



# UPR- CAYEY

# CATALOG



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# University of Puerto Rico

## THE GREAT PUERTO RICAN CULTURAL PROJECT

Throughout its long hard working trajectory, the University of Puerto Rico has established itself as a trusting institution, sustaining projects of critical social advancement, technological progress and cultural significance for Puerto Rico.

The University harmonizes its intimate roots in the Puerto Rican reality with the opening to a world of knowledge and global creation.



Established in 1903 it is the oldest university in Puerto Rico. It started its first academic year with an enrollment of 173 students. It graduated its first class in June 1907. Today the University of Puerto Rico consists of eleven campuses (units)

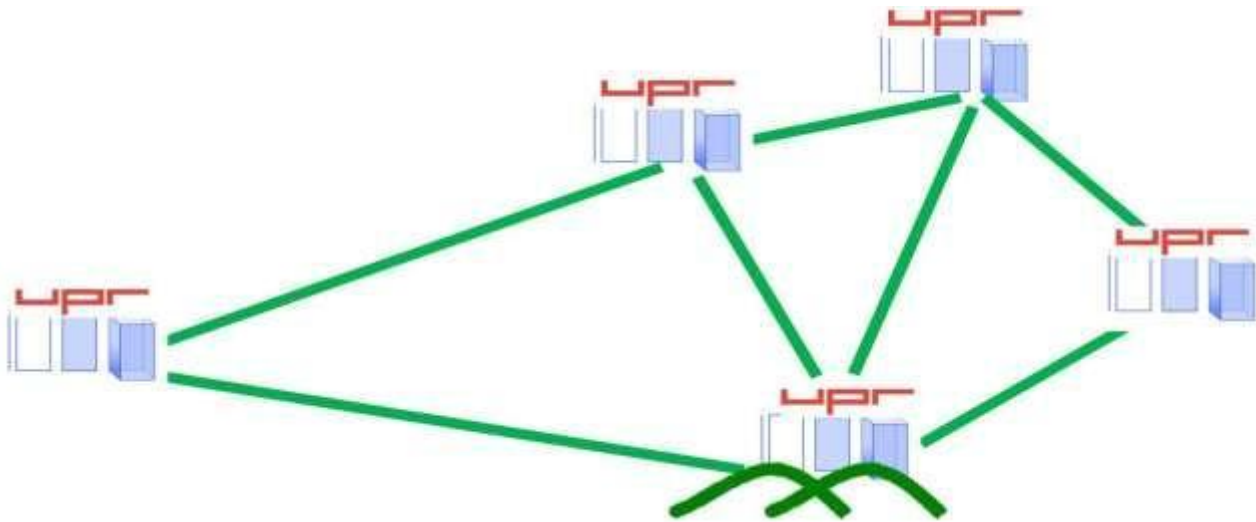
accredited by the Council on Higher Education of Puerto Rico and the Middle States Association of Colleges and Schools. Their curriculum at the undergraduate level and graduate level is the most comprehensive in Puerto Rico. Three of its enclosures are rated as doctoral and research campuses. The University of Puerto Rico, is one of the cultural and academic centers in the Caribbean and the Hispanic world.

Its greatest asset, its greatest legacy are the generations of university students that for more than a century, in appreciation of the values of knowledge, beauty and in a civilized manner, have provided the country and the world with knowledge, technology, service and culture .

In 1966, Act 1 of January 20, 1966, as amended, defines the University of Puerto Rico as an organic system of higher education composed of a central administration and a structure of enclosures, colleges and regional colleges. Currently the University of Puerto Rico has eleven campuses located throughout the country: Río Piedras, Mayagüez, Medical Sciences, Cayey, Humacao, Arecibo, Bayamon, Ponce, Aguadilla, Carolina and Utuado. The community of the University of Puerto Rico has about 50, 000 students, 5,200 professors and 14,000 non - docent employees (2012-13).

## THE UNIVERSITY AS SYSTEM

The University of Puerto Rico, in accordance with the Law of the University of 1966, consists of **eleven autonomous units**, each of which has a board according to the Law. Each self-contained unit is headed by a Chancellor and has a legislative body and adviser known as the academic senate or academic board that provides a forum for the academic community.



The Governing Board was created in 2013 as an independent and autonomous body that governs the 11 unit system comprising the University of Puerto Rico. Prior to its creation, these responsibilities were in charge of the former Higher Education Council (CES) and the previous Board of Trustees (JS).

The work of the Governing Board is to govern the University, supervise the overall operations of the institution and create guidelines governing their orientation and development. The Board is not involved in administrative details or relevant work to the Presidency, the Chancellors, or other officials.

It is composed of 13 members, namely: a regular undergraduate student; a regular student in a graduate program at the University; two professors with tenured appointment in the university system; the Secretary of Education, ex officio basis; a professional with extensive knowledge and experience in the field of finance; a resident of Puerto Rico who has participated with distinction in social and community leadership; five residents of Puerto Rico featured in professional artistic knowledge, scientific and; a citizen who resides in Puerto Rico, linked to Puerto Rican communities abroad( Diaspora).

Except for the two students and two professors, who are elected, the other members of the Governing Board are appointed by the Governor with the advice and consent of the Senate. All members of the Governing Board hold office for staggered terms established in the University's Law and until their successors are appointed and take office.

The President coordinates and oversees all university activities. In carrying out its functions, it has the resources of his own office and the offices of the Central Administration of the University System. The following offices are the Central Administration of the UPR and assist the President in formulating policies, rules and procedures applicable to all units of the system: Academic Affairs, Planning and Development, Finance and Budget, Human Resources and Admissions. It is the responsibility of the President to coordinate the planning and budgeting of the University.

The University Board, chaired by the President of the University, consists of the Chancellors, the CFO of the Central Administration, three members of the President's team work and a member of the faculty and one student from each of the autonomous units. The University Board advises the President and approves to process the Governing Board, proposals for academic programs, internal regulations, budget and amendments to the regulations submitted by the autonomous units. It also serves as the Appeals Board on decisions of the administrative boards on promotions in rank and licensing procedures of professors.

The Editorial Universitaria, The Puerto Rican Literature Institute, Botanical Garden and the Center for Energy and Environmental Studies, and the Dialogo newspaper are under direct jurisdiction of the Office of the President.

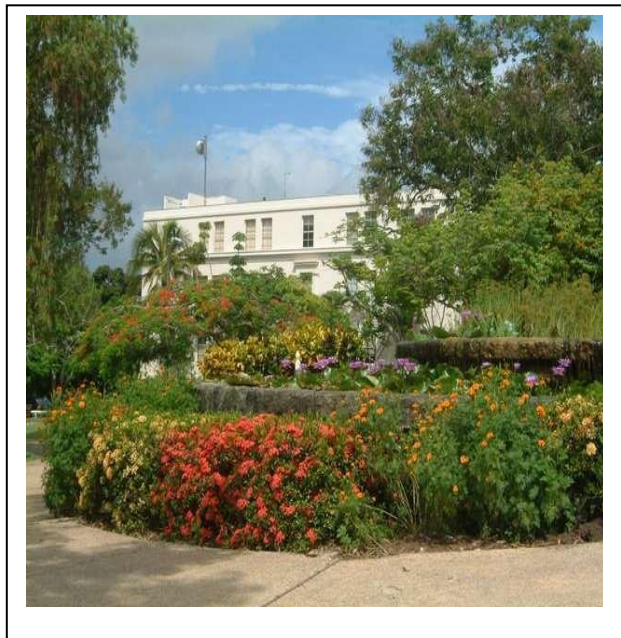
All units at the University of Puerto Rico offer academic programs leading to four - year baccalaureate degrees. The University of Puerto Rico also offers programs in master's and doctoral degrees in the Rio Piedras, Mayagüez and Medical Sciences campuses

## **UNIVERSITY OF PUERTO RICO IN CAYEY**

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

#### **PREAMBLE**

The University of Puerto Rico in Cayey is an autonomous unit of the University of Puerto Rico. Established in 1967 as a regional college at the headquarters of a former military camp it becomes a university college in 1969 and acquired its autonomy on April 2, 1982 by resolution of the Board of Higher Education. The mission of UPR-Cayey has its origin in the commitment to the fundamental values of the University and from the mission of the University of Puerto Rico as a public institution of higher education.



The variety of academic backgrounds of its faculty provides richness and diversity to the educational experience, the natural beauty of its surroundings and its location, both near and far from major metropolitan areas, fosters a friendly academic environment, which invites the study, reflection and personal development. Our campus stresses the importance of human relations. We care about quality more than quantity.

## **VISION**

We want a University that cares for human relations and human quality. We want to provide the physical conditions and spiritual incentives for everyone to feel joy while being a part of the university.



The appreciation of the diversity that characterize us implies recognition of the variety of dimensions that come together in our institution. Both our curriculum and the functioning of the organizational structure must reflect this diversity. And we will submit our curriculum to critical reflection, review the principles, rules, procedures and assessment tools for professors in order to promote excellence among those who already work in the UPR-Cayey and to recruit qualified personnel.

The opportunities for future development before us are almost unlimited. In collaboration with the other campuses of the University of Puerto Rico, we enrich our academic programs, our research and our ability to service the country, but especially the surrounding towns, are benefitted in the process.

At the University of Puerto Rico in Cayey we celebrate the wonder of the physical environment and we are committed to the best and most attentive conservation. It is an Open book for learning and the exercising of ecological values. Our campus will be home to meetings that go beyond our shores. We will host workshops, conferences, research, exhibitions, and exchange programs, especially with the Caribbean countries. This will

enable us to achieve an environment in which students, faculty and staff understand and respect the diversity of the surrounding world.

We reiterate our commitment to the ideals of the university's autonomy. We consider essential to develop the institution according to the values and programs generated from its own involvement and with the support of its members.

## **MISSION**

The University of Puerto Rico in Cayey is committed to excellence through education of undergraduates in teacher preparation and in the disciplines of Natural and Social Sciences programs, Humanities and Business Administration. We understand the general education and professional expertise as complementary experiences of the formation of human beings. Offer an interdisciplinary and innovative education, integrating themes and experiences of various fields of knowledge, research and community service as part of the teaching and learning experience, while maintaining the value of specialization. We educate with a global perspective which in turn recognizes the location of the human being in his community, with a historical sense and a vision of the future.

We are committed to the comprehensive development of human beings, autonomous, critical, sensitive, believes in excellence as standard of living, and who is prepared to settle creatively in society and in the work environment. It will be someone who discovers in herself/himself the resources and incentives for learning, who has learned to seek and gestate the knowledge for a full life, and maintain a lifelong commitment to this. We work to achieve an integrated university community among its components, based on the shared commitment to education as a way of life. We recognize that all members are essentially, students, and we can all be teachers.

We believe, as Hostos taught us that the good life is closely linked to good deeds. We affirm that the University has a responsibility to link their say with their doing. The academic project of the University of Puerto Rico in Cayey requires an alertness to the issues of our time, such as improving the natural and social environment and the promotion of peace, and committed to the reasoned overcoming of prejudice and respect to dissent. We want to educate for life.

## **GOALS AND OBJECTIVES**

### **1. Provide an undergraduate education of excellence.**

- Keep varied and updated programs to include the Natural and Social Sciences, Humanities, Education and Business Administration.
- Offer a diverse, innovative curriculum based on recent technological advances, social relevance, international and interdisciplinary perspective that gives students

a solid foundation of knowledge and skills from which to expand its training in any field of knowledge and professional performance .

- Develop programs, co - curricular activities and study experiences, research, exchange, creation, training, professional practice and service that are relevant and innovative.
  - Promote synthesis and continuity in the organization of knowledge as well as learning experiences.
  - Provide students with a vision of the interrelationship between general education, the expertise of the specialty and their living environment.
  - Contribute to the training of people with a broad, inclusive, dynamic and innovative cultural vision of knowledge, the human being and the teaching and learning process.
  - To train students to function in a multicultural, international and interdependent world.
  - Strengthen the development of complex thinking, which promotes independent learning, critical discernment, the generation of new knowledge and a creative attitude.
  - Develop in students the strengthening and full appreciation of their vernacular.
  - Expand on students' ability to communicate effectively and properly.
  - Train students in the use of various sources of information and research.
  - Familiarize students with the creative use of technology as tools both in training and in their specialty.
  - Sensitize students in various forms of artistic and corporeal expressions through formative training and experiencing activities inside and outside the classroom.
  - Cultivate in the students their self - esteem and self - confidence, initiative and leadership, independence of judgment and prudence in decision-making, enabling them to make ethical judgments, anticipate problems, perceive opportunities and propose constructive changes, promoting a comprehensive and balanced development of the person.
- 2. Cultivate in all areas of the university's community commitment to the enforcement of excellence in line with the academic project that promotes the institutional purpose of unity.**
- Encourage continuous education of all members of the university's community: students, professors and non-docent personnel.

- Provide student support services to facilitate their integration into university life.
- Support faculty in the enrichment of a broad cultural training, updating knowledge of their specialty and improving their teaching skills.
- Foster in the university's support staff the role and values of the University, and contribute to their professional and personal development.
- Recognize merit for job executory.
- Adapt the budget allocation to the work plan that recognizes the institutional priorities.
- Integrate assessment as a way to enrich the teaching and learning process.
- Promote the assessment, evaluation and review of processes and academic and administrative schemes, so that it responds in an agile and flexible way to the academic project that gives meaning to our existence.

**3. Making the University of Puerto Rico in Cayey one of the main centers of academic and cultural activities in Puerto Rico.**

- Foster a climate of encounter and exchange between scholars, researchers and forgers of the country and the world, as well as dialogue between academic disciplines and between different areas of the community.
- Provide continuing education to people who aspire to excel professionally, change careers or enhance their quality of life.
- Strengthen links with academic and cultural institutions inside and outside of Puerto Rico.
- Maintain a comprehensive program of artistic, scientific, professional and athletic activities that complement the academic programs and serve the community.
- Keep the community informed of the progress in the various branches of knowledge.
- Enrich and disseminate the values of the Puerto Rican culture.

**4. Foster the development of a sense of social responsibility based on respect for human beings and their natural environment.**

- Train students with the knowledge and skills needed to understand social, cultural, economic, political and environmental phenomena in Puerto Rico and the world.
- Promote attitudes that lead to respect, diversity and overcoming prejudices that violate human dignity.

- Promote commitment to justice and the search for peaceful solutions to common problems.
- Promote the preservation and improvement of the environment.
- Maintaining a campus environment that guarantees respect for dissenting opinions and rights of others.
- Assert the university's autonomy.

The Mission Statement, Goals, General Objectives of the University of Puerto Rico in Cayey, concocted with the widest participation of all sectors of the academic community, crystallized the sense of this academic community about what is and what should be the University of Puerto Rico in Cayey. Unanimously approved by the Academic Board on March 5, 1993, it was endorsed by the Council on Higher Education, which, through Certification 94-002 repealed the last mission, issued before granting autonomy to Cayey and collected in its Certification 57 1979-1980 series. On February 23<sup>rd</sup>, 1994 it received the unanimous support of the University Board. It was updated on May 4, 2006, by Certification number 89 2005-06 series of the Academic Senate.

## **ACCREDITATION**

The University of Puerto Rico in Cayey has been accredited by the *Middle States Association of Colleges and Secondary Schools, Commission on Higher Education* on March 22, 1975, on March 13, 1980, on July 1, 1985, June 21 1995 and a visit with the Council of Higher Education of Puerto Rico on June 22, 2005.

## **ACADEMIC DEGREES**

Here we identify in the following order: Code and program title or concentration and the number of certifications, that authorize the twenty - eight programs offered by the University of Puerto Rico at Cayey and two Transfer Articulated programs.



**Bachelor codes and Programs****Reviewed  
by the Unit****Bachelor of Business Administration**

0301	Business Administration	CES 143 1997-98	0301
0305	Management	CES 143 1997-98	0305
0302	Accounting	CES 143 1997-98	0302
0321	Office Administration	CES 035- 1999-00 CES 177, 2004-05	0321
0322	Office Systems *	CES 035- 1999-00 CES 177, 2004-05	0322

**Bachelor of Science**

1201	Natural Sciences	143. CES 1997 to 1998	1201
1202	Biology	143. CES 1997 to 1998	1202
1204	Chemistry	143. CES 1997 to 1998	1204
1205	Mathematics	143. CES 1997 to 1998	1205

**Bachelor of Arts**

0902	Humanities	143. CES 1997 to 1998	0902
0906	History	143. CES 1997 to 1998	0906
0907	English	143. CES 1997 to 1998	0907
0909	Hispanic Studies	143. CES 1997 to 1998	0909
1602	Social Sciences	143. CES 1997 to 1998	
1605	Psychology	143. CES 1997 to 1998	1605
	Psychology and Mental		
1613	Health	CES 143 1997-98	1613
1606	Sociology	143. CES 1997 to 1998	1606

**Bachelor of Arts in Elementary Education**

0420	English	143. CES 1997 to 1998	0420
0423	Natural Sciences	143. CES 1997 to 1998	0423
0424	Math	143. CES 1997 to 1998	0424
0426	Spanish	143. CES 1997 to 1998	0426
0446	Special Education	CES 079, 1999-1900, CES 162, 2003-04	0446

**Bachelor of Arts in Secondary Education**

0401	natural Sciences	143. CES 1997 to 1998	0401
0404	Mathematics	143. CES 1997 to 1998	0404
0409	Physical education	143. CES 1997 to 1998	0409
0413	History	143. CES 1997 to 1998	0413
0414	English	143. CES 1997 to 1998	0414
0415	Spanish	143. CES 1997 to 1998	0415

\* Halted program.

## EMBLEMS OF THE UNIVERSITY OF PUERTO RICO IN CAYEY



### THE SHIELD

"Shield cut, in blue, over all a four gate facade mounted on a window; in base, argent, red bull, on a three hill mountain, vert."

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

The golden gate reproduces the characteristic relief of the entrances of the main buildings of the institution, where gold signifies the enduring value of the knowledge received and academic excellence. The open door wings mean that the UPR at Cayey is open to all who want to benefit from the academic opportunities. The window refers to the clear view that the students receive the knowledge acquired by professors, and with a look to the future. The four grades indicate the four - year academic program leading to a bachelor's degree.

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

The red bull, next to the green morning, are taken from the shield of Cayey, adopted by the Honorable Municipal Assembly by Municipal Ordinance No. 2, Series 01971-72 dated June 15, 1972. The bull refers to peak called El Torito, which honor the original tradition of the institution began using the stylized bull used as well as the sports team called "the Toritos of Cayey". The three hills are by El Torito, El Gato and Cerro La Santa, which indicate the location of the UPR Cayey among green cayeyanos mountains due to the river and aquatic wealth of the area. We used three hills instead of three peaks to distinguish the Institutional shield of the town of Cayey.

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



### THE STAMP

"The whole surrounded by a double circle with the inscription UNIVERSITY OF PUERTO RICO IN CAYEY, on the base 1967, sable, outer circle of chain links." The shield in the circle described is the hallmark of the UPR Cayey where 1967 indicates the date of its foundation. Black (sable) of letters and date indicates seriousness and formality of the academic work of the institution. The outer circle surrounded by chain links refers to the common effort of all members of the academic community in the areas of administration, faculty, students, administrative personnel operation and maintenance.

The shield serves to identify the institution, while the seal is used to authenticate documents issued by the UPR at Cayey. Its designs created by Dr. JJ Santa-Pinter, faculty member and the Académie Internationale d'Héraldique, in collaboration with Mr. Santiago Nieves, were adopted by the University Board through its Certification Number 14, series 1974-75.



## **THE FLAG**

The official flag of the UPR Cayey consists of three horizontal stripes: red, white and green, in this order, located in the center the shield of the UPR Cayey. All bordered by the usual yellow fringes, it is the regulatory size in the proportion of three high by 5 wide. Creation of Dr. JJ Santa-Pinter, Professor and member of the "North American Vexillological Association" was adopted by the University Board through its Certification Number 23, series 1978-79. The red, white and green are the colors that have been used since the beginning of our Alma Mater, especially in activities and sports uniforms. These colors were also adopted into the tincture of the shield and seal of the College. Red means love of country and studies; white sincerity and honesty; and green, Cayey's environment and hope that symbolizes faith in the future of our youth.

## **THE ANTHEM**

The melody of the Hymn of the University of Puerto Rico in Cayey was composed in 1973 by composer César Concepción a native son of Cayey. On February 2<sup>nd</sup>, 1979 the UPR in Cayey announced a competition to provide with the appropriate lyrics for the music, which was selected on April 4, 1979 by a jury of five members, consisting of professors of the of Spanish Department and musician, critic and musicologist Dr. Bartolome Bover and premiering on May 10, 1979 during the End of the Year concert offered by the Polyphonic Choir of the UPR Cayey under the direction of Prof. Salvador Ruiz Cordobes.

## **ANTHEM OF THE UNIVERSITY OF PUERTO RICO IN CAYEY**

Es un orgullo de mi pueblo, de mi preciosa Borinquén

mi Colegio, monte y cielo, el más precioso Edén,

Libres en el pensamiento iestudiantes a luchar!

La verdad es nuestro aliento iadelante, hasta triunfar!

Es un orgullo de mi pueblo, de mi preciosa Borinquén

mi Colegio de Cayey es la más precioso Edén.

Libres en el pensamiento iestudiantes a luchar!

