill of speed and accuracy to higher levels. Application of the computer in the preparation of simulated assignments, so that the student develops effective criteria for the preparation, collation, evaluation and disposition of documents. Frequently used and updated application software is used in the contemporary office.

### **TAOF 3019**

Integration of Electronic Information Design and Processing Programs

4 credits, 4 hours

Requirements: TAOF 3018

Training in advanced electronic information processing functions, using the integration of several updated and frequently used programs in the contemporary office, such as: electronic information sheets, database, charts, electronic publication, calendar and e-mail. Emphasis is placed on the production of reports and other business documents

#### **TAOF 3026**

Websites, Internet and Telecommunications

4 credits, 4 hours

Requirement: None

The creation of web pages and websites with the elements and tools necessary to establish a business is studied. The course prepares the student in skills such as the use of the electronic calendar. Develops the skills and elements necessary for the effective management of the use of the Internet and e-mail. Principles, fundamentals

and integration of telecommunications in the management and search for information are presented. The ethical, social, political and security principles in the management of these technologies are studied.

#### **TAOF 3027**

Transcription in Spanish by Magnetic Media 3 credits, 3 hours

Requirements: TAOF 3018

This course works with the learning, development and mastery of the skill of transcribing documents in Spanish from dictations recorded on dictation and transcription machines, using the computer. The course reviews, develops and integrates the knowledge of typing, computer, language and grammar, necessary for transcription

acceptable of documents. In addition, it develops the skill of comparison at higher levels.

#### **TAOF 3028**

English transcription by magnetic means 3 credits, 3 hours Requirements: TAOF 3018

In this course, students learn, develop, and master the skills of transcribing recorded dictation by magnetic means using the computer. In the course, shorthand, language, grammar and computer skills are reviewed, developed and integrated to correct the transcription of English documents. In addition, the course aims to develop high-level skills in document review.

#### **TAOF 4015**

Administrative Systems and Office Procedures 3 credits, 3 hours

Requirements: TAOF 3018

Teaching and development of knowledge and skills in problem solving, decision-making, case analysis and teamwork. It also offers knowledge of office equipment and information processors frequently used in the contemporary office. Prepare the student to develop formats and establish procedures to carry out administrative tasks in the modern office.

### **TAOF 4016**

Office Supervision and Administration 3 credits, 3 hours Requirements: TAOF 4015

Development of competencies in the area of office administration and employee supervision. Application of the functional management approach to the establishment, coordination, implementation and evaluation of office systems and procedures. It will include case studies, literature review and preparation of research projects related to office administration.

#### **TAOF 4018**

Systems and Procedures at Oficina Legal 3 credits, 3 hours

Requirements: None

This course will emphasize the responsibilities and duties of administrative staff in the law office. Teaching and application of terminology, functions and procedures in the production of legal documents. The course requires visits to courts and law offices. Development of the exercise of effective human relations, good judgment, positive attitudes and professional ethics. Development and application of the principles of effective time management, decision-making, and analysis and interpretation of regulations.

#### **TAOF 4019**

Systems and Procedures in Medical Offices

3 credits, 3 hours

Requirement: None

This course will emphasize the responsibilities and duties of administrative staff in the medical office. Teaching and application of terminology, functions and procedures in the production of medical documents, including billing for services. The course requires visits to medical offices. Development of the exercise of effective human relations, good judgment, positive attitudes and professional ethics.

### **TAOF 4024**

Office Systems Integration

3 credits, 3 hours

Requirements: TAOF 3008 and TAOF 3019

Synthesis, application and evaluation of the concepts related to the role of the office as a support system for the company. Emphasis on the integration of subsystems, short and long-term strategic planning, solving problems related to the change process and the efficient use of human and technological resources in the modern office.

### **TAOF 4025**

Seminar and Internship in Office Administration 5 credits, 5 hours

Requisitos: TAOF 3009, TAOF 4016, TAOF 4024

Supervised work practice in community offices selected as Practice Centers. The period of the Internship and Seminar will be 15 to 20 hours per week for Practice and Seminary meetings. At the Seminar, students will participate in activities that will complement their transition from university to office.

#### **TAOF 4035**

Integration and management of programs for business decision-making

3 credits, 3 hours

**Requirements: None** 

The course develops knowledge and skills in the use of electronic information processing programs, such as: electronic sheet, word processing and presentation program. Students will carry out and apply different documents frequently used in companies and through the integration of these programs they will put into practice managerial decision-making.

### **TEAT 3011**

Action I Credits, 3 hours

Requirement: None

The training of an actor, body and voice by developing the basic techniques of dramatic art for the creation of a believable character worthy of representation.

#### TEAT 3012

Action II Credits, 3 hours Requirement: TEAT 3011

This course continues the training of the actor, developing his dramatic creativity to the maximum, through the psychophysical theatrical scientific method, reinforcing with analytical techniques on the characterization of a character.

#### **TEAT 3030**

Diction Credits, 3 hours Requirement: None

Fundamental aspects of diction theory and techniques in theatre.

### **TEAT 3041**

Taller de Teatro I 1 credit

**Requirement: Teacher's Permission** 

The workshop aims to carry out four productions integrating students and professional actors. To structure the experience and get the best out of it, students will fall into the category of apprentices so that they carry out their work, whether acting, directing or production, under the mentorship and supervision of the director under the same conditions as the professional within the production. Those interested in directing will be assigned as assistant directors to conduct their lab and actors will be trained in movement, character study, projection and acting from a more personalized perspective.