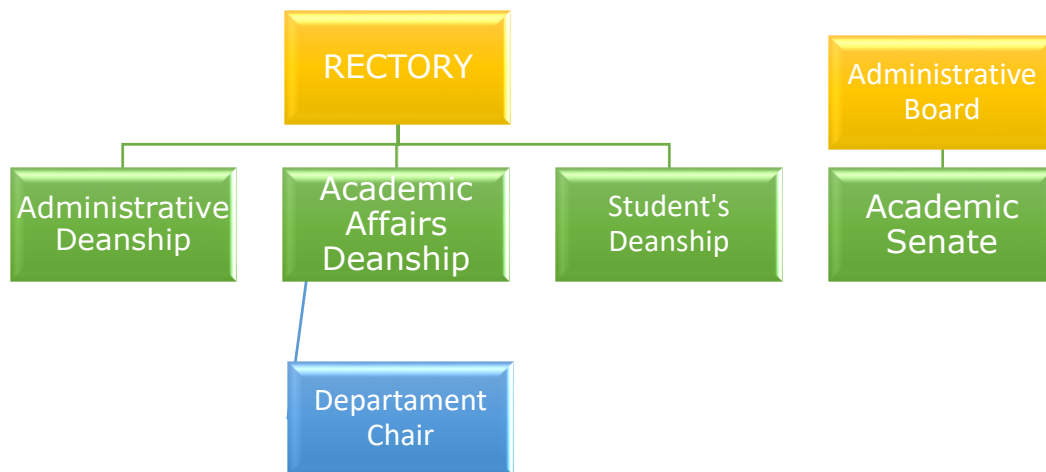
La verdad es nuestro aliento iadelante, hasta triunfar!

Con tu razón yo me levanto, camino firme en libertad.

## ORGANIZATIONAL STRUCTURE OF THE UNIVERSITY OF PUERTO RICO IN CAYEY

The internal governance structure and decision - making at the University of Puerto Rico in Cayey can be understood as a joint academic and administrative effort. Through its academic side they originate, approve or channel and transfer for approval by agencies from the System of the University of Puerto Rico initiatives of curricular nature. Through its administrative side they originate, approve or channel and transfer for approval by the agencies in the system, initiatives to support the quality of academic management and service to the university's community.

Agencies and officials in which decisions originate or are endorsed are, from the level of grouping discipline of study to the institutional level, the following: academics with student representation departments, heads of department, faculty with student representation, deans, **ad hoc** committees between deaneries, the Academic Senate, the Administrative Board and the Rector. The University has a constitution framed in the three deaneries, which respond to structure Chancellor: Academic Dean, Dean of Administration and Dean of Students. The Chancellor is the highest academic and administrative authority. In the exercise of its duties guides and monitors the academic staff in teaching, research, administrative and technical functions carried out in the institution.



At the University of Puerto Rico in Cayey there is only one faculty, equivalent to the cloister. The faculty is constituted at its meetings by the Chancellor, Deans, faculty and student representation. On March 18, 1988 the Senate approved the *Regulation Rules of the Faculty of the University of Puerto Rico in Cayey*. This regulation was amended in September 2007. *The regulation* has roles and responsibilities of the Faculty, its officers and five standing committees, to wit: Personnel Committee of the faculty,

Faculty Curriculum Committee, Faculty General Education Committee, Research Committee, Planning and Assessment Committee of the Faculty and Student Support.

The Academic Senate is the official forum of the academic community. Through it, the faculty participates in the institutional processes and the establishment of academic standards. It consists of the Chancellor, who presides, the deans, the Director (a) of the Library, the representation of professors in each department and library, plus two elected faculty meeting professors and student representation. Receives the proposals submitted by the faculty regarding the creation and revision of courses on which takes final decision, and regarding academic programs, which, to approve, transfers them for consideration by the University Board. It is responsible for determining the general orientation of education programs and the approval of the academic calendar, the general requirements for admission, promotion and graduation of students, the general rules of recruitment, retention, promotion of rank and licensing of professors, understand in consultations for the appointment of the Chancellor and the deans and makes recommendations to the College Board or the Board of Trustees on the creation or reorganization of offices on the General Regulations of the University and the Student Regulations.

The Administrative Board is composed of the Chancellor, who presides, the deans, the director of the library, four department chairs, two representatives elected by the Academic Senate who are not **ex officio** and student representation. The functions and powers of the Administrative Board are established by the University Act. Advises the Chancellor in the exercise of her/his functions, develops projects and plans of development, and approves the draft budget submitted by the Chancellor. The Board grants at the request of the Chancellor, licenses, academic ranks, the tenured of staff and promotion in rank of professors. Approves internal regulations regarding the evaluation of non - docent staff and internal regulations concerning services and administrative procedures.

## The Chancellor

The Chancellor is the principal academic and administrative authority of the University of Puerto Rico in Cayey. She/he is nominated by the President of the University, after consultation with the university community through the Academic Senate, and confirmed by the Governing Board.

Her/his powers and specific responsibilities are outlined by law and regulation: Article 7 of the University Act, in Section 19.3 of the General Regulations of the University of Puerto Rico, and Section 7.1 of the Rules of the Faculty of the University of Puerto Rico in Cayey.

Among the main they are presiding over the Cloister, the Academic Senate and the Administrative Board; appoint, after consultation, deans and heads of academic departments, as well as office managers and all the staff at the University of Puerto Rico in Cayey; direct the formulation of the draft budget, the annual report of the work of the UPR at Cayey and other institutional documents of a similar magnitude.

Corresponds to the rectory the direction and coordination of the many and various academic and administrative efforts related to university life, including the advancement of institutional priorities, support for academic activities, and protection of rights and expansion of opportunities for members of the university's community. It also corresponds to the rectory to represent the UPR Cayey before university authorities and the external community, foster good relations between different sectors of the university's community and clarify claims and disputes that have not been resolved at other levels.

From the rectory are launched accreditation activities and institutional planning and projects of special interest, such as Visiting Professors, resident artists and others. Activities of international projection are also sponsored.

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

1. Student Attorney
2. Affirmative Action Officer
3. Office of Budget
4. Information Technology
5. Office of Legal Affairs
6. Administrative Board
7. External Resources
8. Child Development Center
9. Division of Graphic Arts and Print
10. Museum
11. Information systems
12. Planning and Development
13. Assessment and Institutional Research
14. Academic Senate
15. The Commission for Prevention of Violence (COPREVI)



## **DEAN OF ACADEMIC AFFAIRS**

The Dean of Academic Affairs meets, under the coordination of the Dean's Office, departments and academic programs, centers of learning resources, programs and projects to support docents, the special academic projects, the Office of the Registrar, the division of Continuing Education and Professional Studies, the Extended University and official publications ( Revista Cayey and catalog).



The Dean of Academic Affairs is responsible for the development of programs and academic policies of the Campus: Directs and coordinates activities of the associate deans, department chairs, coordinators and program directors and academic projects, the Division of Continuing Education and Professional Studies and the Library ; advises on matters related to professors, promotes faculty excellence in the performance of their duties and continuous development; implements the agreements on academic matters approved by the Academic Senate and other university authorities; attends the creation, revision and programming of courses and updating programs generated by the faculty; coordinates the activities of academic counseling carried out by the departments and the

transdepartmental components of general education and training of teachers; participates in the activities of the Administrative Board, the Senate and faculty committees and academic development budget; It provides direction to the Registrar; coordinates with the Office of Admissions; liaises with the Office of the Vice President for Academic Affairs of the Central Administration and accreditation agencies; recommends the appointment of directors and actions of professors, after consultation with the appropriate authorities; assists the Chancellor in all matters relating to academic affairs and represents it in his absence. She/he works in integration with the deaneries of Administration and Students.

## **Departments and Academic Programs**

The department is the academic and administrative unit in charge of offering programs and courses toward degrees in various disciplines in the daytime program and coordinates with the Division of Continuing Education and Professional Studies offerings in the evening and Sabbath programs. Each department is constituted by professors and researchers attached thereto. The department chair is the chief executive and administrative officer of each department.

The academic departments of the University of Puerto Rico in 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
- Program in Natural Sciences

### **Professional Schools**

- Department of Education
- Physical Education Program

- Department of Business Administration
- Program of Technology and Office Administration

- Library

- Institute for Interdisciplinary Research

## Researchers and Professional Counselors

They also offer courses leading to certificate in the following academic programs:

Honor Studies Program (PEH)

Military Sciences Program (ROTC)

The following research projects and docent assisting programs that complement the work of the departments:

Pro-Women project (PROM)

Biomedical Research Program:

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

Educational Services Program

Special Projects and Institutes:

Institute for Interdisciplinary Research  
Infrastructure and Capacity Building Research (BRIC)

Center for Ecological Education

The objectives and curriculum of each department are described in the section of Academic Programs in this catalog.

### **Learning Resources**

The main centers of learning resources at the University of Puerto Rico in Cayey are: Victor M. Pons Gil Library, the Museum of Art Dr. Pio Lopez Martinez, and the Office of Technology for docents under which it is grouped: the Support Center on Informational Skills, the Center for Educational Technology and Communication. The laboratories are assigned to the relevant departments, gym, tennis and pool to the Physical Education Program. The objectives and services of these centers are described in the section on Learning Resources in this catalog.

### **Registrar's Office**

The Registrar's Office administers and enforces regulations and academic standards approved by university bodies and the Dean of Academic Affairs. It is responsible for the custody of all academic records of students who enroll at the University of Puerto Rico in Cayey.

The Registrar directs and coordinates all activities of the Registrar: consultation with department chairs and other officials on programming courses and enrollment procedures; directs the preparation and evaluation of academic records; issues official transcripts and list of graduates; directs the collection of statistical data on student enrollment and Administration for Central and other agency and analyzes for administrative use in policy formulation; interprets policies and academic standards for students and professors; directs the collection and dissemination of information on scheduling classes and enrollment, graduation requirements, reclassification, transfer, special permits, etc. .; coordinates the dissemination of information on courses offered, enrollment procedures and other actions that require registration; coordinates the programming of classes with the available classrooms to optimize the use of the infrastructure and equipment.

The office is located on the first floor of the building Carlos Iñiguez. To provide services of the Registrar, the window remains open Monday through Friday from eight o'clock to noon ad 1:00 p. m. to 4:30 p.m.

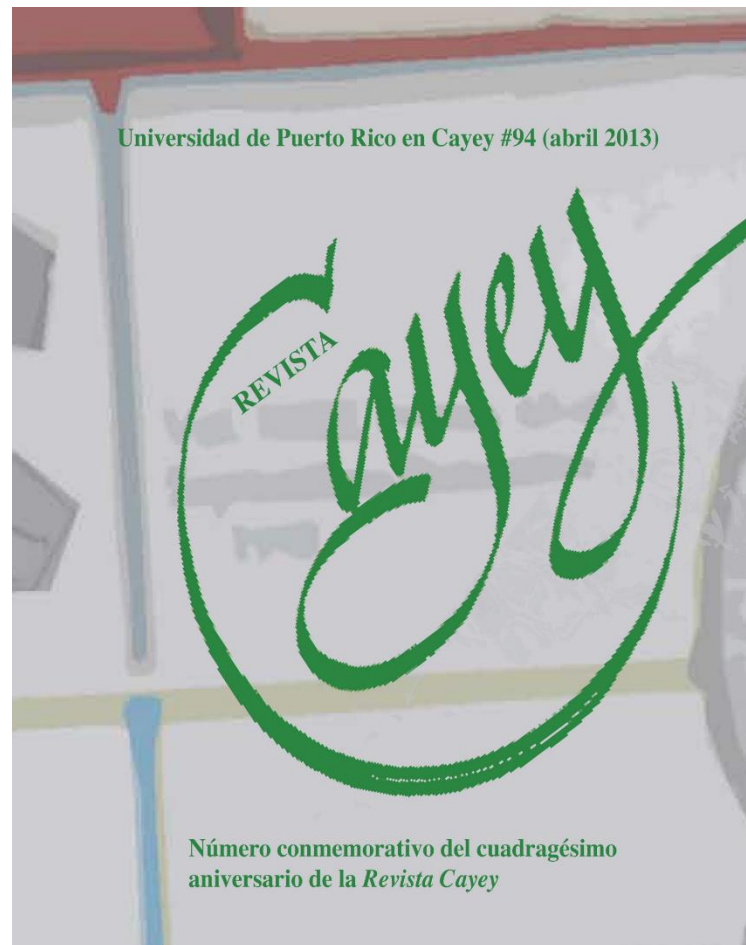
## **CAYEY MAGAZINE**

The “**Revista Cayey**” is a biannual academic publication of the University of Puerto Rico in Cayey founded in 1968. Reports multidisciplinary and interdisciplinary research and creation in Spanish or English, from the University of Puerto Rico in Cayey and other academic and cultural institutions. Promotes debate and critical analysis of the different forms of knowledge and contributes to its development. It provides a forum for the expression of academics, intellectuals, researchers and artists from Puerto Rico and abroad.

Currently it is directed by Dr. Heida Sanchez Zambrano. From the number 84 (2007), art direction is headed by Professor Harry Hernandez.

[revistacayey@gmail.com](mailto:revistacayey@gmail.com)

<http://web1.oss.cayey.upr.edu/main/unidades/revista-cayey>



## **ADMINISTRATIVE DEANSHIP**

This coordination of this deanship is the responsibility of the Dean of Administration, who reports directly to the Chancellor. Human Resources, Physical Resources, Safety and Security (University Guard), Shopping, Finance (Payroll, Property, Accounts Payable, Accounts, Disbursements, Collections and Claims) Complementary Services (internal Postal Service, Postal Station Cafeteria, Bookstore, Reproduction Center, Guest Houses, Faculty's House), General Services (Supply Depot, phone board and Central Archive), Systems and Procedures, Health, Occupational Safety and Environmental Protection, and Fiscal Financial Aid Office.

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

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

## **STUDENT'S DEANSHIP**

On the student's deanship of lies the responsibility of performing all tasks related to student services effectively and efficiently. It is committed to the overall development of students, both intellectually and personally, in accordance with the student profile that exposes the Mission of the University of Puerto Rico in Cayey. Towards this end, complements the academic school activities with other to facilitate their integration into university life, encourages the spirit of Alma Mater and provides for maximum development of the potential of each.

The Dean of Students and her/his offices keep the doors open to all students to guide them, address their concerns and provide the necessary assistance. The units assigned to this deanery are: Guidance, which has a Center for Occupational and Educational

Resources; admissions; Financial Aid; Jobs, Accommodation and Veterans Services; Cultural, Sports and Recreation; Exchange and student traveling ; Medical Services, and Quality of Life. The services provided are described in the section of this catalog labeled: Student Services. The Dean of Students assists in the coordination of the activities of the Student Council, the graduating class, student associations and student representatives of the departments that request so.

*The functions of the Deanship of Students:*

- Expand educational dimensions and social development of students by providing and promoting cultural, athletic and social activities and programs.
- Provide or facilitate the provision of those services the student needs for full development as a college student.
- Coordinate student participation in the university community through the annual constitution of the General Council of Students, the student representation in all academic departments, the standing committees of the Faculty and other committees and bodies of the university community; and stimulate the organization of cultural, technical, sporting, social and fraternal student academic groups.
- Keep 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, creating a bridge that tends to strengthen our culture.
- Offer a program of social activities that facilitate and serve the college student's adjustment and complement the academic programs.
- Provide opportunities to enrich the educational experience through programs and traveling trips abroad.
- Help each student to achieve a better understanding of herself/himself to supply an appropriate adjustment to college life and the society in which they live.
- Manage the programmatic phase of the financial aid programs.
- Liaising with the Veterans Administration to facilitate disbursements for studies of those veterans and dependents who attend the school.
- Provide guidance to students about jobs, agencies and companies that offer work opportunities.
- Keep up to date information and guidance on programs and scholarships for graduate and professional studies.

- To mediate in problems that may arise between students and private dormitory owners.
- Provide students with general medical services.
- Mediate disciplinary actions regarding students.
- Encourage in the student and the community healthy and safe lifestyles.
- Update College Student and Student Rules Manuals.
- Disclose in the university community information related to campus safety.

## **STUDENT REPRESENTATION**

The University of Puerto Rico in Cayey encourages student participation in university affairs as a way to better meet their needs and encourage leadership. Student participation is set representatively in Article 10 of the Law of the University of Puerto Rico of 1966, as amended by Certification 45 series 1972-1973 of the Council of Higher Education, incorporated to the General Student Regulations on Certification 14 1974-75, and Certification 117 of the Academic board and incorporated into the Internal Faculty Regulations.

Student representation has a voice and vote in the department and faculty meetings, in the Academic Senate, the Administrative Board and the University Board, committees of the Faculty (except Personnel) and special committees on discipline and other university committees and bodies. Student participation with voice and vote at the departmental level will not exceed 10 percent of the number of Senate members that make up the department, but in no case be less than two student representatives. Student representation with voice and vote at the level of the Faculty consists of student representatives at the departmental level, but in no case, the total of such representation may exceed 10 percent of the number of professors belonging to the faculty. On eligibility and election procedures, see the Student's Regulations.

### **General Student Council**

The General Student Council is the body representing the student body at the University of Puerto Rico in Cayey. Created by Law, it facilitates the expression of the students, provides the means to exercise in their own government, participate within the framework of its own responsibilities and channel the contribution of ideas for the proper functioning of the institution. The General Student Council shall consist of four representatives each year by secret ballot elected annually. Once elected, they choose their board among the elected members.

### **Student Organizations**

Various student organizations, duly recognized, contribute to university life in their academic, cultural and support the academic activities. Below a description of these:

**Artistic:**

Café Teatro  
Cuerpo de Artes Teatrales  
Loquendi Theatron  
Dance Team  
MUZIEK

**Liberal Arts:**

Student Association of the Honor Studies Program (HHH)  
Psychology Student Association (Psy-Chi)  
*History Circle (Circulo de Historia)*  
English Organization

**Natural Sciences:**

American Medical Student Association (AMSA)  
Math Circle  
Chemistry Circle  
Future Medical Technologists and Microbiologists, Alpha Chapter  
GAIA  
BBB Honorary Biology Society, Epsilon Zeta Chapter

**Professional programs:****Pedagogy**

Special Educators in Action (EEA)  
Circle of Future Professionals in Education (CIRPE)  
Future Physical Educators Association (AFEF)

**Business Administration**

Accounting Students Association (AEC)  
Chamber of Commerce of Puerto Rico, Cayey University Chapter (CCPR)  
Society for Human Resource Management (SHRM)  
National Society of Hispanic MBA  
American Society of Quality (ASQ)  
Student Association of Administrative Professionals (AEPA)

**Sports:**

Chess Club  
Organization of Student Athletes  
Cheerleading Squad UPRC *Toritos*  
UPR Cayey *Abanderadas (Flag bearers)*

**Social:**

University Christian Association (CONFRA)  
University Association of Parents and Mothers Fighting for their Objectives (A PULSE)  
E.S.P.A.D.A. Association in favor of University students with Disabilities  
PARTY VIII  
Cayey International Ambassadors (EIC)  
Youth Ministry  
Alpha Omicron Sigma Honorable Fraternity

Amnesty International - UPRC Chapter  
Collective Pro Women  
Omicron Sigma Rho Sorority  
Philanthropic University Leaders in Action (LUAF)

## **KEY OFFICIALS**

### **UNIVERSITY OF PUERTO RICO**

President

Dr. Walker Ramos Uroyoán

Governing Board

Dr. Jorge L. Sanchez Colón, President  
Dr. Angel Collado Schwarz, Vice President  
Atty. Ana Matanzo Vicens, Secretary  
Atty. Juan Acosta Reboyras  
Dr. Juan B. Aponte Vazquez  
Atty. Rafael Escalera Rodriguez  
Dra. Ana M. Garcia Blanco  
Mr. Dennis Hickey Rivera  
Hon. Rafael Román Meléndez  
Lcdo. Fernando Lloveras San Miguel  
Dr a. Yolanda Molina Serrano  
Mr. Christopher Torres Lugo

## **KEY OFFICIALS**

### **UNIVERSITY OF PUERTO RICO IN CAYEY**

Chancellor

Special Assistant to the Rector

Dean of Academic Affairs (Interim)

Dean of Students (Interim)

Dean of Administration (Interim)

Associate Dean of Academic Affairs

Department of Business Administration

Department of Humanities

Department of Social Sciences

Department of Hispanics Studies

Department of English

Department of Biology

Department of Mathematics-Physics

Department of Chemistry

Department of Pedagogy

Natural Sciences Program

Dr. Mario Medica Cabán

Prof. Gladys Ramos García

Dr. Rosario Pérez Glorivee

Dra. Sarah Malave Lebron

Lcdo. Samuel González González

Dr. Edwin J. Flores Torres

Prof. José A. Pérez Llavona

Prof. Harry Hernandez Tirado

Dr. Torres Martinez Lizandra

Dr. José Perez Pelay

Dr. David Lizardi Sierra

Dra. Rosa C. Torres Fernández

Dr. Edwin J. Flores Torres

Dr. Rest Wilfredo Otero

Dr. Ricardo Molina Castrillon

Dr. Rosario Pérez Glorivee

Technology Program and office Management  
Physical Education Program  
Studies program Honor  
Continuing Education and Professional Studies  
Extended University Unex  
General Education  
Women's Studies Project  
Victor M. Pons Gil Library  
Educational Services Program  
Museo Pio López Martínez  
Cayey Magazine  
Registrar  
Admissions  
Economic Assistance  
Cultural Activities  
Planning  
Budget  
Finances  
Human Resources  
Safety and Security  
Office of Institutional Research and Assessment  
Student Attorney  
Center Pre-School Development

Prof. Caraballo Awilda M. Bonilla  
Prof. Efrain Rivera Colon  
Dr. Edwin J. Flores Torres  
Mr. Jesús Martínez Martínez  
Mr. Jesús Martínez Martínez  
Dr. Xiomara Santiago Rodriguez  
Dra. Sarah Malave Lebron  
Prof. Sonia Davila Cosme  
Prof. José A. Cruz Rios  
Prof. Humberto Figueroa Torres  
Dra. Heida Sanchez Zambrana  
Ms. Daisy Ramos Quintana  
Mr. Wilfredo Lopez Merced  
Ms. Sonia Perez I. Pleasures  
Mr. Angel Rosa González  
Prof. Irmannette Torres Lugo  
Mr. Gonzalo Román Colón  
Mr. José Colón Sánchez  
Mr. Juan M. Ortiz Ortiz  
Mr. Carlos Vazquez Lopez  
Prof. Irmannette Torres Lugo  
Prof. Evelyn Collazo Núñez  
Ms. Berrios Carmen B. Báez

## **ADMISSIONS**

Aware of the public interest served by the admissions process to the University of Puerto Rico and in order to ensure greater fairness and objectivity for the applicant to enter the University, each year an Offerings Manual is published. Those applying should refer to this Manual, available in the Admissions Office of the University of Puerto Rico in Cayey, located in the building of the Dean of Academic Affairs. The current standards are summarized below.

### **APPLICATION FOR ADMISSION TO THE UNIVERSITY OF PUERTO RICO IN CAYEY PROCEDURES AND REQUIREMENTS**

High school students who aspire to begin studies at the University of Puerto Rico in Cayey, should be guided by the following criteria and procedures:

1. Fill the application form via the Internet ([www.upr.edu](http://www.upr.edu)) by clicking on the *Admissions* link and then on *Apply Now*. You can only complete one application.
2. Pay the application fee of \$ 20.00.
  - a. After the deadline the fee will be \$ 30.00.

- b. Since the application is through the Internet payment may be made by credit card or debit card. When having problems with payment, you should contact the nearest campus admission's office.
3. Take the entrance examination exam (PEAU) offered by the Office of the College Board. The exam consists of the following parts:
  - a. The Academic **Aptitude** tests: *Verbal and Mathematical Reasoning*,
  - b. The Academic **Achievement** tests: *English, Spanish and Mathematics*.

It is also allowed to take the English version of the admission exam known as the SAT I and SAT II. In the case of SAT II, you should take the following tests: English (Literature or Writing), Mathematics-Level IC4, and Spanish (Reading). The tests expire after five years.

4. Request the Office of the College Board or *Educational Testing Service*, as appropriate, to send the test results to the Admissions Office of the University of Puerto Rico in Cayey.
5. Send an official transcript from high school where she/he studied, no later than January 31<sup>st</sup>. This should be sent to the Office of Admissions at the University of Puerto Rico in Cayey. The ratings should appear in the alphabetical system: A, B, C, D, F and High School Index (IES) should be a 4.00 scale. Some schools send the file electronically through UPRPES.
6. Admitted applicants must submit to the Office of Admissions a Certificate of Graduation from high school with the official seal and authorized signature.

If you come from an abroad high school you must manage the delivery of the following documents:

- Official copy of the transcripts (Grade Records) in the native language and another one in Spanish or English as the official copy duly certified by the institution of origin and the American Embassy or the Ministry of Education of the country of origin. Under no circumstances the transcript of the applicant will be accepted by hand.
- An official report describing the grading system used in assessing academic achievement, content and level of approved courses, and the number of hours of weekly study in each subject.
- Evidence of degrees or diplomas received.
- Official certification stating that the institution is duly recognized by the government of that country.
- Evidence of achievement in Spanish and English.
- Evidence of possessing the necessary financial resources to study in Puerto Rico. Any person applying must submit an affidavit to that end.

## **SELECTION OF APPLICANTS FOR ADMISSION**

For the purpose of admission to the University of Puerto Rico, a formula that gives a weight of 50% to the rate of high school and a weight of 50% to the **Aptitude** parts of the admission test. Evidence of **use** of Spanish, English and math are required for the purpose of placing applicants admitted to the relevant courses in these subjects.

Any request for admission is evaluated based on the Minimum Entrance Index (Indice Mınimo de Ingreso- IMI- in Spanish) established by the Academic Senate annually for each academic program. Admission will be based on IMI and the quota (Maximum amount of students) established for each program.

Applicants will receive written notification of the decision. Admitted applicants will be instructed so that they can reserve their space and process documents electronically on the dates indicated. Applicants denied, but with options, will be informed about the procedure for reconsideration.

## **SPECIAL ADMISSIONS**

UPR Cayey recognizes the need to facilitate admission to a limited number of applicants (2.2% of those admitted) evidencing, competitively, **talents and exceptional skills** in sports, arts or research. For information on this mechanism of admission, you can refer to the UPR website ([www.upr.edu](http://www.upr.edu) ) *Admissions Section*.

## **TRANSFER**

### **Application for Admission to Students from Private Institutions**

Students from accredited private institutions may apply for *transfer* to the UPR at Cayey provided they meet the following requirements:

1. Have completed a minimum of 30 college credit hours with a GPA of 3.00 or more, with the exception of the Department of Mathematics and Physics that requires an overall average of 2.50 or more, effective at the time of the transfer.
2. Meet specific requirements established by each academic department.
3. The applicant may not be under suspension and should be free of disciplinary sanctions on the former institution.

Applicants with a bachelor's degree are required a minimum grade point average of 2.50.

### **Transfer Procedure**

An interview in the admissions office in Cayey UPR building located in the Office of Academic Affairs is required and if you meet the minimum requirements may file a transfer request. The deadlines for filing the request for transfer are set in the academic calendar approved by the Administrative Board ([www.cayey.upr.edu](http://www.cayey.upr.edu)). No applications will be accepted to begin studies in the summer. Each applicant must also submit the following documents:

1. An official copy of the transcripts of each university where he conducted or has conducted studies (including institutes). These records should be sent directly from the institution of origin to the UPR Cayey.
2. Proof of a \$ 33.00 payment (application on time) of the Bursar's Office of the UPR at Cayey. After the deadline the fee is \$49.50.
3. A copy of the syllabi of the approved courses in the institution or institutions where studies were or are being conducted.

The admission is subject to the institution requirements as presented in Certification Number 27 (2011-12) of the Academic Senate and institutional quota (number of students) and any other criteria established at the date of the application.

### **Credit Hour Validation**

UPR Cayey reserves the right to determine the number of courses to be validated. Only courses approved with a minimum score of **C** will be validated and that meet the requirements of the institution. The maximum number of credits to validate may not exceed 30 percent of the total number of credits from the requested program.

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

## **ENROLLMENT**

### **General Rules of Registration**

The registration process begins with the academic counseling provided by the department in which the student is classified in the dates established by the academic calendar. Both the required courses and electives should be chosen with the approval of the academic advisor and meet the academic progress standards.

When the registration process begins, the student must personally fill all appropriate forms, which will be given along with instructions. New students will present their certificates of admission to begin the process of registration.

You must enroll within the days and hours previously assigned by the University of Puerto Rico at Cayey and informed by the Registrar's Office. No student enrollment will be accepted after these dates. No enrollment changes will be allowed after the last date set in the academic calendar for the corresponding semester.

The student must enroll in the necessary courses to achieve academic progress toward the selected degree.

The registration will be incomplete and will not have official value until the student pays all rights and deposits to the official campus collector and it is approved and registered by the Registrar.

All courses in which the student is enrolled will permanently appear on your transcript.

The Registrar is the custodian of the documents concerning students and sets the registration procedure. No curriculum is valid without official approval.

## **STUDENT CATEGORIES**

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

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

Has met the requirements for admission, is a candidate for a degree, diploma or certificate and follows a regular program with a minimum of 12 credit hours per semester or is registered in the teaching practicum course (Cert. 54, 2002-03 Academic Senate).

### **Incomplete Program Student**

Has met the entry requirements, is a candidate for a degree, diploma or certificate and follows a program of less than 12 credits per semester.

### **Listener Student**

Can attend classes with permission of the department's chair and the Registrar, but does not receive official rating or credit for work done in the courses. Must comply with the payment of the appropriate fees (Cert. 70, 2004-05, Board of Trustees).

### **Special or Temporary Student**

Comes from another accredited institution and requests to take courses with the intention to transfer credits to her/his home institution. Admission will be determined by the space available in the required courses.

### **University staff**

The faculty and administrative staff of the University of Puerto Rico may enroll in the system units. Professors can enroll in a maximum of six credit hours per semester. They may be authorized up to eight (8) credits in cases where they are enrolled in two subjects whose value exceeds the maximum of six (6) credits. Professors and non-teaching staff with a full work load may enroll in courses and credits that have been authorized by their respective supervisors or directors. The time devoted to study during regular working hours will be charged to the accumulated vacation or overtime. The classified UPR Cayey staff can enroll in a maximum of 12 credit hours per semester, three of which may be during working hours. Must request authorization from the Chancellor and replace time under

vacation or accumulated hours. Shall be exempt from payment for courses and will only pay tuition fees.

## **STUDY PROGRAMS**

### **Daytime or Regular Session**

The daytime academic program is regularly consists of a group of subjects with a maximum value of 16 to 18 credit hours per semester, but may be increased or decreased in particular cases, such as honor students, upon approval of the department's chair and the Registrar, in no case it will exceed 21 credit hours per semester. The total credit hours per semester is determined by the student's average (GPA), as follows:

Less than 2.00	12 credit hours
2.00 to 2.49	16 credit hours
2.50 to 2.99	18 credit hours
3.00 onwards	20 credit hours

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

### **Sabbath Session**

Saturday program students are mostly teachers, university employees and other public or private company employees that through this program can further their studies.

### **Summer Session**

Any person enrolled in four (4) credit hours is considered a regular summer student. The regular academic load during the summer, cannot exceed seven (7) credit hours. Honor Students and graduating candidates can take up to (10) credit hours during the summer session. The same rule applies to students authorized to take summer courses at other universities their schedules must be approved by the Department Chair, the Academic Dean and the Registrar. Courses approved with a **D** rating will not be accepted when taken outside the University of Puerto Rico.

### **Student Classification Code**

Student classification is as follows: The year of classification is established according to the number of credit hours approved:

1. First year or 1-23 credit hours (PRI)

2. Second year or 24-47 credit hours (SEG)
3. Third year or 48-72 credit hours (TER)
4. Fourth year or 73 onwards (CUA)
5. Graduates (QTO)

## **CODING OF FACULTIES, DEGREES AND CONCENTRATION <sup>1</sup>**

The faculty and department are identified with the following letters:

**1** = faculty **2** = Grade **3** = Concentration

<b>1</b>	<b>2</b>	<b>3</b>	
CN	BCN	CN	Natural Sciences
CN	BCN	BIOL	Biology
CN	BCN	MATE	Mathematics
CN	BCN	QUIM	Chemistry
HU	BA	ESHI	Spanish
HU	BA	INGL	English
CS	BA	CS	Social Sciences
CS	BA	PSIC	Psychology
CS	BA	SOCI	Sociology
CS	BA	PSAL	Psychology and Community Mental Health
HU	BA	HU	Humanities
HU	BA	HIST	History
PE	BEE	ECIE	Elementary Education Natural Sciences
PE	BEE	EESP	Elementary Education Spanish
PE	BEE	EING	Elementary Education English
PE	BEE	MAT	Elementary Education Mathematics
PE	BEE	EDES	Elementary Education Special Education
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	AE	Business Administration
AE	BAE	GERE	Management
AE	BAE	CONT	Accounting
AE	BTD	AOFI	Office Administration
AE	BTD	SOFI	Office Systems *

**For authorizations the following encoding is used**

**P.M PRM PERM NIN**

<sup>1</sup> See certifications of the Board of Trustees 103 and 103 (1999-2000); Certifications of the Council for Higher Education of Puerto Rico 2000-2005; Baccalaureate Colleges-Diverse Field: Carnegie Classification 2006

## Student Identification Number

Each student is assigned an identification number when entering the University of Puerto Rico. It consists of nine digits: a three-digit prefix indicating the institutional unit where she/he began his studies, followed by two digits indicating the year of admission and four digits allocated according to the alphabetical order of surnames.

## TUITION FEES

Tuition fees at the University of Puerto Rico are established to ensure academic excellence by strengthening docents, research and service. These funds will also serve to strengthen financial aid programs and the permanent improvements program of the University.

According to Certification 60 (2006-07) of 27 June 2007 the Board of Trustees of the University of Puerto Rico approved a staggered increase in tuition fees. However, according to Certification 4 (2013-14) July 30 2013, a period of moratorium was decreed of one year to stop the **policy on tuition fees in the UPR** , in order to consider the recommendations arising from the evaluation process and adopt the necessary adjustments. The moratorium is effective on August 2013 and ends in August 2014.

## Undergraduate Tuition Costs

Nonresident students in Puerto Rico coming from the United States will pay the equivalent of what the Puerto Rico residents pay in the state universities where they came from.

Students not residing in Puerto Rico, from any other country will pay the amount of \$ 4,369.00 per year for the undergraduate program plus applicable fees.

The registration fee for non-resident students is per academic year, up to a maximum of 21 credits per semester.

## RELATED CONCEPTS FEES

<b>Admission request</b>	<b>\$20.00</b>	( Late Request \$ 30.0 )
<b>Cost per credit</b>	<b>\$55.00</b>	
<b>Maintenance Fee</b>	<b>\$47.00</b>	(Per semester, non - refundable nor subject to extension)
<b>Health insurance</b>	<b>(variable)</b>	
<b>Technology fee</b>	<b>\$25.00</b>	<b>(Sem-Cuat-Summer)</b>
<b>Lab Fee</b>	<b>\$ 33.00</b>	<b>c / u</b>
<b>Graduation Fee</b>	<b>\$27.00</b>	
<b>Transfer request</b>	<b>\$20.00</b>	( Late Request \$ 30.00 )
<b>Readmission application</b>	<b>\$33.00</b>	( Late Request \$ 49.50 )
<b>Transfer request</b>	<b>\$33.00</b>	( Late Request \$ 49.50 )
<b>Transcript</b>	<b>\$1.35</b>	<b>c / u</b>
<b>Duplicate documents</b>	<b>\$ 1.35</b>	
<b>late registration</b>	<b>\$ 13.00</b>	

<b>Listener courses</b>	<b>\$ 33.00</b>	<b>(BA)</b>
<b>Special permission</b>	<b>\$20.00</b>	

The conditions and the cost of the premium vary according to the contract the University has with the health insurance company for the provision of medical services to students of the university's system. With this policy the listed in the contact medical services will be provided to all daytime, nightly or Sabbath students enrolled in at least two courses per semester or at least one course in the summer. Excluded from this provision students who enjoy other private health plans. To qualify for this exclusion, the student must present proof of health insurance.

### **Exemption or Honor Enrollment <sup>2</sup>**

Receive honor enrollment and shall be exempt from the cost of undergraduate credit hours regular sophomores and older students who have an academic GPA of 3.50 or more and whose cumulative achievement in the program they are enrolled in places them in the top five percent (**5%**) of their admission class (Cohort). They must have approved twelve (12) credit hours or more per semester.

To enjoy the honors privilege, students must be enrolled in a regular program of 12 credit hours or more per semester. The privilege has no effect if the student does not complete the semester with 12 credits or more.

To remain in the honors exemption program a student must maintain a minimum grade point average (GPA) of 3.50 at the end of each semester in the aspired study area.

### **Payment Rules**

Dates: All regular and special rights and charges are payable on the day of the corresponding registration.

Payments: Payments are made by current U.S. currency, certified check / money order for the exact amount in favor of the University of Puerto Rico and ATH. In addition, the following credit cards are accepted: VISA, MASTER CARD and AMERICAN EXPRESS. No personal checks accepted, unless they are certified by the bank.

Extension: The Dean of Students may grant extensions of time for payment of tuition fees for students who cannot make full payment the fixed day for tuition. This privilege is allowed under the following conditions:

- a) The extension must be requested during the period prescribed by the Dean of Students.
- b) The student may not have debts with the University.
- c) Pay no less than 20% of total credit hours plus the total cost of the special fees. During the regular semester the amount due will be paid in four

installments, additional maturing as set out in the form to request the extension.

- d) The student will make all the adjustments or changes in the program before applying for the extension.
- e) Students who receive veterans' benefits and request an extension must request such a benefit at the Veteran's Office on Campus who in turn will deliver the evidence to the Bursar's Office.

The Board of Trustees reviews from time to time the policy for tuition waivers. Therefore, when a change occurs it will be published in this catalog. UPR-Cayey will apply the policy that the Board of Trustees approves and determines to be valid on the date to be announced.

### **Refunds**

Students who withdraw in the period of one week from the start of classes can claim back 100% of the basic registration, excluding regular and special fees. To claim back 50% the student will have two weeks after the start of classes, excluding regular and special fees. *Registration Modification Form (add and withdraw slip)* must be submitted to the Registry Office and the Bursar's Office on or before the last day of the deadline to be eligible for the 50%. Failure to comply with this procedure cancels the right to a refund. For listener students, students discharged for disciplinary reasons and for students with a debt: no refunds are authorized.

Before leaving campus after the completion of an academic session or after withdrawing from a course, the student is required to return in good condition the borrowed property in any of the departments and books and materials that may have taken on loan from the Library. The value of the damaged property or loss must be paid in full at maturity of the loan.

Students who have debts with the University, either for property or money, are not issued any official documents related to their academic work, or be granted extension in paying tuition or will not be eligible to enjoy other university benefits paid or unpaid until the debt has been paid (Cert. 90, 1974-1975 Council of Higher Education).

# GENERAL ACADEMIC STANDARDS

## Attendance

**Class attendance is mandatory.** Professors have a duty to notify the student absences and report to the Registrar in the **three different (3)** dates determined by the academic calendar during the semester. The Registrar will be notified of students who have never attended or did not attend the class. Frequent absences affect the final grade and may result in the total loss of credit hours. The United States Department of Education, in response to regulations on Financial Aid (Title IV, 34 CFR 668.22 and 682 605) requires more accurate records of informal and low attendance for the effective administration of Pell, SEOG grants, Work study and student loans, students who **stop attending enrolled courses are disqualified from receiving payments from federal grants.**

If the professor **does not notify that she/he will be late to class** students may leave after a **15 minutes wait** from the time the class begins, regardless of the length of it.

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

## Course Syllabus

**Every professor will give students a course syllabus in the first week of school.** **This** should include the professor's name, course title, office hours, office, a brief description of the course and its objectives, requirements, chronological thematic sketch, technological methods to be used and evaluation system used, the minimum required bibliography and required readings if applicable. (Cert. 56, 1983-84 Academic Board)

The courses are described further in the catalog. Coding, title, number of credit hours, the requirements and the number of hours the class meets weekly are indicated. It also entails hours of independent study.

## Exams

At least two tests are offered per semester on the material studied, one of these before the deadline for partial withdrawals. The 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 in writing, unless the nature of the subject prevents it or the dean authorizes another type of examination. The professor will evaluate the work done by the student by the method it deems most appropriate, provided that it is indicative evidence of objectivity in determining the rating. The target date for a final exam cannot be changed unless authorized by the Registrar and Academic Dean. Student attendance to all examinations at the designated time and published by Registration are required. The student who is absent from a duly announced final examination receives a grade of **0** or **F** in it.

## Credit Hours and instruction unit

One credit equals one hour of lecture-discussion or two hours or more a week of lab per semester.

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

Classes are offered Monday through Saturday. Each class meets at least once from Monday to Saturday in the programmed hours and days.

## Grading

The grading system of the University of Puerto Rico in Cayey is the following:

- A** -outstanding
- B** - Good
- C** - Satisfactory
- D** -Approved but poor
- F** -Failure or suspended
- P** -Approved (not included in the GPA)
- NP** Not approved
- I** - Incomplete
- W** -authorized withdrawal

## Provisional Grading

The student may receive Incompletes with provisional grading when the professor determines that for justified reasons the student has failed to meet all course requirements. The student will receive a grade of **O** or **F** in the portion of work completed to calculate the provisional grade. If the professor only reports **I** the provisional grade shall be **IF**. Before the end of the next semester, the student must approach the professor to complete the deficiency. Once completed, the professor can change the provisional grade for the final grade and inform the Registrar. If the professor does not report any change during this period, the grade will become permanent and the letter **I** will be removed permanently from the transcript.

## Grading Errors

Every professor who commits an error when awarding a student a grade must submit to the Office of the Registrar, with the approval of his department chair and through the Academic Dean: the completed **grade change form**, copies of the student's exams and roll book. The student will have to make the claim to the professor immediately. **After one semester has passed since the grade was awarded** (the last day for grades

turn in- May, December or summer) **the student cannot make any claims** about errors in the award of a grade.

### Grades Notification

The Office of the Registrar mails to each enrolled student the report score obtained at the end of each semester or summer session. The student who does not receive the grades report should contact the Registrar. Students who believe that a mistake has been made in this report should consult with the professor and notify the registrar.

The Registrar is responsible for the enrollment, academic records of students, the issuance of transcripts and studies and graduation certifications. The student who requires information about her/his academic record or needs copy of transcripts or for these to be sent somewhere must apply to the Registrar's Office in accordance with established procedures and under the policy - *The Family Educational Rights & Privacy Act II (Buckley Amendment)*.