#### **TEAT 3042**

Theatre Workshop II 1 credit

Requirement: Teacher's Permission

The workshop aims to carry out four productions integrating students and professional actors. To structure the experience and get the best out of it, students will enter the category of apprentices so that they carry out their work, whether acting, directing or producing under the mentorship and supervision of the director under the same conditions as the professional within the production. Those interested in directing will be assigned as assistant directors to conduct their lab and actors will be trained in movement, character study, projection and acting from a more personalized perspective.

#### **TEAT 3101**

History of Puerto Rican Theater Credits, 3 hours

Requirement: None

Introduction to the development of the history of theatre from its origins to the French Theatre of the 19th century The course follows a positivist treatment which suggests that history can be explained logically and narrated objectively. The corresponding acting styles will be studied in a significant way.

#### **TEAT 3102**

History of the Theatre II 3 credits, 3 hours Requirement: TEAT 3101

Introduction to the development of the history of theatre from the Restoration to the North American and Latin American Contemporary Theatre. The course follows a positivist treatment which suggests that history can be explained logically and narrated objectively. The corresponding acting styles will be studied in a significant way.

#### **TEAT 3125**

Theatrical Makeup 3 credits, 3 hours Requirement: None Theory and practice of the fundamentals of theatrical

makeup. Basic principles in the technique of using

makeup, special emphasis on application and use for characterization.

#### **TEAT 3141**

Pantomime I

3 credits, 3 hours

**Requirement: None** 

The disciplined preparation of the intellect, imagination and body of the mime (actor, actor) for improvisation on stage or pampered dramas. Students will be able to appreciate the different traditions of this ancient art while exercising in it.

#### **TEAT 3142**

Pantomime II 3 credits, 3 hours Requirement: TEAT 3141

Study and practice of pampered drama in theatrical performance, taking into account the possibilities of the given space or scenic elements. Precise gesticulation and the combination of rhythms are coordinated with the spoken word to develop themes in stylized ways.

#### **TEAT 3185**

Experimental Theatre 3 credits, 3 hours Requirement: None

Study and practice of Experimental Theatre in the dramatic art that takes into account the variety of styles and treatments presented by the history of experimental theatre from the end of the nineteenth century to the present. Study of the character of Latin American experimental theater. Development and practice in new ways.

#### TEAT 3191

Theatrical Production I 3 credits, 5 hours

Requirement: None

The realization of a theatrical performance that involves the collective work of an artistic concept. All the elements that make up the theatrical production will be considered from the staging: selection of the play, direction, acting, scenography, sound, make-up, costumes, lights, advertising and finances.

#### TEAT 3192

Theatrical Production II 3 credits, 5 hours Requirement: TEAT 3191 The realization of a theatrical performance that involves the collective work of an artistic concept. All the elements that make up the theatrical production will be considered from the staging: selection of the play, direction, acting, scenography, sound, make-up, costumes, lights, advertising and finances.

#### TEAT 3301-3302

Basic Dance for Theatre 3 credits, 3 hours Requirement: consultation with the teacher This course proposes to develop in the student the individual and collective capacity for knowledge and

control of the body in space. It also prepares the student to make use of improvisation techniques as a point of A game for the creation of movement and selfexpression.

#### **TEAT 4063**

Theatre as an Experience 3 credits, 3 hours Requirements: HUMA 3101 and HUMA 3102 Study and analysis of theatrical art through the elements that define it, its historical development, genres and representative works.

#### **TEAT 4064**

Theories of Western Theatre 3 credits, 3 hours Requirements: HUMA 3101 and HUMA 3102 Introductory course to the theatrical theories that collect and codify theatrical work in the West.

#### **TEAT 4111**

Dramatic Activities for the Elementary Level Teacher 3 credits, 3 hours per week Requirements: None To develop the creative capacities of students so that they in turn stimulate them in others. Theatre as a pedagogical resource.

#### **TEAT 4213**

Stage Direction Workshop 3 credits, 3 hours Requirement: TEAT 4213

Practice of creative and analytical capacity through various strategies in the form of a workshop in which students express their directorial vision for theater. The student participates in the stage direction of a play. Evaluation of the director's work during the rehearsal stage. Qualitative evaluation of the staging.

## **TEAT 4260**

Dramaturgy Workshop I 3 credits. 3 hours Requirement: TEAT 3101 and TEAT 3102 or teacher's authorization Introduction to the study of Dramaturgy: a search for material and forms appropriate to the art and technique of Dramaturgy, highlighting writing.

## TEAT 4261

Playwriting Workshop II 3 credits, 3 hours Requirement: TEAT 4260 or teacher authorization Introduction to the study of Dramaturgy: a search for material and forms appropriate to the art and technique of Dramaturgy, highlighting writing.

## **TEED 3008**

Introduction to Educational Technology 3 credits, 3 hours Requirement: None It analyzes the role of educational technology in contamporant education. Polate the student to the

contemporary education. Relate the student to the concept of systematic planning, the various materials and technological equipment, their characteristics, potentialities and limitations. It discusses the role that these play in the teaching-learning processes and communication. The integration of information skills into the course content will provide the teacher candidate with the opportunity to develop the skills to identify their need for information in order to offer alternatives, to be able to make informed decisions and solve problems in an accurate way, according to the subject of the course.