Academic index is the measurement of student achievement. It is calculated by dividing the total number of honor points by the total number of credit hours accumulated in courses in which the student has received a final grade, including F.

The points value of each grade is as follows:

**A = 4, B = 2, C=3 D = 1, F =**

The calculation is made according to this example:

	credit		
courses	hours	Qualification	Honor Points
INGL	3	C (2)	6
SPA	3	B (3)	9
MATE	3	C (2)	6
CISO	3	A (4)	12
	<b>12 credit hours</b>		<b>33 points</b>

The provisional grading count in the calculation of the grade point average (GPA) for all purposes except graduation. When calculating the graduation index only required and elective courses in the student curriculum are considered. The subjects marked with "**W**" **do not count in the grade point average (GPA)**. Grades earned in the summer session are calculated in the index of the next academic year. If a student repeats a course in which an **F** was obtained, the lowest rating shall not be counted in the index but will appear on the transcript (Cert. 87, 1976-77 CES).

Courses with a grade of **D, F** or **not approved may be repeated without restriction**. Courses with a grade of **C** may be repeated with the authorization of the Dean of Academic

Affairs (Cert. 17, 1998-99 JS). If a student repeats a course, the highest score will count for the academic index.

### **Satisfactory Academic Progress**

It is considered that the student maintains a satisfactory academic progress when a retention rate index of 2.00 (C) or more is maintained, there is progress towards the degree in which she/he is classified within the set time limit, and approves at least fifty percent of the enrolled credit hours. In no case the number of credits approved by a regular student may be less than nine per semester. (To continue receiving financial aid the rule is stricter). The maximum time to complete the degree which is provided by the general rule of the University of Puerto Rico are: program four year program (4) years and six (6) years (Cert. 42, 1980-81 CES). The maximum time to complete a study program will apply for veterans or their beneficiaries.

### **Satisfactory Academic Progress Standards for Financial Aid**

\* Certification # 44, 2005-06, Board of Trustees

Academic progress satisfactory institutional rules for granting financial aid at the University of Puerto Rico in Cayey.

\* Copies available from the Office of the Registrar

### **Time Eligibility**

Students classified in a baccalaureate program must complete their studies in a maximum of six years provided they are enrolled full-time at the institution.

The student classified in an associate degree must complete it within a maximum of three years.

The student will be inactivated once completed the requirements of their curriculum, in line with Certification 85, 2005-06, the Board of Trustees.

### **Retention Index**

Incomplete courses with provisional rating of D (ID) or more are considered approved.

Incomplete courses with provisional rating of F (IF) are not counted in the total credit hours approved.

The student must remove the incomplete before the end of the next academic semester. After removal, the scholarship student must take a certificate from the

Registrar to the Financial Aid Office to indicate the total credits in the previous semester.

### **Reimbursement**

**50%** of tuition will be reimbursed if a student is given a total withdrawal within the first **ten (10) days** of the semester.

A total withdrawal with or without refund, may disqualify the student for financial aid the following semester, if she/he does not approve the minimum amount of degree credit hours enrolled.

### **Course Repetition**

The repetition of courses approved with a **C** are authorized (Cert. 17, 1998-99 Board of Trustees) with the approval of the Dean of Academic Affairs.

The University of Puerto Rico in Cayey adheres to the policy for the inclusion of repeated courses in the cost of study of –Pell Grant scholarship of the central administration of the University of Puerto Rico.

### **Tuition Probation**

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

### **Remedial Courses**

Remedial courses do not carry academic credit and are not federally funded.

### **Summer Courses**

Summer courses are included along with the following academic year.

### **Appeal**

At the end of the academic year, the Financial Aid Office will notify the cancellation of economic aid to all students who demonstrated unsatisfactory academic progress. The **form to request a financial aid review** will be provided.

Students who understand that the cancellation is due to an administrative error or extraordinary and justified circumstances may request a review of their case to the Financial Aid Appeals Committee. Must show evidence to support the circumstances that led her/him to seek a review and copy of transcripts.

The committee shall consist of the professional counselor appointed by CEDE.

### **Appeals Procedure**

The student who receives a communication of denial from the committee and understands that her/his case should be reconsidered, should request an interview with the Dean of Students.

The Dean shall notify the final decision to the Director of the Office of Financial Aid and this will be final and of an unappealable nature.

### **Reinstatement of Financial Aid**

Once the committee examines a case, notifies the student in writing. If the decision is favorable, financial aid is restored, according to available funds.

### **Transfer and Readmission Students**

The transfer student will be considered as a new student at the time of admission to the institution and shall be classified in accordance with approved credit hours.

### **Honor Roll**

Students who have earned a GPA of at least **3.50** and complete at least (12) credits per semester are part of the Honor Roll. The awards ceremony takes place in May of each academic year. These students may aspire to join the Honor Studies Program. **Honor students are granted the privilege of enrolling the first day of registration, regardless of the year in which they are classified.**

### **Suspension Due to Academic Failure**

The student who at the end of the academic year obtains a lower average than the minimum required grade point average of 2.00 may be suspended due to academic failure (Cert. 90, 1997-98 Academic Senate).

Any student who obtains a grade point average below 2.00 during the first year of study, will be placed on probation for the second year. After the second year, if the GPA is below 2.00 will be suspended for academic failure. These students are not allowed to enroll in the summer session. A suspension letter from the Registrar will be sent to the students who do not meet the minimum GPA requirement for further studies. The student suspended for the first time may apply for readmission for the following academic year to the year of suspension. If readmitted, it will be on probation with a maximum program of twelve (12) credits per semester to be approved with a fixed grade point average. A second suspension imposes a separation of the University of Puerto Rico and its campuses for five years.

## **Partial Withdrawal**

Students can withdraw from one or more subjects within the established period for this purpose in the academic calendar, after notifying the professor and after getting the required authorizations and with the appropriate form. Withdrawal is partial when the student continues to take the other courses enrolled. The deadline for filing partial withdrawals in the Registrar's Office is 9 days before the last day of classes (Cert. 48, 2000-01 Academic Senate). The student will not receive a grade for the work done in the withdrawn course. The Registrar scores a **W** (Authorized withdrawal) as a final grade in the course in the student's transcript.

## **Total Withdrawal**

A total withdrawn is given to the student who stops taking all enrolled subjects, must obtain authorization requesting the appropriate form and file it on the Registrar's Office on or before the deadline published in the academic calendar at the end of the semester. If the withdrawal has been duly authorized, the student will not receive grades for work done and will be marked **-W** in all subjects in which she/he was enrolled this semester.

When filing the withdrawal, the student is inactive the next semester (Cert. 62, 1978-79 University Board).

## **Courses at Other Institutions**

Those students interested in taking courses at other institutions will fill the appropriate form which after being approved by the department's chair, academic dean and registrar, will be sent with a copy of their academic record to the institution where interested in taking courses. They can authorize a full program during the semester and six (6) credits during the summer session, up to ten (10) if he has an average of 3.50 or more, or is a graduation candidate that summer. It is the responsibility of the student to request that institution to send a copy of the transcripts with the obtained grades.

Students who voluntarily stop their studies and conduct studies in a public or private institution outside of the University of Puerto Rico; and apply for readmission must submit official transcripts of the other institution. The department's chair that reinstates the student will evaluate them and determine which courses will validate. The department's chair cannot validate any course in the following cases:

- a) if the student had an overall average of less than 2.00 when voluntarily leaving the university .
- b) if the student was suspended for academic, disciplinary or administrative reasons.
- c) if the student at the other institution obtains an overall average of less than 2.00.

## **Privacy of Student Records (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). This federal

law protects the privacy of students' educational records and establishes their right to inspect and review those records. It also provides guidelines to correct the accuracy of information through informal and formal hearings. Students have the right to file complaints if they so wish, to - The Family Educational Rights and Privacy Act Office, Department of Health, Education and Welfare, 330 Independence Ave., SW Washington, DC 20201 II , and in connection with alleged breaches of the law by the University.

Copies of the Institutional Policy established by the University in compliance with the law can be obtained from Registry, the Library, the Dean of Students and the Office of Financial Aid. These offices maintain a list of educational records maintained by the University of the Students, as well as the location of these files.

### **Directory Information**

The University of Puerto Rico offers students the opportunity to choose one of two alternatives, namely:

- a. Appearing in the -Directory under one of three categories

Name, student number, classification, registered credit hours, address, years of study, date and place of Birth.

Name, student number, classification and years of study, address, degree conferred, major, date and place of birth, academic status.

Name, student number, classification, years of study, address, degree conferred, major, graduation index, major or general, honors, academic status, social security number.

- b. Not to be included in the -Directory

Students who opt for alternative A, authorize the University of Puerto Rico to disclose the information in the selected category for those purposes that the institution determines appropriate, in addition to those provided by law.

The card or form of the -Directory will be delivered to the student during the period of enrollment in the second semester of this academic year. It will be returned to the designated office no later than 30 calendar days after the beginning of this academic session. If the student does not return the card or form -Directory, the University of Puerto Rico understands that he opted for alternative A, Category III. The student may modify the -Directory information. To do so, she/he must submit to Registration, no later than 30 days after the start of the academic year, the corresponding request.

## **GRADUATION**

### **Graduation Requirements**

To qualify as a candidate for a degree, diploma or certificate at the University of Puerto Rico a student must meet the following requirements:

1. An overall minimum grade point average of 2.00 and a minimum grade point average on the chosen major of the program.
2. Approve at the University of Puerto Rico the last 28 required credits for the degree, diploma or certificate, provided that such credits are required in the final phase of such studies. (Cert. 83, 2002-03 Academic Senate)
3. Approving of the appropriate studies for the degree, diploma or certificate within the maximum time limits stipulated by the general rule in two-year programs within a maximum period of three years and in four-year programs within a maximum period of six years. If the student exceeds these limits, the University may require repetition of those courses that in the Academic Dean's opinion, deems necessary. In this case, the student must obtain written authorization in duplicate from the Department's Chair and the Academic Dean and the list of courses to be repeated.
4. Satisfy any pecuniary obligation with the University.
5. Formally request the degree, diploma or certificate, filing the corresponding application to the Registrar on the dates specified in the academic calendar semester they have to complete their academic requirements.
6. Have been recommended for the degree, diploma or certificate that aspires for by the faculty and the appropriate department.
7. Attend graduation exercises, unless she/he has been excused by the Department Chair and the Dean of Students.

The University of Puerto Rico reserves the right to make changes in the different programs and curriculum requirements applicable to their admission. Students who do not meet the requirements of their degree programs within the deadlines and students who resume studies after a period of absence shall be governed by the provisions applicable to the graduating class.

Students must apply for graduation after finishing their studies, will be inactivated once the requirements of their curriculum are completed, in line with Certification 85, 2005-06 Board of Trustees.

### **Honors**

Students with a graduation index of **3.50** to **3.69** graduate Cum Laude , those who reached an index of **3.70** to **3.94** will receive the degree Magna Cum Laude and of **3.95** to **4.00** Summa Cum Laude (Cert. 29 Academic Senate, effective in the academic year 2005-06).

**Cum Laude**

3 repetitions

**Magna Cum Laude**      2 repetitions

**Summa Cum Laude**      1 repeat

(Including withdrawn courses) Only repeated courses as a result of a first total withdrawal are excluded.

### **Awards**

The University of Puerto Rico in Cayey awards prizes at graduation to students who graduate with honors who hold the highest average in their majors and are recommended for this distinction by their departments. The student with the highest graduating average of the class and those with the highest academic averages in their academic areas are equally recognized.

### **Graduation Acts**

The University of Puerto Rico in Cayey held graduation exercises once a year, at the end of the second semester. All degrees, diplomas or certificates are conferred only on that occasion. Students who meet the requirements of degree, diploma or certificate upon completion of the first semester or during the summer session may request a certificate of completion, but the degree will be conferred in subsequent graduation exercises.

## **STUDENT SERVICES**



## **Financial Aid**

The University of Puerto Rico in Cayey offers a comprehensive program of financial aid for the purpose of providing equal opportunity for higher education to students with limited financial resources.

This program has funds that come from funding by the Government of Puerto Rico, from the federal government and contributions from individual entities. These funds are managed according to the regulations established by the entities in which they originate.

The Financial Aid Programmatic Office offers three types of aid, these are: scholarship, work - study and loans. The scholarships are offered to students as monetary aid or exemption from payments without these having the obligation to return the funds received. In the Work -Study program, the student works a number of hours per week at the University and receives payments for the services provided.

In the loan program, the student is required to repay all monies received to the corresponding bank with very favorable payment conditions and payment cancellation possibilities in certain circumstances.

### ***Federal, State and Institutional Financial Aid programs***

- Federal Pell Grant
- Federal Supplemental Grant (FSEOG)
- LEAP
- Work- Study Federal Program (FCWSP)
- Federal Perkins Loan Program
- Loan Program - "Stafford" Subsidized
- Loan Program - "Stafford" Unsubsidized
- "Plus" - Loan Program

### **Financial Aid Request Eligibility and Requirements**

- Be a bonafide student of the University of Puerto Rico
- Be enrolled in a program conducing to a degree
- Demonstrate financial need
- Be a citizen of the United States or an eligible noncitizen
- Demonstrate Satisfactory Academic Progress

### **How to Apply for the Institutional Federal Aid**

- Applying for the Federal Pell Grant (FAFSA)
- Through the Institutional Financial Aid Verification Application which is utilized for applying for the complementary programs.

### **Determination of Dependence**

- Has more than 23 years of age.
- Is pursuing a master's or doctorate program?
- Is currently married?
- Do you have a child for whom you provide more than half of her/his support?
- Do you have dependents (other than your children or spouse) who live with you and who receive more than half of their support from you?

- Have your father and mother passed away?
- Are you a veteran of the United States Armed Forces?

If the student answers - **Yes** to any question, a student is considered independent or otherwise if any response is - **No**, student is considered dependent of her/his biological parents.

### **Student's Responsibility to Request and Receive Financial Aid**

- Evaluate the study programs offered by the University.
- Review and consider all information concerning Financial Aid programs offered by the UPR at Cayey
- Complete the financial aid application and meet delivery deadlines
- Read and understand all documents asked to be signed
- Provide all information required by the Financial Aid Office to demonstrate the socio-economic status of the family
- Notify the Financial Aid Office of any changes that may affect the information previously submitted when first applied for financial aid
- Demonstrate satisfactory academic progress as defined by the University
- Pay all student loans received at the undergraduate level
- Know the refund policy for financial aid programs
- Know the consequences of a total or partial withdrawal
- Know the procedure for verification of attendance
- Be aware of changes in federal, state and institutional regulations such as:
- 150% of maximum amount of time of the credit hours that are required by the academic degree
  - Compulsory class attendance
  - Knowing the standards of Satisfactory Academic Progress

### **Deadlines**

The deadlines are set by the Financial Aid Office where to better serve students the deadlines procedure is used. The Financial Aid Office is located on the second floor of the Student Center.

### **Interdisciplinary Center for Student Development (CEDE)**

The CEDE offers the following services to the student population:

**PERSONAL COUNSELING** - Analyze alternatives and interventions to resolve situations involving individual student development.

**EDUCATIONAL COUNSELING** - Provide alternatives to overcome the various academic challenges and facilitate the achievement of career goals of the student.

**VOCATIONAL COUNSELING** - Offer alternatives to clarify and plan effectively vocational goals.

**CLINICAL PSYCHOLOGY** - Provide psychotherapy for the purpose of identifying and working intra- and interpersonal conflicts that affect the quality of student life.

**Educational and Occupational Information Room** - Contains information on local and foreign universities at the undergraduate and graduate levels. Applications and exams for admission to graduate and professional schools are provided.

## **ACADEMIC DEPARTMENTS AND COMMUNITY SERVICES**

**EXTERNAL** - orientation activities, workshops, training, and consulting services are offered to students and professionals in the internal and external community. It coordinates with academic departments to develop and offer workshops, in line with the course content and / or the needs of students.

**REFERRAL** - According to the situations described by the student refers to the warranted service.

**QUALITY OF LIFE PROGRAM** - healthy lifestyles are promoted in prevention and counseling on use and abuse of alcohol and other drugs, sexual assault and other risky behaviors.

**STUDENTS WITH DISABILITIES** - reasonable accommodation is coordinated, as well as other services within the University to maximize their academic performance.

**PROGRAM FOR IN CAMPUS SUICIDE PREVENTION** - has as its goals to develop an educational campaign for suicide prevention and strengthen counseling and psychology in coordination with the internal and external community.

**PROGRAM FOR THE ON CAMPUS PREVENTION OF DOMESTIC VIOLENCE, SEXUAL ASSAULT AND STALKING** - It aims to expand victim services on campus, conduct training and promote a coordinated community response against aggression towards people.

## **CEDE STAFF**

1. Dr. Ivonne I. Bayron Huertas - Professional Counselor II, Director of CEDE.  
Email: [ivonne.bayron@upr.edu](mailto:ivonne.bayron@upr.edu)
2. Prof. Carilú Pérez Caraballo - Professional Counselor II. E - mail:  
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3. Dr. Maria C. Fernández Rodríguez. - Clinical Psychologist, Director Proposal for Suicide Prevention. E - mail: [maria.fernandez9@upr.ed.org](mailto:maria.fernandez9@upr.ed.org)
4. Dr. Lino A. Hernandez Pereira - Clinical Psychologist III, Co-Director Proposal for Suicide Prevention . [E - mail: lino.hernandez@upr.ed.org](mailto:lino.hernandez@upr.ed.org)

5. Dra. Gertrudis Maldonado Rios - Psicologa II, Outreach Coordinator of Services for Students with Disabilities. Email: [gertrudis.maldonado@upr.edu](mailto:gertrudis.maldonado@upr.edu)
6. Dr. Ruth Noemi Cruz Mercado. - Rehabilitation Counselor I.

## **SOCIAL AND CULTURAL ACTIVITIES**

The Office of Social and Cultural Activities fundamental purpose is the offering of a varied program of activities that make possible and contribute to the growth and cultural development of the student and the community serviced by the University.

This office is responsible for designing a program of activities covering the various branches that make up the Fine Arts: dance, theater, classical, popular and folk music, film and visual arts among others, so as to enrich the integral development of today's youth.

## **SPORT ACTIVITIES**

The Gymnasium of the University of Puerto Rico in Cayey has an area of courts, of approximately 10,000 square feet of floor and bleachers that accommodate 922 people, and contain a basketball court, a volleyball court and a small side court used for practices. It can be transformed into various combinations of basketball courts that include an electrical system with electronic board baskets and annotations. Its first floor is equipped for gymnastics, has lounges, lockers, bathrooms with showers and classrooms. Outside there is a place for controlled activities and parking for 187 vehicles. The gym houses the Physical Education and Athletic Programs offices.

In the University's swimming pool courses are offered and is reserved for the enjoyment of students, under the supervision of a lifeguard at all times.

There are outdoor volleyball, basketball and tennis courts, facing the pool and next to the Green Shadows Park. The athletics track, next to the gym, is used by the local community.

Athletes of the University of Puerto Rico in Cayey participate in the Intercollegiate Athletic League (LAI) of Puerto Rico. In addition to intramural sporting events.

## **TRIPS AND EXCHANGE**

The internationalization of studies is a requirement of this globalized world. Summers and semesters of study abroad expose students to other educational systems, cultures and languages, and life experiences that provide a more complete picture of today's world.

The Exchange Office at the University of Puerto Rico in Cayey has as its main mission to actively contribute to the internationalization of education, fostering and promoting a culture clash in order to give the student a comprehensive and global view of the world and the elements to judge their own reality through Academic Collaboration Agreements.

The University of Puerto Rico in Cayey maintains academic cooperation agreements with educational institutions abroad that allow students to take one year, semester or summer

of studies abroad and transfer the credits to the University. The student can study at one of the following universities in Madrid: Complutense University, Carlos III University, Autonomous University, Polytechnic University, University of Salamanca and University of Malaga in Spain, among others.

Since 1983, The International Studies Program in Toledo offers University students the opportunity to take courses in various disciplines at the Center for International Studies at the Ortega y Gasset Foundation in Toledo, Spain. Students also have the opportunity to study through an exchange program at the Institute of Latin American Studies at the University of Montaigne-Bordeaux 3, France, at the Instituto Tecnológico de Estudios Superiores de Occidente in Guadalajara, Mexico or any of the participating universities in the Exchange Program in UPRC. The University of Puerto Rico in Cayey is also part of the Interuniversity Consortium -National Student Exchange Program". Qualifying students can study a semester or a year by special permit in universities throughout the United States paying a similar enrollment to the University of Puerto Rico while maintaining their academic progress towards the Bachelor at the Campus. There is also an exchange program in which students from other international institutions which have filed immigration documents necessary for obtaining a student visa (F1) have the opportunity to study at our institution. The UPRC liaises Bilingual Initiative Program for Hispanic students. This initiative provides an immersive experience in the Puerto Rican culture which of course includes a meeting with the Spanish language and Hispanic Puerto Rican residents in the United States.

### **OFFICE OF STUDENT ORGANIZATIONS**

Student organizations are composed of different groups of the university community who come together with a common purpose, through these, student leaders are formed. They have the opportunity to develop communicational skills, service, and leadership, the ability to organize activities, design and implementation of strategies to help improve the quality of teaching.

The Office of Student Organizations provides the tools that these students need so that college life is an integral experience that promotes not only academic and intellectual capacities, but also to develop in the student the social and cultural aspects. The student organizations are governed by the rules set out in the Student Regulations, Part III, Article 4.

#### ***Our mission***

Encourage in the student appreciation for participation at all levels of their lives. And to value the organization, democratic participation, and group work.

#### ***Our vision***

Create a development plan of the Student Organizations in order to increase, diversify and support them in a more structured way.

### **PRIVATE LODGING OFFICE**

The Office of Private lodging gives students orientation about existing facilities and private accommodation registered in our office. We make sure that the accommodation facilities comply with the requirements established by law (DACO) and orient students and owners

of accommodations on standards when operating and / or using the facilities of a private accommodation.

### **FORMER-ALUMNI**

The Former Alumni association of the UPR Cayey has the mission of trying to group graduates so that they maintain their ties with the Alma Mater, continue to participate in its activities and contribute in various ways. We invite graduates to contact the Alumni Office, located at rectory.

### **BOOKSTORE**

The library of the University provides, through a dealer, textbooks and materials that are required by students in their courses. It is located on the first floor of the Student Center.

### **CAFETERIA**

Cafeteria, located on the first floor of the Student Center, works by concession to a private company and provides food services at accessible prices to the students. It is supervised by the Office of Complementary Services of the Dean of Administration.

### **MEDICAL SERVICES**

The Medical Services Office in UPR Cayey is located on the first floor of the Student Center. It is an office that provides medical and nursing services to the entire student population. It has an administrative assistant, a graduate nurse with a baccalaureate, and a general practitioner (MD).

Its main objective is to provide high quality comprehensive primary care services that meet the physical, emotional and mental needs of students, for a better academic performance. The office provides medical services both outpatient and emergencies. We also offer counseling services for prevention and health maintenance.

Their operation hours are Monday through Friday from 7:00 AM to 4:30 PM. The service schedule for physician consultations are Monday through Friday from 8:00 a.m. to 11:30 a.m. and 1:00 PM to 4:00 PM.

Any student who is enrolled in the UPR at Cayey and has completed and delivered admission documents required by the Office of Medical Services, has the right to request and receive outpatient services at this office.

### **QUALITY OF LIFE**

The Office of Quality of Life coordinates and carries out activities aimed at preventing illicit drug use, aggression and sexual harassment, as well as alcohol abuse. They promote and encourage healthy lifestyles, also safety on campus, so that we can ensure our students and the university community, a better quality of life. With the help of the student organization *Students Creating Integral Leaders, Projecting Successful Solutions (ECLIPSE)*, youth peer educators, carry the message to enjoy nature, without drugs or alcohol. Extensions 2093, 2537.

## **SECURITY AND VIGILANCE**

The mission of the Office of Safety and Security is to provide security services, protection and guidance to the university's community and visitors. To provide a safe and quiet environment to ensure academic, administrative, research, and community service. Success depends on respect for the rights of human beings, teamwork, comradery, the preservation of the values of the institution while maintaining a harmonious climate in performing our role and acting with respect, honesty, professionalism and courtesy.

## **EDUCATIONAL SERVICES PROGRAM**

The Program of Educational Services in UPR Cayey was established in 1972 under the auspices of the United States Department of Education. It aims, since joining the Campus, to provide support to around 384 participants, in developing attitudes and skills necessary to succeed in academic life and to successfully complete a bachelors. In addition, it encourages them to pursue graduate studies and aspires that they become models for their fellow citizens. It emphasizes the cultural and educational enrichment through complementary activities and academic courses that include a mentoring and guidance component.

In the summer session, the program offers remedial courses in English, Spanish and Mathematics, and tutoring. It also offers workshops and conferences that contribute to the adjustment of its participants to university life. During the academic year courses in English, Spanish and Mathematics taught by professors committed to the philosophy of the program and attentive to the emotional and academic needs of students are offered. Tutoring in these disciplines and in the area of Chemistry are offered, according to the needs of the participants. Tutors are mostly advantaged Program students recommended by the academic departments.

Counseling services, provided by a counselor and an educational psychologist, serve the personal and academic needs of their students from admission to graduation.

Regular workshops, seminars and lectures on study skills, writing papers, bibliographic research, assertiveness, decision making and other issues, designed to meet the specific needs of the participants are offered. The cultural activities that are organized include excursions to places of historical, scientific and professional interest to expose students to different fields of work. Also concerts, theatrical performances and other artistic events that contribute to the cultural development of the participants are hosted.

When selecting students for the program the priority are those who are in need in one or more of the following items: limited financial resources, be a first generation college student, and or have a physical handicap.

Educational Services offices are located in the first floor of the Morales Carrion, building - office 136.

# LEARNING RESOURCES

## VICTOR M. GIL PONS LIBRARY

The Library conscious of the aims and objectives of the University of Puerto Rico, has as its main task to satisfy the information requirements of the university community by organizing collections that enrich academic work. In addition to developing the skills to retrieve and use the information in a critical and creative way, while maintaining physical and virtual spaces that create optimal learning conditions.



The Library is a center where the study, teaching and research are encouraged and where human and professional formation of the individual is stimulated while contributing to the academic, social and cultural development of Puerto Rico.

To fulfill this task, it is necessary:

- Participate actively and creatively in teaching and learning processes addressing the needs of actual and potential users and responding to them.
- Develop collections and services of excellence and make available to the user information resources relevant for education, research and creation.
- Preserve and conserve the acquis.
- Develop an informational culture, with a clear educational intention that responds to the interests of the university environment and to society.
- Cooperate with other libraries nationally and internationally.
- Embrace the potential of technology in all areas of knowledge.
- Develop specialized collections that enrich the cultural environment of our country.

The library has a documentary bank made up of thousands of volumes of books on open shelves, a varied collection of journals available on paper and in digital format: databases on CD ROM, microfilm and online, a video library and several special collections.

The building that houses the library houses up to 800 users and is organized into the following rooms:

### Reference Room

The Reference Room in its services and collections meets the curricular offerings, as well as to the mission, goals and objectives of our campus. Its main purpose is to guide and educate the academic community and the external community in the search, retrieval, analysis and evaluation of information, essential components of research. The room has a large variety of reference works and printed sources of information. Our collection also

provides access to electronic resources and databases. Reference materials are provided for use in the Library.

### **Research and Documentation Room (Magazines)**

It provides a space for analysis and research through resources, which are mostly specialized and primary sources. In this space you can find indexes, abstracts, microfilms, microfiche and print and electronic international academic journals. It also provides consultation and guidance in the use of databases subscribed by the University of Puerto Rico. These full text databases are: *HW Wilson*, *EBSCOHost*, *ProQuest*, *Gale Thompson*, *CRCnet Base* and *Ocenet*. The resources in this room do not circulate. We also have indices in print format, such as: *Chemical Abstracts*, *Biology Digest* and *Library Literature & Information's Science*, and retrospective *Biological Abstracts*, *Hispanic American Periodicals Index (HAPI)*, *Psychological Abstracts*, *The New York Index*, *Social Science Index*, *Humanities Index*, *Readers Guide to Periodical Literature*, *Public Affairs Information Service*, *Historical Abstracts*, *Business Periodicals Index* and *Educational Index*, to name a few.

### **Puerto Rican Collection: José Luis González Room**

In this space lies all the bibliographic material that is nationally or internationally associated with Puerto Rico. This collection has specialized books, magazines, microfilm, newspapers, CDs and government documents. On the other hand, has a Census Data Center attached to the *Junta de Planificacion of Puerto Rico*. Biographical, Municipal Files, and volatile material related to the country are also kept. Most of the collection is available for home loan. We have online databases such as *PCIP Online (Proyecto Cooperativo de Indizacion de Periodicos)*, *Adendi (El Nuevo Dia file)*, *Primera Hora archive* and *JTS Online (Decisions by the Supreme Court)*

### **Miguel Meléndez Muñoz Room**

Attached to the José Luis González Hall there is a large part of the private collection of the famous Puerto Rican writer Miguel Melendez Munoz. This consists of a letters file, books, magazines, awards and memorabilia of Don Miguel. In addition his articles published in *Puerto Rico Ilustrado* are kept in binding format.

### **Documentary Archive of Vieques**

The Puerto Rican Collection also features a documentary archive of Vieques. This is established in April 2006 thanks to the documentary donation of the *Todo Puerto Rico con Vieques* organization, and other organizations related to the struggle of the people of Vieques. This repository is created with the intention of giving free access to all documents and bibliographic materials related to the struggle of the people of Vieques and Puerto Rico to stop the war practices of the US navy in the Vieques territory.

### **Circulation**

The Circulation Collection is the widest of the Library, it is responsible for the loan of general and multidisciplinary books. It has a system of open shelves, which means that

the user can move to the shelves area without restriction. The books are loaned following the established rules.

### **Picture, Sound and Movement Room Hector Campos Parsi**

It is dedicated to the memory of deceased composer and professor at the UPR, Hector Campos Parsi. It provides a space for studying or reading in general and for music and audiovisual appreciation in particular. It has ten stations to listen to digital compact discs, two computer stations with Internet access, TV, video recorders, audio system, turntable of 33 rpm, audio tape recorders (cassette) and compact disc digital recorder, among others. Requests made in advance for the transfer or reproduction of audiovisual material from the collection, exclusively for educational purposes, outside the room, are served. Its resources are contained in three collections. The audiovisual collection includes multidisciplinary material in analogue formats such as videocassettes (VHS), audio tapes (cassettes), phonograph records (LP) and digital formats like CDs, both audio (CD) and video (DVD). The Hector Campos Parsi specialized collection contains books, articles, scores, memorabilia, and other documents related to the life and work of the famous master. It also has a collection of books and magazines about the Library's music.

### **Documentation Center on Women and Gender: Luisa Capetillo Room**

The Luisa Capetillo Room named as a posthumous tribute to Luisa Capetillo, a pioneer in feminist struggles, journalist, playwright, union leader and suffragette. The Documentation Center collects bibliographic and audiovisual materials relating to women's studies and gender. The collection specializes in Puerto Rico and the Caribbean and includes various materials from Latin America, North America and Europe. It consists of books, journals, theses, papers, bibliographies and a video library. It also has access to specialized databases such as: *Contemporary Women Issues*, *Women Interest and Feminism & Literature*.

### **Joan Miller Room**

It is a collection specializing in education and children's literature. It consists of reference sources, magazines, books, recordings, elementary level tales, computer programs and a toy library. Participates with the Department of Education programs in the areas of English, Curriculum and Arts in Special Education for children and adolescents from the community. Requests for activities and workshops for schools at the elementary level are met.

### **Collections Development**

It is responsible for processing the recommendations for the purchase of educational materials and accepts donations to the Library. Resources are organized using the classification System of the Library of Congress of the United States of America and available to users in the online *Catalog* of the University of Puerto Rico.

## **OTHER SERVICES**

### **Online Reserve**

This service offers the enrolled student in the Campus access to the used or suggested readings in class by professors. All readings are in PDF digital format and can be consulted online, thus facilitating printing and recording documents from any computer with Internet access. This service is accessible via cybernetics page <http://reservadigital.cayey.upr.edu/>.

### **Information Skills Competitive Program (Academic Research Laboratory)**

It is one of the spaces of the library where the students and professors are trained in the development of informational skills through computer technology. Individual and group counseling skills and competencies related to the recognition of the need for information and the necessary skills and tools to locate, evaluate and effectively use it to convert it into a research product are offered.

### **Computer Laboratory for Student Development (LABDIES)**

It is a computer lab available to students on our campus. In it the user can access the databases available in the library, the Internet and perform academic work.

### **Interlibrary Loans**

The interlibrary loan service is offered through the ARIEL Program. Its main function is to provide our users the books or magazine articles they need but that are not available in our collection. The schedule allows us to request the item to other libraries in the UPR system and receive it no more than 48 hours at the Reference Room of our Library, the processing of the loaned books is governed by the conditions of the University to which the application is made.

### **Online Electronic Catalog**

The computers in all library rooms communicate with the public catalog of the Library System at the University of Puerto Rico: HORIZON. It allows our users to locate resources we have available in the various collections, as well as those found in other libraries of the UPR.

### **Student Support Center (CAE)**

Tutoring services are offered to students.

### **Conference and Exhibition**

Where are exhibited or presented various works of creation, conferences and research, among other possibilities, of our academic and external community. For space reservations should contact the direction of the Library.

## **INFORMATION SYSTEMS OFFICE (OSI)**

The Information Systems office (OSI) is a service unit assigned to the Rectory whose main objective is to support the university community in academic, administrative and institutional activities. Its aim is the strengthening and development of technological solutions in the areas of greatest service to the university's community, OSI provides a wide variety of specialized services.

### **Vision**

The UPR Cayey offices are dedicated to providing information technology services, we believe in the power vested in the use of technology to enhance, facilitate and expedite the academic and administrative tasks of our institution.

We consider essential to our country that its citizens have general and practical knowledge of various information technologies available and we believe in the dissemination of this knowledge to both the university's community and to the outside community.

We believe it is crucial for achieving the goals and objectives of the UPR Cayey a continuous professional development of its information technology specialists.

The resources and the technological and telecommunications infrastructure at UPR Cayey must meet all requirements of the university's community.

UPR-Cayey should be positioned in the highest place in providing access to information and research resources within their immediate geographic area, and remotely through advances in telecommunications technologies.

UPR-Cayey should be regarded as the center of intellectual, social and cultural enrichment of the central area of Puerto Rico through technological means at their disposal.

### **Mission**

Provide the community of the UPR at Cayey information technology services that are more effective, appropriate, and cost effective to fully achieve the goals and objectives of the institution.

### **Goals**

1. Always practice the ethical principles of the information technology specialists' profession.
2. Provide prompt and effective technical support of the highest quality.
3. Practicing preventive maintenance of our computer resources.

4. Offer relevant, dynamic high quality educational training programs, in areas of information technology for students, faculty and staff.
5. Maintain accessible and in optimal conditions the flow and storage of information in our internal telecommunications network.
6. Provide continuous, stable and optimal access to external sources of information through the Internet.
7. Keep safe the data transferred and stored in our information network so that only authorized users have access to it.
8. Maintain a program of continuing professional development with a dynamic and current agenda for our information technology specialists.
9. Perform continuous formative assessment of services and computing resources and use the results to improve our offerings.
10. Set goals and objectives of information technology services according to changes in the computing needs of the community.
11. Collaborate on projects of information technology with all units of the UPR in Cayey, students, professors, non - docents and the external community.
12. Maintain an open and continuous communication with the university's community about events and decisions within the area of information technologies that may have an effect on their work experiences at the campus.
13. Collaborate in the development of policies of security, privacy and good use of computing resources.

#### **Values that characterize the information technologies area in the UPR-Cayey**

- Creativity and innovation
- Collaboration
- Open communication
- Opening
- Transparency
- Respect for the needs of students, faculty and staff
- Commitment to quality in our work and services
- Fiscal responsibility
- Personal responsibility
- Integrity and adherence to the highest ethical principles

#### **Services**

- Orientation: It offers professors, students, and employees, guidance on the effective use of communications and information technologies to provide enrichment of scientific, academic, administrative and cultural activity of the institution and the development of projects designed to effectively achieve those purposes.
- Advice: Advice is offered to the university's administration, professors, and students in the effective integration of telecommunications, information technology, for the most agile and effective management in academic and administrative affairs.
- Conceptualization of strategies, development and production of videos for guidance and broadcast media in the country.
- Collaboration: We work with academic departments on campus, administrative offices and the university's community in the development of workshops and seminars in specialized areas in telecommunications, information technology and communication sciences.

- Production: We work and produce audiovisual academic resources and educational and informative audio and video material for institutional use and dissemination in the university's media.

### **Audiovisual Academic Services (AVAS)**

- It offers projection services of educational materials, maintains direct communication with the university's community by providing services, advice on the use of audiovisual resources and the use and handling of equipment. For the performance of their duties this area uses the resources of production and will be supported by the Educational Television and Repair areas.
- Development of services, systems and computer applications, including for the WEB, to meet institutional needs.
- Development and maintenance of the campus's WEB portal.
- Equipment Repair and Maintenance workshop provides repair services and maintenance of electronic equipment to areas that make up the Center and offices that require services. It also provides advice for the acquisition of new equipment for the Center and the institution in general.

### **The Academic Computation Center**

The Academic Computation Center (CAC), located in the Computing Building is divided into two interdependent sections:

1. Academic Computing Labs (LCA)
2. Support Center in Computer Skills (CADI)

In line with the mission, goals and objectives of the University of Puerto Rico in Cayey (Goal 1), the Academic Computer Center:

1. Provides users an excellent education at the level of technological advances, allowing the development of skills in professional performance;
2. Promotes the synthesis and continuity in the organization of knowledge, enabling users to manage information sources and relates them to the creative use of technology as a tool in their specialty;
3. Extends the ability of users to communicate and conduct themselves in an international and interdependent world;
4. Facilitates coordination and integration of its resources a Computations Academic Advisory Committee with representation from the three academic areas that have the task of:
  - a) long-term planning of academic computing system;
  - b) make recommendations on the operation and expansion of the Center;
  - c) link more directly the academic departments with the development plan of computing resources;
  - d) collaborate with the Learning Resource Committee of the Faculty.

The main asset of the CAC is its highly trained staff, and always, with the desire to offer a high quality service.

## **Academic Computing Labs (LCA)**

The **LCA** are directed to render direct service to students. It is an important plank of engagement with the UPR Cayey education of excellence. Among its features are:

1. Make available the literary information to students.
2. Keep computer facilities in line with technological development and the needs of students and professors.
3. Provide students with an environment that facilitates learning and / or practice and / or enrichment of a specific subject, as well as the opportunity to experiment with various computer applications.
4. Support in computing matters students and professors in the development of academic and research projects.
5. Keep a collection of programs such as programming languages, data processors, electronic spreadsheets, database managers, statistical packages, tutorials, test generators, among others.
6. Provide the infrastructure, equipment and training necessary for communication between the student community and information sources such as libraries and information banks through the use of networks of local, national and international computers as an essential component in education.
7. Provide space for professors who use the laboratories resources and academic computing programs as a complementary or supplementary part of their courses.
8. Provide support and necessary follow-up to those professors interested in using
9. Maintain an ongoing communication with professors and students to identify their needs for infrastructure, equipment and software.
10. Keeping the institutional infrastructure available to students and professors during institutional working hours.

Each semester seminars and workshops are offered, on a regular basis, in basic computer skills, use of computer applications, management systems, online courses, data analysis packages, production and editing of digital media and related trainings to the computer science and educational technology areas.

## **ART MUSEUM DR. PIO LOPEZ MARTÍNEZ**

Art Museum Dr. Pio Lopez Martinez's mission is to be a center of study, creation and dissemination of art from the artistic legacy of Ramon Frade (Cayey, Cayey-1875, 1954) as well as the collection of Puerto Rican silkscreen poster the Museum is custodian of, studies, exhibits and preserves. The museum promotes the National Art through a program of exhibitions.

The Frade Legacy housed by the Museum since 1979 is composed of a variety of works of art and objects produced by the artist and the original belongings from his home in Cayey. The Legacy includes painting, drawing, photography, plans and survey drawings, engineering, architecture and design as well as documents, books, tools, furniture and memorabilia of the artist.

Art Museum Dr. Pio Lopez Martinez is administered by the University of Puerto Rico in Cayey with rooms exhibiting the work of Puerto Rican painter Ramón Frade La Casa Frade, the poster and Puerto Rican graphic in Lorenzo Homar Room and temporary exhibitions in the Central Hall. The name given to our museum highlights the work of its founder and director Professor Pio Lopez Martinez (Burgos, Spain, 1922-Cayey, 1998).



The Museum opened to the public on June 11, 1979 with the display of the belongings of Ramón Frade, including oils, watercolors, *aguadas*, pastels and drawings as well as its library, furniture and documents were transferred to the UPR Cayey Campus from the Museum of the University of Puerto Rico, Río Piedras Campus. This legacy was donated to the University of Puerto Rico in 1957 by the widow of the painter Doña Reparada Ortiz.



Address and Phone Numbers:

Art Museum Dr. Pio Lopez Martinez  
University of Puerto Rico in Cayey  
PO Box 372230

Cayey, Puerto Rico 00737-2230

Tel.: 787-738-2161, extensions 2191, 2209, 2634 Fax: 787-738-0650

<http://www.cayey.upr.edu/museo-de-arte-dr-pio-lopezmartinez>

Email: [museo.cayey@upr.ed](mailto:museo.cayey@upr.ed) or

Hours: Monday through Friday from 8:00 am to 4:30 pm **FREE Admission**  
Weekends and holidays from 11:00 am to 5:00 pm

Closed on Good Friday, Thanksgiving, Christmas, New Year and Three Kings Day.

# ACADEMIC PROGRAMS

## Programs Components

The University of Puerto Rico at Cayey is an institution committed to an education of excellence through undergraduate programs in teacher preparation and in the disciplines of Natural and Social Sciences, Humanities and Business Administration. We understand the general education and professional expertise as complementary experiences of the formation of human beings. We believe in offering an interdisciplinary and innovative education, integrating themes and experiences of various fields of knowledge keeping in perspective the value of specialization. We educate with a global perspective that simultaneously recognizes the place of the human being in his community, with a historical sense and future vision.

We are committed to the development of the integral human being, independent, critical and sensitive, who believes in excellence as a standard of living, and who is prepared to settle creatively in society and in the world of work. It will be someone who discovers in herself/himself the resources and incentives for learning, who has learned to seek and gestate knowledge for a full life, and maintain a lifelong commitment to learning. According to the graduate profile that spells out the mission of the University of Puerto Rico at Cayey and the general objectives of the goal of providing undergraduate education of excellence, its twenty-eight (28) academic programs seek interaction between the various disciplines. Intertwining three components: general education courses (core courses), concentration courses or specialty and elective courses (non-core courses).

The component of core courses in *general education* consists of a set of common courses to students in fundamental or core subjects of knowledge which in turn are aligned with the *Skills and Content Document*: Mathematics, Physics and Biological Sciences, Language and Literature (in Spanish and English), History, Social Sciences and General Culture (Humanities). Materials that respond to the class of general education required for 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 they live and the phases that compose it. It has as one of its main purposes to teach the student to learn how to learn. Wants the student to capture the dynamic and changing nature of knowledge. It also provides fundamental skills verbal and mathematical reasoning, research, etc. essential for success in college and for work in today's world.

The discipline of study in which the student takes his degree is known as the *major* or *specialty*. It consists of ten or more courses for around 30 credit hours. In the UPR Cayey majoring courses are classified into three types: additional disciplines required courses in the same department, required courses in the discipline of specialization and elective courses within the specialty.

The *free electives* are courses that the student chooses without restriction among those offered by the College, regardless of their major. A minimum of twelve credit hours of this program group is required.

The *free elective* courses allow students to explore other branches of knowledge, delve into subjects of interest and take courses that will prepare them to proceed to professional or graduate studies. Through *free electives* students can acquire a subspecialty, such as education courses required for teacher certification. They can also complement their training with courses in fields such as Business Administration to help lead them to the work world. Credit hours of *free electives* facilitate the student to participate in educational experiences such as a semester of studying abroad or special courses for scientific research without exceeding the total credits required by the curriculum or delay graduation date.

In addition to regular courses, UPR Cayey offers workshops and courses in skills without credit. It is recommended that in the first semester of study all students enroll in workshops on managing computers offered by the Academic Computer Center. Librarians offer workshops on bibliographic instruction and research methods.

An essential complement of academic programs as part of the university training is the rich array of co-curricular activities. We encourage the students to attend every week at least one of the scientific, theatrical, musical, literary, film and various kinds of activities that the College makes available.

## **Interdepartmental Coordinated Programs**

### **General Education**

Our University is committed to provide excellence in undergraduate education which emphasizes the training of students with a vision of the interrelationship between general education, the expertise of the specialty and their living environment.

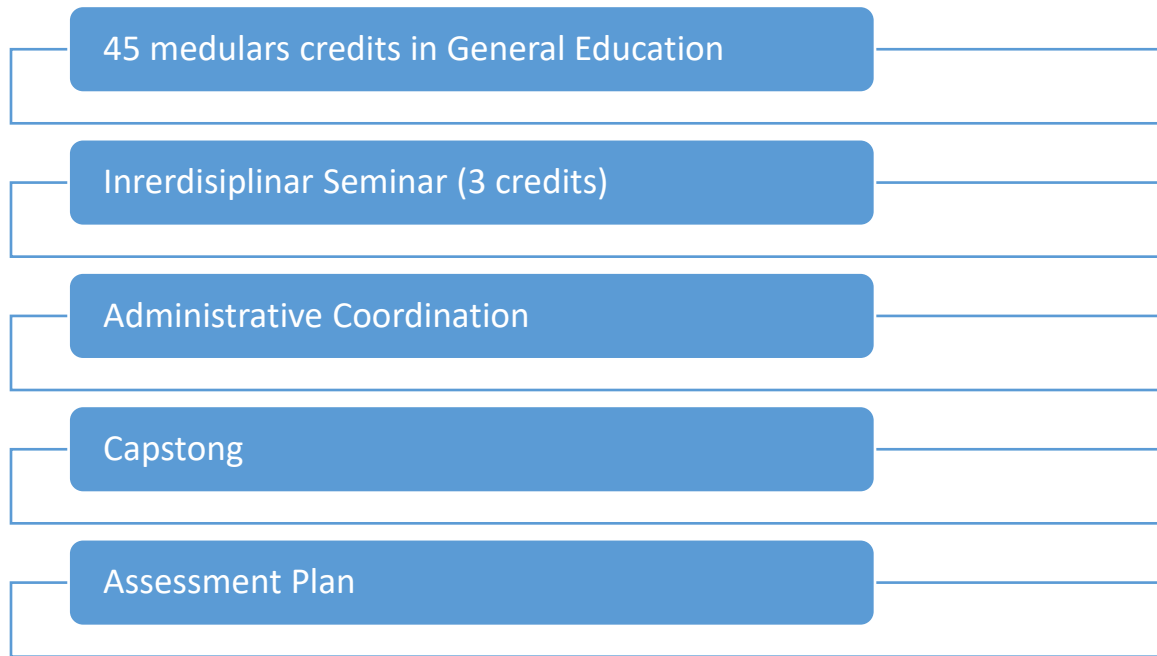
Among the distinctive elements of the General Education Program are the following: the interdisciplinary nature of knowledge, the research approach, the development of critical thinking strategies, the integration of general education throughout the entire college career, culture appraisal, and development of skills and content of general education.

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

1. A basic curriculum structure for all academic programs of 48 credit hours General-45 Education credit hours of core courses and 3 credit hours of the Freshman Interdisciplinary Seminar-designed around the *skills and content* of the General Education recognized at the University of Puerto Rico- Cayey.

2. A course or experience (capstone) to promote the integration of skills and content of general education with specialty.
3. A continuous programmatic assessment program and of the classroom, in harmony with the culture of assessment that is being developed at our institution.

The classification in courses in the *New Model* is core (component of General Education, 48 credits), non - core (courses from other disciplines), major (content courses of study program) and free electives.



# **DEPARTMENTS AND STUDY PROGRAMS**

The academic departments of the University of Puerto Rico in Cayey are grouped into three areas, presented below:

## **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
- Natural Sciences Program

## **Professional schools**

- Department of Business Administration
- Technology and Office Management Program
- Pedagogy Department
- Physical Education Program



## **SOCIAL SCIENCES DEPARTMENT**

The Department of Social Sciences offers a Bachelor of Arts with the following specialties: General Social Sciences, General Psychology, Psychology and Mental Health, and Sociology. It also offers courses from the General Education Program, courses required by other programs and electives of interest to all students.

### **Vision:**

The Department of Social Sciences of the University of Puerto Rico at Cayey is committed to the development of a learning community that fosters an articulate and active culture of skills, knowledge, and attitudes that enable students, along with professors and non-teaching members of this community, to creatively meet the challenges of living in society, especially in today's Puerto Rican society. To this end, we will promote that learning lead to service and service to learning.

***We want to be a learning community that educates for life and in which service is linked to learning and learning to service.***

In this task, the Department of Social Sciences will offer courses leading to a Bachelor of Arts with the following concentrations: General Social Sciences, Psychology, Sociology and Psychology and Mental Health as well as service courses to other departments. In that spirit, we reaffirm the commitment to promote dialogue between and outside traditional disciplinary barriers of social sciences. We do this with the purpose of finding languages and common areas of study and reflection that foster integrative and interdisciplinary learning.

### ***An integrated and Interdisciplinary Education.***

We understand that the production of new knowledge is closely linked to the development of social research. The Department of Social Sciences, besides promoting the exchange of knowledge, skills, and individuals techniques of various specialties, promotes interdisciplinary research at the undergraduate level oriented towards the study of the Puerto Rican society and its link to global communities.

### ***We want to educate through research.***

Finally, the Department of Social Sciences, fosters among its students the cultivation of abilities, skills, and knowledge conducive to the development of critical human beings and freelancers, who are life-long learners, who value their cultural wealth and their life experiences, that promote human understanding, and who are committed to improving society, the pursuit of justice, honesty, and peaceful solutions to common problems.

### **Goals:**

1. Promote in students the development of skills, abilities and knowledge to meet the challenges of the work world and everyday life.

2. Develop programs and courses in the social sciences that have an interdisciplinary character.
3. Encourage that learning is integrated into the service and the service in turn refine and enrich learning.
4. Promote the continuous assessment of our programs and courses so that we can make sure the effectiveness of our offerings.
5. Promote social research at the undergraduate level with a focus on the needs of the Puerto Rican society.
6. Promote the development of autonomous human beings, able to make decisions for themselves.
7. Cultivate the students' development of critical thinking as well as the cultivation of attitudes linked to the desire to learn throughout life.
8. Develop students' abilities, skills, knowledge, and values that promote the development of attitudes aimed at improving society, transforming the world in which we live, the promotion of justice, honesty, and the search for peaceful solutions to common problems.

***Reviewed and approved: August 2006***

## Bachelor of Arts Majoring in Social Sciences

<b>Core courses General Education</b>		
Code	Title	credit hours
HUMA 3101-3102	Western culture I-II	6
ESPA 3101-3102	Basic Spanish I-II	6
ESPA 3201-3202 or ESPA 3211-3212	Introduction to Literary Genres I-II Introduction Spanish Literature I-II	6
INGL 3101-3102 or INGL 3103-3104 or INGL (3XXX-4XXX)	Basic English I-II (450-539 points CEEB) Intermediate English I-II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
INGL 3201-3202 or INGL 3221-3222 or  INGL (3XXX-4XXX)	Composition and Reading I-II (Prerequisite: Basic English) Introduction to Literature I-II (Prerequisite: Intermediate or Advanced Level English) Advanced Level English (Requirement: Intermediate or Advanced Level English)	6
MATE 3041-3042	Introduction to Mathematics I-II	6
CIBI 3001-3002	Fundamentals of Biology I-II	6
HIST 3245	History of Puerto Rico Compendium	3
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non-Core courses</b>		
Code	Title	credit hours
CISO 3121-3122	Introduction to Social Sciences I-II	6
HUMA 3201-3202	Western culture III-IV	6
ICTP 3001-3002	Introduction to Physics I-II	6
ART 3155 or ART 3156	Ancient and Medieval Art Modern and Contemporary Art	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	Social Research Techniques	3
CISO 3155	Fundamentals of Statistical Reasoning	3
elective CIPO	Directed Elective in Political Science	3
<b>Specialty Courses / Major</b>		
Code	Title	credit hours
electives CISO	Electives in Social Sciences	12
CISO 3085	Society and Culture of Puerto Rico ( <i>Capstone</i> )	3
<b>Free Electives</b>		
Code	Title	credit hours
	electives	23
<b>Total Credit Hours</b>		<b>128</b>

## Bachelor of Arts Majoring in Sociology

<b>Core courses General Education</b>		
Code	Title	Credit hours
HUMA 3101-3102	Western culture I-II	6
ESPA 3101-3102	Basic Spanish I-II	6
ESPA 3201-3202 or ESPA 3211-3212	Introduction to Literary Genres I-II Introduction to Spanish Literature I-II	6
INGL 3101-3102 or INGL 3103-3104 or INGL (3XXX-4XXX)	Basic English I-II (450-539 points CEEB) Intermediate English I-II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
INGL 3201-3202 or INGL 3221-3222 or INGL (3XXX-4XXX)	Composition and Reading I-II (Prerequisite: Basic English) Introduction to Literature I-II (Prerequisite: Intermediate or Advanced Level English) Advanced Level English (Requirement: Intermediate or Advanced Level English)	6
MATE 3041-3042	Introduction to Mathematics I-II	6
CIBI 3001-3002	Fundamentals of Biology I-II	6
HIST 3245	History of Puerto Rico Compendium	3
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non-Core courses</b>		
Code	Title	Credit hours
CISO 3121-3122	Introduction to Social Sciences I-II	6
HUMA 3201-3202	Western culture III-IV	6
ICTP 3001-3002	Introduction to Physics I-II	6
ART 3155 or ART 3156	Ancient and Medieval Art Modern and Contemporary Art	3
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 PSIC 3137	Social Research Techniques Non Experimental Methods of Psychology	3
elective CIPO	Directed Elective in Political Science	3
<b>Specialty Courses / Major</b>		
Code	Title	Credit hours
ANTR 3005	Society and Culture Caribbean	3
ECON 3032	Statistical Methods II	3
PSIC 3006	Social psychology	3
SICI 3006	Computerization principles	3
SOCI 3270	Social institutions ( <i>Capstone</i> )	3
SOCI 4005	Modern Sociological Theory	3
SOCI electives or ANTR	Electives in Sociology or Anthropology	3
SOCI electives	Electives in Sociology	6
<b>Free Electives</b>		

<b>Code</b>	<b>Title</b>	<b>Credit hours</b>
	electives	15
	<b>Total Credit Hours</b>	<b>132</b>

**Bachelor of Arts  
Majoring in Psychology and Community Mental Health**

<b>Core courses General Education</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
HUMA 3101-3102	Western culture I-II	6
ESPA 3101-3102	Basic Spanish I-II	6
ESPA 3201-3202 or ESPA 3211-3212	Introduction to Literary Genres I-II Introduction to Spanish Literature I-II	6
INGL 3101-3102 or INGL 3103-3104 or INGL (3XXX-4XXX)	Basic English I-II (450-539 points CEEB) Intermediate English I-II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
INGL 3201-3202 or INGL 3221-3222 or INGL (3XXX-4XXX)	Composition and Reading I-II (Prerequisite: Basic English) Introduction to Literature I-II (Prerequisite: Intermediate or Advanced Level English) Advanced Level English (Requirement: Intermediate or Advanced Level English)	6
MATE 3041-3042	Introduction to Mathematics I-II	6
CIBI 3001-3002	Fundamentals of Biology I-II	6
HIST 3245	History of Puerto Rico Compendium	3
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non-Core courses</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
CISO 3121-3122	Introduction to Social Sciences I-II	6
HUMA 3201-3202	Western culture III-IV	6
ICIF 3001	Introduction to Physics I	3
CISO 3155	Fundamentals of Statistical Reasoning	3
PSIC 3001	Introduction to Psychology I	3
SOCI 3261	Introduction to Sociology	3
SOCI 3315	Family Sociology	3
ECON 3085	Economic and Social Development of Puerto Rico	3
<b>Specialty Courses / Major</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
PSIC 3006	Social psychology	3
PSIC 3016	Psychopathology	3
PSIC 3017	Personality Measurement	3
PSIC 3018	Physiological psychology	3
PSIC 3118	Laboratory of Physiological Psychology	1
PSIC 3019	Clinical and Community Psychology	3

PSIC 3025	Human development	3
PSIC 3137	Non Experimental Methods of Psychology	3
PSIC 4008	Mental retardation	3
PSIC 4015	Practicum in Social Psychology	3
PSIC 4095	Counseling and Short Therapies	3
PSIC 4097	Practicum in Clinical and Health Psychology ( <i>Capstone</i> )	3
electives PSIC	Electives in Psychology	6
<b>Free Electives</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
	electives	12
<b>Total Credit Hours</b>		<b>130</b>

## Bachelor of Arts Majoring in Psychology

<b>Core courses General Education</b>		
Code	Title	credit hours
HUMA 3101-3102	Western culture I-II	6
ESPA 3101-3102	Basic Spanish I-II	6
ESPA 3201-3202 or ESPA 3211-3212	Introduction to Literary Genres I-II Introduction to Spanish Literature I-II	6
INGL 3101-3102 or INGL 3103-3104 or INGL (3XXX-4XXX)	Basic English I-II (450-539 points CEEB) Intermediate English I-II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
INGL 3201-3202 or INGL 3221-3222 or INGL (3XXX-4XXX)	Composition and Reading I-II (Prerequisite: Basic English) Introduction to Literature I-II (Prerequisite: Intermediate or Advanced Level English) Advanced Level English (Requirement: Intermediate or Advanced Level English)	6
MATE 3041-3042	Introduction to Mathematics I-II	6
CIBI 3001-3002	Fundamentals of Biology I-II	6
HIST 3245	History of Puerto Rico Compendium	3
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
Code	Title	credit hours
CISO 3121-3122	Introduction to Social Sciences I-II	6
HUMA 3201-3202	Western culture III-IV	6
ICTP 3001-3002	Introduction to Physics I-II	6
ART 3155 or ART 3156	Ancient and Medieval Art Modern and Contemporary Art	3
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
<b>Specialty Courses / Major</b>		
Code	Title	credit hours
PSIC 3018	Physiological psychology	3
PSIC 3118	Laboratory of Physiological Psychology	1
PSIC 3025	Human development	3
PSIC 3137	Non Experimental Methods of Psychology	3
PSIC 3166	Psychology Research Practicum	1
PSIC 4003	Experimental psychology	3
PSIC 4004	Laboratory of Experimental Psychology	1
PSIC 4065	Psychology Seminar ( <i>Capstone</i> )	3
electives PSIC	Electives in Psychology	12
<b>Free Electives</b>		

Code	Title	credit hours
	electives	12
	<b>Total Credit Hours</b>	<b>129</b>

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## HISPANIC STUDIES

### MISION, VISION, AND PHILOSOPHY

The Department of Hispanic Studies provides a Bachelor of Arts majoring in Hispanic Language and Literature. It is responsible for training students of Pedagogy who work as teachers of Spanish, through specialty courses. It also offers general education courses in language and literature required for all freshmen and sophomores and electives for students in general. It offers courses and workshops, Continuing Education for teachers and other professionals interested in enriching their exposure to the language, its literatures and Hispanic culture.

Language is the foundation of our existence; it enables us to develop and express thought, so that from its full knowledge the acquisition of other knowledge is dependent: language, perception and thought are interdependent. The vernacular language of a people is its most essential manifestation; it is the vehicle in their understanding of the historical and cultural identity. The study of literature provides models for thought and expression; faces fundamental human issues; develops the aesthetic and ethical sensitivity. The unerring mastery of the language allows the externalization of oneself and the relationship with the environment, while making more fruitful participation in the Puerto Rican community in the Hispanic world and the world where Spanish is the second language of communication.

In this context, Hispanic Studies trains professionals to perform in a wide variety of careers that require a solid command of the language and also to pursue graduate studies in Linguistics, Comparative Literature, Hispanic Studies, Journalism, Communication, Law and others.

Encourages and sponsors activities that complement formal studies and outreach to the general community, such as film showings, lectures, creative writing workshops, among these, the annual literary contest , the Literary Circle, and Tinta Nueva magazine.

**Reviewed and approved at the extraordinary meeting of March 30, 2009.**

The objectives of the Department of Hispanic Studies enable the student:

1. To get a clear awareness of the importance of human communication and artistic expression in the explanation and construction of the notions of the world.
2. Manage language with fluency, expressiveness and correction so as to understand that it is the most effective communication mean and irreplaceable in the articulation and expression of thought.
3. Reach a solid understanding of literature as a manifestation of symbolization and expression of life, identity and history of our formation as a Hispanic community.
4. Cultivate the habit and enjoyment of reading, discussion and interpretation, aware that it enriches the sensitivity, complex thinking, observation skills, critical judgment and objective and independent analysis.
5. Get an insight into the historical development of the language and of Puerto Rican and Hispanic literature in its cultural, social and global framework, and learn to apply that knowledge to understand contemporary phenomena.
6. Relate in an integrated way literature, other arts, society and history in dealing with literary works and to attend theater performances, concerts, films, etc.
7. Use creatively and ethically diverse sources of information when exercising bibliographic research skills and relevant technologies when applied to the study and production of texts.
8. Participate in literary activities, theatrical, film and others that lead to the independent and lifelong learning, as well as trips that broaden their perspectives.

Also are objectives of the Department:

1. The periodical renewal of courses and offerings according to the needs of the student and the country.
2. Professors develop research projects that enrich the profession.
3. Professors cultivate their continuing professional development.
4. To serve the community through curricular activities, conferences, forums and
5. The use of assessment to make decisions related to the courses and the program.

## Bachelor of Arts Majoring in Hispanic Studies

<b>Core courses General Education</b>		
Code	Title	credit hours
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 INGL 3103-3104 or INGL (3XXX-4XXX)	Basic English I-II (450-539 points CEEB) Intermediate English I-II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
INGL 3201-3202 or INGL 3221-3222  INGL (3XXX-4XXX)	Composition and Reading I-II (Prerequisite: Basic English) Introduction to Literature I-II (Prerequisite: Intermediate or Advanced Level English) Advanced Level English (Requirement: Intermediate or Advanced Level English)	6
MATE 3041-3042	Introduction to Mathematics I-II	6
CIBI 3001-3002	Fundamentals of Biology I-II	6
HIST 3245	Compendium of History of Puerto Rico	3
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
Code	Title	credit hours
ESPA 3101-3102	Basic Spanish I-II	6
ESPA 3211-3212	Introduction to the Spanish Literature I-II	6
ICTP 3001-3002	Introduction to Physics I-II	6
MUSI 3225	Appreciation Elements of Music	3
FILO 3001-3002	Introduction to Philosophy I-II	6
ART 3155 or ART 3156	Ancient and Medieval Art Modern and Contemporary Art	3
<b>Specialty Courses / Major</b>		
Code	Title	credit hours
ESPA 3291-3292	Spanish grammar I-II	6
ESPA 4011-4012	Hispanic Linguistics I-II	6
ESPA 4221-4222	Spanish American Literature I-II	6
ESPA 4231-4232	Puerto Rican Literature I-II	6
ESPA 4251-4252	Golden Age Literature I-II	6
ESPA 4496	Research Seminar ( <i>Capstone</i> )	3
elective ESPA	Directed Elective in Hispanic Studies	3
<b>Free Electives</b>		
Code	Title	credit hours
	electives	15
<b>Total Credit Hours</b>		<b>129</b>



## HUMANITIES DEPARTMENT

The Humanities Department is an academic unit within the Department of Arts offers that courses in humanistic disciplines. Through courses and activities the Department of Humanities is faithful to the goals that define the University of Puerto Rico in Cayey. We believe that our institution has a commitment to excellence; it must also become a meeting place for academic and cultural activity in the country; and also foster a sense of social responsibility.

The Department of Humanities maintains that its courses and activities in what has been called the arts and letters provide an area for reflection, creation and essential research in higher education.

Our institution is committed to an interdisciplinary and innovative education that integrates academic knowledge with contemporary events in a profound historical and cultural analysis. The Department of Humanities believes that this interdependence of knowledge must be manifested in a curriculum in which the ideals that have been identified in the authentic university tradition should be accentuated. Before everything else, our graduates must be characterized by a broad view of cultural and social phenomena that define our reality during these times.

As part of the mission, goals and objectives of the University of Puerto Rico in Cayey, the following are objectives of the Department of Humanities:

1. Promote research and teaching from a humanistic and interdisciplinary perspective linked to the academic work of other departments and new trends in the field of knowledge.
2. Develop in students a vision that interrelates humanities own expert knowledge, social management, and environment both in ethics and aesthetics.
3. Train aspiring students to further deepen their knowledge either in formal studies or any humanistic, cultural and artistic activity.
4. Elevate artistic activities generated by students and professors to a similar importance to academic activity within the classroom, contributing, this way, to the university ethos.
5. Within the study of cultures, recognize and read the implications of the Caribbean and Puerto Rican culture as formative cultural constructions for students.

6. Foster the creative and educational use of technology as one of the tools that help in the humanistic, artistic and cultural development among students and professors.
7. Encourage the students and faculty of the Humanities Department to use various methods and content and in tune with current intellectual debates.
8. Continue the project of cultural trips to stimulate in students the knowledge and skills needed to relate their discipline with its cultural and international environment.

*Approved by the Curriculum Committee of the Humanities Department in April 2006. Approved unanimously at the meeting of the Department of Humanities on Thursday, May 18, 2006.*

## Bachelor of Arts Majoring in History

<b>Core courses General Education</b>		
Code	Title	credit hours
ESPA 3101-3102	Basic Spanish I-II	6
ESPA 3211-3212 or ESPA 4221-4222 or ESPA 4231-4232	Introduction to Spanish Literature I-II Spanish American Literature I-II Puerto Rican Literature I-II	6
CISO 3121-3122	Introduction to Social Sciences I-II	6
INGL 3101-3102 or INGL 3103-3104 or INGL (3XXX-4XXX)	Basic English I-II (450-539 points CEEB) Intermediate English I-II (540-640 points CEEB) <b>Advanced Level English</b> (641 or more points CEEB)	6
INGL 3201-3202 or INGL 3221-3222  INGL (3XXX-4XXX)	Composition and Reading I-II (Prerequisite: Basic English) Introduction to Literature I-II (Prerequisite: Intermediate or Advanced Level English) <b>Advanced Level English</b> (Requirement: Intermediate or Advanced Level English)	6
MATE 3041-3042	Introduction to Mathematics I-II	6
CIBI 3001-3002	Fundamentals of Biology I-II	6
ICIF 3001	Introduction to Physics I	3
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
Code	Title	credit hours
HUMA 3101-3102	Western culture I-II	6
HUMA 3201-3202	Western culture III-IV	6
ICIF 3002	Introduction to Physics II	3
MUSI 3225	Appreciation Elements of Music	3
ART 3155 or ART 3156	Ancient and Medieval Art Modern and Contemporary Art	3
FILO 3001	Introduction to Philosophy I	3
FRAN 3021-3022	Experimental French I-II	6
FRAN 3033	Experimental French III	3
<b>Specialty Courses / Major</b>		
Code	Title	credit hours
HIST 3111-3112	US History I-II	6
HIST 3211-3212	Hispanic American History I-II	6
HIST 3241-3242	History of Puerto Rico I-II	6
HIST 4226	Seminar Methodology and Techniques of Historical Research ( <i>Capstone</i> )	3
electives HIST	Electives in History	fifteen
<b>Free Electives</b>		

<b>Code</b>	<b>Title</b>	<b>credit hours</b>
	electives	12
	<b>Total Credit Hours</b>	<b>129</b>

## Bachelor of Arts Majoring in Humanities

<b>Core courses General Education</b>		
Code	Title	credit hours
ESPA 3101-3102	Basic Spanish I-II	6
ESPA 3211-3212 or ESPA 4221-4222 or ESPA 4231-4232	Introduction to Spanish Literature I-II Spanish American Literature I-II Puerto Rican Literature I-II	6
CISO 3121-3122	Introduction to Social Sciences I-II	6
INGL 3101-3102 or INGL 3103-3104 or INGL (3XXX-4XXX)	Basic English I-II (450-539 points CEEB) English Intermediate English I-II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
INGL 3201-3202 or INGL 3221-3222 or INGL (3XXX-4XXX)	Composition and Reading I-II (Prerequisite: Basic English) Introduction to Literature I-II (Prerequisite: English Intermediate or Advanced Level) Advanced Level English (Requirement: Intermediate or Advanced Level English)	6
MATE 3041-3042	Introduction to Mathematics I-II	6
CIBI 3001-3002	Fundamentals of Biology I-II	6
ICIF 3001	Introduction to Physics I	3
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
Code	Title	credit hours
HUMA 3101-3102	Western culture I-II	6
HUMA 3201-3202	Western culture III-IV	6
ICIF 3002	Introduction to Physics II	3
MUSI 3225	Appreciation Elements of Music	3
ART 3155	Ancient and Medieval Art	3
ART 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	French Experimental I-II	6
FRAN 3033	Experimental French III	3
LITE 3011	Modern literature	3
<b>Specialty Courses / Major</b>		
Code	Title	credit hours
elective FILO	Directed Elective in Philosophy	3
elective HIST	Directed Elective in History	9
elective ART	Directed Elective in Art	6
HUMA 4105	Research or creation Seminar in Humanities ( <i>Capstone</i> )	3
<b>Free Electives</b>		
Code	Title	credit hours
	electives	12
<b>Total Credit Hours</b>		<b>129</b>



## **ENGLISH DEPARTMENT**

The English Department offers a language, literature and cultural studies program leading to the Bachelor of Arts in English. It also provides future teachers of English a program that includes requirements for certification. Similarly, the Department provides business administration students courses of oral and written communication related to their major. Courses in the General Education program give emphasis to learning essential skills in English within the cultural contexts of language. Therefore, the English Department reserves the right to place students according to their score in the CEEB in the area of English. All Department programs are designed to meet the communicational needs presented by social and economic challenges of the contemporary world.

The Department strives to provide a balanced, innovative, and useful curriculum for all students. Its standards are demanding in terms of course organization, professional performance and student achievement. To this end, the Department continually evaluates itself, responding to new developments and possibilities in the field of English.

### **Philosophy**

Culturally, socially and linguistically all languages are useful. The domain of the vernacular contributes a sense of identity and provides a powerful means of communication. But in our multicultural world, learning other languages and knowing their cultural aspects is of great value for everyone and essential for the college student. One of those languages is English. In particular, the requirements of communication in a global economy requires knowledge of specific international languages which are accepted as main forms of dialogue. Undoubtedly, historical events have made English the preferred transaction in commerce, medicine, and science, among other international media. Therefore, proficiency, if not fluency in all aspects of English has become a requirement, an essential tool for competition in all major economic areas today.

The language is not learned in a vacuum. Man becomes a social being through its language, so the language is more than grammatical structures. A variety of English, like any other language, responds to the complex interplay between ideology, history, politics, and economics culminating in the term – culture. The department considers these important ideas by teaching a language. It strives to present the student those elements comprising the focused variety of English. Our goal is to open windows to the worlds

constructed by various cultural forms of language. Therefore, we consider an intellectual field all varieties of English and cultural texts that may occur from the literary canon from Shakespeare to contemporary visual aspects such as musical videos.

### **General objectives**

To support the mission of the University of Puerto Rico in Cayey, and staying true to the philosophy mentioned, any program offered by the English Department strives to develop in each student the following:

- communicational skills in English and meta-cognitive skills related to language learning;
- appreciation and understanding of the English - speaking cultures and cultural production;
- familiarization and use of technology related to the areas of language learning.
- awareness of the professional world, the work environment in general and the role of language in both;
- a sense of social responsibility based on respect for others and the natural environment.

## Bachelor of Arts English Major

<b>Core courses General Education</b>		
Code	Title	credit hours
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 ESPA 3211-3212	Introduction to Literary Genres I-II Introduction to Spanish Literature I-II	6
MATE 3041-3042	Introduction to Mathematics I-II	6
CIBI 3001-3002	Fundamentals of Biology I-II	6
HIST 3245	Compendium of History of Puerto Rico	3
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
Code	Title	credit hours
INGL 3101-3102 or INGL 3103-3104 or INGL (3XXX-4XXX)	Basic English I-II (450-539 points CEEB) Intermediate English I-II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
ICTP 3001-3002	Introduction to Physics I-II	6
MUSI 3225	Appreciation Elements of Music	3
HIST 3111	US History I	3
ART 3155 or ART 3156	Ancient and Medieval Art Modern and Contemporary Art	3
Elective Social Sciences	Directed Elective Social Sciences	6
elective Language	Directed Elective in Languages	6
<b>Specialty Courses / Major</b>		
Code	Title	credit hours
INGL 3001-3002	English Literature I-II	6
INGL 3231-3232	Advanced Composition I-II: Introduction to Rhetoric and Composition	6
INGL 3251-3252	American Literature I-II	6
INGL 4011	English phonetics and phonology	3
INGL 4407	Closing Seminar Experience English ( <i>Capstone</i> )	3
elective INGL	Directed Elective in English- Linguistics	3
<b>Free Electives</b>		
Code	Title	credit hours
	electives	20
<b>Total Credit Hours</b>		<b>128</b>



DEPARTAMENTO DE  
**BIOLOGÍA**



## **BIOLOGY DEPARTMENT**

The Department of Biology, attached to the Natural Sciences area, offers courses leading to a Bachelor of Sciences with a major in Biology, and training requirements for other programs of Natural Sciences and pedagogy students. It also offers courses in general education and electives for students from other programs.

The department offers a core curriculum that includes the following courses: General Biology I (BIOL 3031C), Laboratory of General Biology I (BIOL 3033L), Botany (BIOL 3415), Zoology (BIOL 3405), Genetics (BIOL 3305), Biology Topics Literature (BIOL 3095) and a Seminar Integrating Biology Topics (BIOL 4915) After completing these, the student will have the option to choose between courses to train her/him specifically in one of the following areas: Biomedical, Botany, Zoology, Evolutionary and Cellular – Molecular Ecology. In collaboration with other units of the institution, the department also offers courses that enable students to pursue specialized studies related to professions in the health field.

The Biology Department at the University of Puerto Rico in Cayey, aware of its role in higher education and as a center of academic activity, uses all resources at its disposal to provide an undergraduate education of excellence. Thus the teaching of biology will be channeled within a framework of social responsibility with relevance to changing scenarios within the contemporary and universal society and the Puerto Rican reality

Its objectives are:

1. To promote student interest in the study of biology, for scientific research and the application of findings derived from such activities.
2. Prepare students to understand, explain and interrelate the theoretical concepts learned in class with practical experiences gained in the laboratory or through scientific research.
3. Prepare professionals who can efficiently apply their knowledge in solving problems related to biology faced by the people of Puerto Rico and the world.
4. Introduce Biology in an integrated way, which will enable the student to better understand the complexities of the world in which we live.

It specifically aims to:

1. Provide a curriculum with a logical organization with varied, updated levels of complexity, in the field of biology at the undergraduate level that prepare students to pursue graduate and professional studies.
2. Provide experiences, including scientific research opportunities that allow students to apply and relate the knowledge of the various fields of biology with their studies and with the different and contemporary schools of thought, in their general education, their daily lives and their future professional performance.
3. Provide students the opportunity to conduct scientific research in the field of biological sciences incorporating modern technology.
4. Facilitate knowledge in biology for those wishing to engage in the teaching of natural sciences.
5. Prepare the student for the evaluation of information in the areas of biology and its relation to the different currents of contemporary thought.
6. Prepare the student for effective oral and written communication in the field of biology.
7. Prepare students for using the available research resources and the various sources of information for the development of skills in the preparation and presentation of written and oral work.
8. To work closely with the Division of Continuing Education and Professional Studies institution to offer evening and Saturday courses.
9. Encourage interaction and exchange of faculty and talented students with researchers, scientists and educators from institutions within and outside of Puerto Rico.
10. Encourage the department's participation in educational activities aimed at the external community.
11. Encourage the study of the contribution of local scientists (biologists) in the advancement of science and the development of activities that encourage open discussion of topics in biology.
12. Facilitate the knowledge and skills that enable students to understand the environmental reality of Puerto Rico and the importance of conservation of natural resources.
13. Enable the student to understand biological phenomena responsible for diversity and human behavior and social and environmental responsibility.

*Baccalaureate Program described here represents a curricular revision that was approved by the Academic Senate in 1999 (Certification 115, 98-99) \*.*

## Bachelor of Science Majoring in Biology

<b>Core courses General Education</b>		
Code	Title	credit hours
CISO 3121-3122	Introduction to Social Sciences I-II	6
ESPA 3101-3102	Basic Spanish I-II	6
ESPA 3201-3202 or ESPA 3211-3212	Introduction to Literary Genres I-II Introduction to Spanish Literature I-II	6
HIST 3245	History of Puerto Rico Compendium	3
HUMA 3101-3102	Western culture I-II	6
HUMA 3201-3202	Western culture III-IV	6
INGL 3101-3102 or INGL 3103-3104 or INGL (3XXX-4XXX)	Basic English I-II (450-539 points CEEB) Intermediate English I-II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
INGL 3201-3202 or INGL 3221-3222	Composition and Reading I-II (Prerequisite: Basic English) Introduction to Literature I-II (Prerequisite: English Intermediate or Advanced Level)	6
INGL (3XXX-4XXX)	Advanced Level English(Requirement: Intermediate or Advanced Level English)	
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
Code	Title	credit hours
MATE 3211-3212	Precalculus 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 3011-3013	University Physics I-II	6
FISI 3012-3014	University Physics Laboratory I-II	2
SOCI 3006 or FILO 4471	Sociology of Science Philosophy of Science	3
MATE 3015 or CITE 4005 or SICI 3007 or elective Physics	Elementary Statistics Introduction to Earth Science Basic programming Elective Physics	3 or 4
<b>Specialty Courses / Major</b>		
Code	Title	credit hours
BIOL 3031	General Biology I	3
BIOL 3033	General Biology Laboratory I	1
BIOL 3095	Literature and Bibliography-Biology Topics	1
BIOL 3305	Genetics	4
BIOL 3405	Zoology	4
BIOL 3415	General botany	4
BIOL 4915	Integration Seminar Topics in Biology ( <i>Capstone</i> )	3
electives BIOL	Electives Biology	12
<b>Free Electives</b>		

<b>Code</b>	<b>Title</b>	<b>credit hours</b>
	electives	12
	<b>Total Credit Hours</b>	<b>131-132</b>



## CHEMISTRY DEPARTMENT

The Department of Chemistry is attached to the area Natural Sciences area. Within the mission, goals and institutional objectives, the Department offers a program of study leading to the degree of Bachelor of Science majoring in Chemistry. To meet all of the degree's requirements the academic offering of the Chemistry Department includes 40 credits in specialty courses, which meet the necessary requirements of the Examining Board of Chemists of Puerto Rico for licensure as a chemist.

The philosophy of our Department of Chemistry is to develop a competent, honest and ever learning professional, must also be responsible to the environment, respect differences and appreciate other human beings. The Faculty of our Department also wants to train professionals with an integrated preparation that can appreciate the importance and changing nature of chemistry as a science and its social, economic and political impact on our people.

To comply with the philosophy, the Department of Chemistry generates a functional academic offerings for our department students and students from other departments who use our services. The variety of courses offered by the Department and the professional and academic experience of our students have established that they can focus on two lines of action (varieties) mainly industry or Graduate School.

For our students to be successful once the bachelor has been completed, the faculty of our Department is committed to:

1. Maintain an updated curriculum so that it meets the quality requirements of teaching and accreditation agencies. In addition, they incorporate extracurricular activities that enrich the education of our students.
2. Use strategies and effective teaching techniques to better achieve the objectives in each course.
3. Maintain as a goal the quality of student training while in the Department through an ongoing assessment program.

As a result of the above, the Department hopes that our graduates have:

1. Academic preparation that enables them to: (1) pursue graduate studies in Chemistry, and / or related areas, (2) perform professionally as a chemist.
2. the knowledge and skills necessary to pass the bar examination.

3. Ability to use or apply their knowledge and skills in chemistry in analyzing specific problems, propose solutions and assess the consequences thereof.
4. Ability to use chemical knowledge for reflection and take the appropriate decisions on matters related to chemistry, technology and the environment.
5. Ability to carry out independent learning.
6. Skills and knowledge to work in the field of scientific research.
7. Techniques, skills and scientific knowledge to teach high school chemistry
8. Capacity to contribute in the prevention, testing and troubleshooting of environmental problems.

## Bachelor of Science Majoring in Chemistry

<b>Core courses General Education</b>		
Code	Title	credit hours
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 ESPA 3211-3212	Introduction to Literary Genres I-II Introduction to Spanish Literature I-II	6
INGL 3101-3102 or INGL 3103-3104 or INGL (3XXX-4XXX)	Basic English I-II (450-539 points CEEB) Intermediate English I-II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
INGL 3201-3202 or INGL 3221-3222  INGL (3XXX-4XXX)	Composition and Reading I-II (Prerequisite: Basic English) Introduction to Literature I-II (Prerequisite: Intermediate or Advanced Level English) Advanced Level English (Requirement: Intermediate or Advanced Level English)	6
HIST 3245	History of Puerto Rico Compendium	3
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
Code	Title	credit hours
MATE 3171-3172	Pre-Calculus I-II	6
MATE 3052-3053	Calculus I-II	6
MATE 3054	calculation III	3
BIOL 3031-3103	General Biology 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
<b>Specialty Courses / Major</b>		
Code	Title	credit hours
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	Analytic chemistry	4
QUIM 3006	Biography and Literature Chemistry Seminar	2
QUIM 4041-4042	Physical Chemistry I-II	6
QUIM 4101-4102	Laboratory of Physical Chemistry I-II	2

QUIM 4015	Instrumental Analytical Chemistry ( <i>Capstone</i> )	4
QUIM 4000	Inorganic chemistry	3
elective QUIM	Directed Elective in Chemistry	3
<b>Free Electives</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
	electives	12
<b>Total Credit Hours</b>		<b>131</b>



## **MATHEMATICS-PHYSICS DEPARTMENT**

### **MISSION**

The Department of Mathematics and Physics, aware of the requirements imposed by our society in the information age, is committed to a comprehensive education of excellence by developing innovative academic programs with an interdisciplinary perspective. The integration of the disciplines we represent: Mathematics, Physics, Statistics and Informatics, allow us to connect themes and experiences of many other fields of knowledge to offer our students a formative college experience and of a great value in all dimensions of their development.

Our mission is focused on the students in hope that they are able to take advantage and use, throughout their lives, every opportunity that comes for updating, deepening and enriching the initial knowledge that was instilled in them while being able to adapt to a changing world. We want to help cultivate the students' self-esteem and self-confidence, initiative and leadership, independence of judgment and prudence in decision-making, enabling them to make critical and ethical judgments, anticipate and resolve problems, perceived opportunities and propose constructive changes on their physical and intellectual environment.

### **GENERAL GOALS AND OBJECTIVES**

1. Contribute to the development of a college education of excellence through the implementation of a modern curriculum and updated in harmony with the goals of the University of Puerto Rico at Cayey and meeting the following objectives:
  - a) Expand and give depth to the courses in the areas of Mathematics, Statistics, Computer Science and Physics integrating assessment as a way to enrich the teaching – learning process as well as the content and methodology of the courses.
  - b) Complete the development and implementation of the baccalaureate program in Physics with emphasis on the training of teachers.

- c) Contribute to continuously improve the training of mathematics teachers of the elementary and secondary levels.
  - d) Practice integration of disciplines and enrich our curriculum with a formal component of undergraduate research experiences or community service, as well as through courses with an interdisciplinary perspective.
  - e) Expand and consolidate the use of educational technology and optimize its use to promote effective learning spaces.
2. Make our department one of the main centers of academic activity at the University of Puerto Rico in Cayey, contributing to the development of the disciplines we represent and the ones we integrate, always meeting the following objectives:
- a) Encourage research and publications by faculty and support efforts of intra- and inter-agency collaboration.
  - b) Design and implement community service activities to meet community needs and to improve the quality of academic learning.
  - c) Build and maintain an atmosphere of encounter and exchange of ideas with other departments of the University of Puerto Rico at Cayey and the entire university community.
  - d) Strengthen professional links with academic departments in other universities, sharing resources and ideas.
  - e) Staying attentive and responsive to the realities and needs that come from the serviced society.
3. Consolidate a comprehensive system to support our academic management that would facilitate our aspirations of excellence with concrete and realistic actions, responding to the following general objectives:
- a) Develop and implement an operational strategic plan as an instrument to implement the principles expressed in this document.
  - b) Create an evaluation system in our department that allows us to recognize strengths and weaknesses, for making informed decisions.
  - c) Design and implement for our professors and staff a program of professional development, in harmony with other institutional efforts.
  - d) Actively participate in the design of the budget request in accordance with the established plans.

## Bachelor of Science Majoring in Mathematics

<b>Core courses General Education</b>		
Code	Title	credit hours
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 ESPA 3211-3212	Introduction to Literary Genres I-II Introduction to Spanish Literature I-II	6
INGL 3101-3102 or INGL 3103-3104 or INGL (3XXX-4XXX)	Basic English I-II (450-539 points CEEB) Intermediate English I-II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
INGL 3201-3202 or INGL 3221-3222  INGL (3XXX-4XXX)	Composition and Reading I-II (Prerequisite: Basic English) Introduction to Literature I-II (Prerequisite: Intermediate or Advanced Level English) English Advanced Level (Requirement: Intermediate or Advanced Level English)	6
HIST 3245	History of Puerto Rico Compendium	3
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
Code	Title	credit hours
MATE 3171-3172	Pre-Calculus I-II	6
QUIM 3131-3132	General Chemistry I-II	6
QUIM 3133-3134	General Chemistry Laboratory I-II	2
BIOL 3031-3103	General Biology 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
elective FISI	Directed Elective in Physics	3
elective SICI	Elective Computer-Second Level	3
<b>Specialty Courses / Major</b>		
Code	Title	credit hours
MATE 3052-3053	Calculus I-II	6
MATE 3015	Elementary Statistics	3
SICI 3007	Basic programming	3
MATE 3019	College geometry	3
MATE 3054 or MATE 4009	Calculus III Ordinary Differential Equations	3
MATE 4031	Linear algebra	3
MATE 4032-4033	Superior Algebra I-II	6
MATE 4035	Real analysis	3
MATE 4997	Special Topics in Mathematics ( <i>Capstone</i> )	3
<b>Free Electives</b>		
Code	Title	credit hours
	electives	12
<b>Total Credit Hours</b>		<b>129</b>

## **NATURAL SCIENCES PROGRAM**

The Natural Sciences Program involves the student with the fields of natural sciences, such as Biology, Chemistry, Physics and Mathematics. It offers a Bachelor of Sciences degree consisting of 132 credits.

The program allows the student to meet the requirements to continue studies in professional or graduate schools such as Medicine, Dentistry and Allied Sciences to Health (Medical Technology, Nursing, Pharmacy and Physical or Occupational Therapy, among others). Students can combine two (2) majors using directed electives and free electives that the Program allows.

In today's modern scientific and technological world it becomes increasingly evident the need for scientists with a broad perspective. There are multiple applications and research fields that require more than one specialization and expertise in various disciplines.



The Natural Sciences Program proposes the training of professionals who work in fields that require a broad view of science and the world. Seeks to provide various curricular options so that graduates have more and better employment opportunities, as well as an excellent preparation for those who pursue graduate or professional studies. It also provides the opportunity to explore various fields before deciding on specialization in any of them.

The Natural Sciences Program is committed to providing a comprehensive, flexible and varied curriculum in the natural sciences and mathematics so that graduates can perform successfully at the personal, and professional level and their graduate studies.

Our vision is to provide an education of excellence in the natural sciences that is characterized by its interdisciplinary and innovative nature and promotes the integration of various disciplines of natural sciences and mathematics, keeping in perspective the value of professional expertise.

The objectives of the program are:

1. Offer a curriculum with interdisciplinary approach that gives students a solid foundation of skills and content.
2. Provide a quality, flexible, and agile curriculum that allows the student to pursue graduate studies and complete requirements to continue studies in professional schools.
3. Contribute to the development of research experiences and community service.

The Natural Sciences Program is located in the New Science Building Office 330.

## Bachelor of Science Majoring in Natural Sciences

<b>Core courses General Education</b>		
Code	Title	credit hours
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 ESPA 3211-3212	Introduction to Literary Genres I-II Introduction to Spanish Literature I-II	6
INGL 3101-3102 or INGL 3103-3104 or INGL (3XXX-4XXX)	Basic English I-II (450-539 points CEEB) Intermediate English I-II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
ENGL 3201-3202 or ENGL 3221-3222  INGL (3XXX-4XXX)	Composition and Reading I-II (Prerequisite: Basic English) Introduction to Literature I-II (Prerequisite: Intermediate or Advanced Level English) English Advanced Level (Requirement: Intermediate or Advanced Level English)	6
HIST 3245	History of Puerto Rico Compendium	3
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
Code	Title	credit hours
BIOL 3031-3103	General Biology 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
MATE 3171-3172	Pre-Calculus 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 MATE 3015	Basic programming Elementary Statistics	3
SOCI 3006	Sociology of Science	3
Social Sciences Elective	Directed Elective Social Sciences	3
<b>Specialty Courses /Major</b>		
Code	Title	credit hours
elective QUIM	Directed Elective in Chemistry	4
elective BIOL	Directed Elective in Biology	4
elective FISI	Directed Elective in Physics	4
Science or Mathematics Elective	Electives in Science or Mathematics	12
NUTR 4177	Nutrition and Health ( <i>Capstone</i> )	3

<b>Free Electives</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
	electives	12
	<b>Total Credit Hours</b>	<b>132</b>



## **BUSINESS ADMINISTRATION**

### **Accreditations:**

The Department of Business Administration is accredited by the *Accreditation Council for Business Schools and Programs*.

The Department of Business Administration offers programs leading to the Bachelor of Business Administration. Academic programs consist of bachelors in Accounting and Management and the General Program in Business Administration. The Department has its Technology and Office Administration program which offers a Bachelor in Technology and Office Administration. This bachelor has two majors; Office systems and Office Administration. The Department of Business Administration aims to prepare professionals who happen to occupy leadership positions in organizations, both public and private, and contribute to the development of our society.

### **MISSION**

To develop in our students the competencies, skills, values and attitudes necessary for a competitive, ethic, and responsible integration in organizations. We encourage entrepreneurship and research through an innovative and comprehensive education of excellence.

### **VISION**

To be one of the top business schools in our country through academic excellence, modern facilities, technology and research integration and development of projects with the industry.

### **The objectives of the Business Administration program are:**

1. Apply models, strategies, tools and concepts to quantitative and qualitative data in the field of business.

2. Understanding the impact of microeconomic and macroeconomic issues on businesses.
3. Understand the accounting cycle and prepare financial statements in accordance with Generally Accepted Accounting Principles.
4. Apply the principles of finance to analyze financial statements and other financial information.
5. Apply management theories to understand organizational behavior and development.
6. Develop a high sense of ethics and social responsibility through adequate training.
7. Develop the commitment to become a responsible citizen in the community.
8. Develop the ability to analyze decisions that take into account all stakeholders.
9. Develop new business opportunities or products within an organization or as a sole proprietor.
10. Apply the principles of marketing to develop new business opportunities and to attract, retain and build customer relationships.
11. Develop computer literacy and the ability to use various software programs.
12. Use tools such as the internet to obtain, process and analyze information.
13. Provide students with a comprehensive approach for addressing the issues of globalization and international business.
14. Develop awareness of business practices of other countries.
15. Promote respect for diversity and understanding of other cultures.
16. Develop research skills through case studies, business problems and projects.
17. Apply research skills for problem solution.
18. Develop leadership skills.
19. Improve oral communication and writing skills in both Spanish and English.

### **The graduate should be able to:**

1. Analyze financial statements and other financial information.
2. Know and solve the everyday problems faced by business managers using management principles.
3. Demonstrate ethical awareness and professionalism to make business decisions, recognizing the impact on stakeholders.
4. Be aware of the legal and regulatory aspects of business.
5. Identify and evaluate business opportunities and build relationships with customers.
6. Use word processing, spreadsheet, database and Internet tools for the collection, processing and analysis of information.
7. Demonstrate awareness, knowledge and appreciation of global business practices, diversity and multiculturalism.
8. Conduct research and study business consulting, adequate print and electronic sources and make recommendations and conclusions based on the information gathered.
9. Develop and apply the skills to lead and motivate others; maintaining effective interpersonal relationships in teamwork environment; and communicate effectively in Spanish and English.

## Business Administration Bachelor Majoring in Accounting

<b>Core courses General Education</b>		
Code	Title	credit hours
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
INGL 3101-3102 or INGL 3103-3104 or INGL (3XXX-4XXX)	Basic English I-II (450-539 points CEEB) Intermediate English I-II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
MATE 3011-3012	Quantitative Methods I-II	6
CIBI 3001-3002 or ICTP 3001-3002	Fundamentals of Biology I-II Introduction to Physics I-II	6
HIST 3245	History of Puerto Rico Compendium	3
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
Code	Title	credit hours
ECON 3005	Introduction to Economics	3
FILO 4021	Principles of Ethics	3
INCO 4005	Pronunciation techniques	3
PSIC 3005	General psychology	3
ESCO 3001-3002	Psychology of Communication I-II	6
INCO 3005-3006	Commercial Communication I-II	6
THIS 3001	Business Statistics I	3
THIS 3002	Statistical Analysis II	3
FINA 3006	Commercial finance	3
FINA 3007	Money and Banking	4
MERC 3115	Principles of Marketing	3
CONT 3005-3006	Introduction to the Fundamentals of Accounting I-II	8
DEME 4005	Commercial law	4
ADMI 4005	Introduction to Management Activity	3
ADMI 4006	Quantitative Analysis for Decision	3
<b>Specialty Courses / Major</b>		
Code	Title	credit hours
CONT 3025	Cost Accounting	4
CONT 3101-3102	Philosophy, Theory and Problems of Financial Accounting I-II	6
CONT 4015	Theory and Problems Advanced Accounting	4
CONT 4040	Audit of Commercial Business and Professional Services ( <i>Capstone</i> )	4
electives CONT	Electives in Accounting	6
<b>Free Electives</b>		
Code	Title	credit hours
	electives	6
<b>Total Credit Hours</b>		<b>136</b>

**Business Administration Bachelor  
Majoring in General Business Administration**

<b>Core courses General Education</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
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
INGL 3101-3102 or INGL 3103-3104 or INGL (3XXX-4XXX)	Basic English I-II (450-539 points CEEB) Intermediate English I-II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
MATE 3011-3012	Quantitative Methods I-II	6
CIBI 3001-3002 or ICTP 3001-3002	Fundamentals of Biology I-II Introduction to Physics I-II	6
HIST 3245	History of Puerto Rico Compendium	3
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
ECON 3005	Introduction to Economics	3
FILO 4021	Principles of Ethics	3
INCO 4005	Pronunciation techniques	3
PSIC 3005	General psychology	3
ESCO 3001-3002	Psychology of Communication I-II	6
INCO 3005-3006	Commercial Communication I-II	6
THIS 3001	Business Statistics I	3
THIS 3002	Statistical Analysis II	3
FINA 3006	Commercial finance	3
FINA 3007	Money and Banking	4
MERC 3115	Principles of Marketing	3
CONT 3005-3006	Introduction to the Fundamentals of Accounting I-II	8
DEME 4005	Commercial law	4
ADMI 4005	Introduction to Management Activity	3
ADMI 4006	Quantitative Analysis for Decision	3
ADMI 4007	Strategic Management ( <i>Capstone</i> )	3
<b>Specialty Courses / Major</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
Electives CONT, MERC, FINA, REHU	Electives in Accounting, Marketing, Finance, Human Resources	12
<b>Free Electives</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
	electives	12
<b>Total Credit Hours</b>		<b>133</b>

## Bachelor in Business Administration Majoring in Management

<b>Core courses General Education</b>		
Code	Title	credit hours
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
INGL 3101-3102 or INGL 3103-3104 or INGL (3XXX-4XXX)	Basic English I-II (450-539 points CEEB) Intermediate English I-II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
MATE 3011-3012	Quantitative Methods I-II	6
CIBI 3001-3002 or ICTP 3001-3002	Fundamentals of Biology I-II Introduction to Physics I-II	6
HIST 3245	History of Puerto Rico Compendium	3
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>No Core courses</b>		
Code	Title	credit hours
ECON 3005	Introduction to Economics	3
FILO 4021	Principles of Ethics	3
INCO 4005	Pronunciation techniques	3
PSIC 3005	General psychology	3
ESCO 3001-3002	Psychology of Communication I-II	6
INCO 3005-3006	Commercial Communication I-II	6
THIS 3001	Business Statistics I	3
THIS 3002	Statistical Analysis II	3
FINA 3006	Commercial finance	3
FINA 3007	Money and Banking	4
MERC 3115	Principles of Marketing	3
CONT 3005-3006	Introduction to the Fundamentals of Accounting I-II	8
DEME 4005	Commercial law	4
ADMI 4005	Introduction to Management Activity	3
ADMI 4006	Quantitative Analysis for Decision	3
<b>Specialty Courses / Major</b>		
Code	Title	credit hours
ADMI 4007	Strategic Management ( <i>Capstone</i> )	3
CONT 4006	Management accounting	3
GEOP 4315	Production and Operations Management	3
REHU 4405	Human resources management	3
REHU 4409	Human relations	3
Electives REHU or MERC	Electives Human Resources or Marketing	6
<b>Free Electives</b>		
Code	Title	credit hours
	electives	6
<b>Total Credit Hours</b>		<b>133</b>



## **TECHNOLOGY AND OFFICE MANAGEMENT PROGRAM**

The Technology and Office Management program (TAOF) is an academic-administrative unit, attached to the Department of Business Administration, offering the Bachelor in Technology and Office Administration with two majors: Office Administration and Office Systems. It also offers a curricular sequence in Technology and Office Administration.

The Technology and Office Management program, began as an Associate Degree in Secretarial Sciences in August 1982. In August 1999, the Bachelor of Technology and Office Administration was approved, with the two majors mentioned in the preceding paragraph. At the moment the Associate Degree is not being offered.

This program prepares our graduates to serve as Administrative Assistants, Secretary, Executive Secretary, Bilingual Secretary, among others; in industry, banking and private and public agencies.

### **MISSION:**

The Technology and Office Administration program's mission is to serve the Puerto Rican community, government agencies and private companies by preparing professionals in the field of office administration, in an integral manner. Our mission includes providing students with learning experiences that enable them to acquire knowledge, develop technological and personal skills, moral, ethical, and intellectual habits and attitudes of excellence that allow them to be professional and successful citizens in the organizational environment and committed to social citizen responsibility.

Our mission also includes providing activities and professional development opportunities to our faculty, so that they are prepared and updated on new trends in the teaching-learning process in the office management area.

## Bachelor of Technology and Office Administration Majoring in Office Management

<b>Core courses General Education</b>		
Code	Title	credits hours
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
INGL 3101-3102 or INGL 3103-3104 or INGL (3XXX-4XXX)	Basic English I-II (450-539 points CEEB) Intermediate English I-II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
XXXX MATE	Elective Mathematics	6
CIBI 3001-3002 or ICTP 3001-3002	Fundamentals of Biology I-II Introduction to Physics I-II	6
HIST 3245	History of Puerto Rico Compendium	3
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>No Core courses</b>		
Code	Title	credit hours
ADMI 4005	Introduction to Management Activity	3
ESCO 3001-3002	Psychology of Communication I-II	6
FILO 4021	Principles of Ethics	3
INCO 3005-3006	Commercial Communication I-II	6
INCO 4005	Pronunciation techniques	3
INGL 3191	Introduction to Speech Communication:	3
PSIC 3005	General psychology	3
CONT 3015	Elemental Accounting for Secretaries	3
<b>Specialty Courses / Major</b>		
Code	Title	credit hours
TAOF 3008	Concepts Office Systems and Technology	3
TAOF 3009	Administration, Management and Conservation of Documents	3
TAOF 3015	Personal development	2
TAOF 3016	Learning the keyboard and Applications	4
TAOF 3017	Formats and Document Production	4
TAOF 3018	Production of Documents	4
TAOF 3019	Integration Program for Design and Electronic Information Processing	4
TAOF 3025	Spanish transcript and English by Magnetic Media	4
TAOF 4015	Administrative Office Systems and Procedures	3
TAOF 4016	Supervision and Administration Office	3
TAOF 4024	Integration of Office Systems	3
TAOF 4025	Seminar and Internship Office Management ( <i>Capstone</i> )	5
elective TAOF	Directed Elective in TAOF	3
<b>Free Electives</b>		

<b>Code</b>	<b>Title</b>	<b>credit hours</b>
	electives	12
	<b>Total Credit Hours</b>	<b>135</b>



## **PEDAGOGY DEPARTMENT**

### **Teacher Preparation**

*Accredited by the Council for the Accreditation of Educator Preparation (CAEP)*

Since its foundation, the University of Puerto Rico in Cayey has been dedicated to the formative and experimental work in the fields of science, liberal arts, and education. Its first baccalaureate program in science and arts was designed to be sufficient and valid in itself and also facilitate the effective preparation of future teachers. In greater degree than any other profession, the teaching profession requires a liberal formation; since its inception teacher training is one of the central objectives of the University of Puerto Rico. The baccalaureate program aims to present and relate the main academic disciplines as coherent phases but not isolated from a greater reality: humanity's cultural heritage. Regarding future teachers of primary and secondary school, an integrated vision provides a starting point equal to or better than that provided by specialized programs. A teacher who has reached a general cultural perspective with significant experiences in thinking, analyzing, organizing and appreciation, conscious of the available pedagogical techniques, will be basically able to take on this huge responsibility and challenge of educating children. (Ref. -A Four-year program for Cayey)

The renewed mission of the University of Puerto Rico in Cayey reaffirms the commitment to train teachers with a broad, inclusive, dynamic and innovative cultural vision of knowledge, of the human being, and the teaching and learning process.

All baccalaureate programs in Education at the University of Puerto Rico in Cayey integrate general education courses, pedagogy courses and major courses in an academic discipline. In the teacher preparation program the Pedagogy Department is involved in an outstanding manner through the bachelor programs of elementary and secondary education that are offered. The Office of the Academic Dean coordinates the interaction of the Pedagogy Department with the departments that contribute to its specialty.

Students from other programs who aspire to obtain a teaching certification can also take as elective those education courses that are required according to regulations on Teacher Certification from the Department of Education of Puerto Rico.

The Pedagogy's curriculum offer consists mainly of the Foundation courses in Education, the teaching methodology courses, and courses associated to the teaching practicum. For the teaching practicum, by agreement with the Department of Education of Puerto Rico, the student- teachers are assigned to centers located in public schools in the surrounding region. The practitioner is supervised by cooperating teachers and specialty supervising professors with proper training in teaching methodologies.

The candidates for the degree of Bachelor of Arts in Elementary Education can choose a major among the following specialties (identified in brackets with the program code): English (0420), Social Studies (0422), Science (0423) Mathematics (0424), Spanish (0426) and Special Education (4995).

The candidates for the degree of Bachelor of Arts in Secondary Education may choose a major among the following specialties: Natural Sciences (0401), Mathematics (0404), Social Studies (0406), Physical Education (0409), History (0413), English (0414) and Spanish (0415).

To serve as a teacher, the graduate must meet the requirements of the Department of Education of Puerto Rico on Teacher Certification. The University of Puerto Rico in Cayey offers, including major and free elective courses, all preparation areas required by the current certification. On the one hand, the programs and graduation requirements meet the teacher that our academic community understands must be formed for the country. This profile includes content areas in addition to those listed in the Teacher Certification disciplines. On the other hand, it is for the student-teacher to complement the range of methodology courses required by UPR-Cayey with those who serve the additional tasks that are needed to meet current Teacher Certification. To apply for the teaching practicum the student will have a minimum grade point average (GPA), and in the specialty of 2.50 (based on a 4.0 average system).

In its philosophy and guidance, the Pedagogy Department as part of the educational system does not find its reason in itself, but on the functions that meets society. Its main purpose is to guide the formation of the personality of the educational professional by cultivating the values of a democratic society and to contribute to the intellectual and professional training of the future teacher that allows her/him to perform successfully in the field of Pedagogy. The educational professional should demonstrate a responsible attitude to act against the needs of a dynamic and economic production, and to the adjustments of social and cultural structures, and to address the aspirations of people in the sense of an individual statement and a social achievement.

These are the general objectives of the Department:

1. Develop in students an anthropological vision and sociological conception of education that allows for their educational activity to have as its basis a concept of man as subject and a starting point.

2. Develop in students the concepts of nature, of Science and Arts, their mutual relations and their social and human importance, in addition to the knowledge of the behavior of protagonists in the teaching-learning process.
3. Instill in the students a critical attitude aimed at seeking a scientific explanation within the social framework in which their professional action takes place.

The program aimed at achieving the degree of Bachelor of Arts in Elementary and Secondary Education serves the preparation of teachers through activities or internal practices that are proper to this department, i.e. teaching, educational research and educational extension.

In teaching, it attends the preparation of teachers who:

- demonstrate mastery of content in the area of their specialization.
- evidence mastery and use of teaching strategies in the design, development and evaluation of learning.
- are distinguished by their professional pride, tact and ethics in the performance of their duties as educational professionals.

In research, it directs its efforts to ensure that future teachers can use the structures and critical thinking methods in the analysis of the surrounding realities with which they have to correlate the teaching and learning process.

In its community service counseling, guide their efforts to ensure that future teachers:

- a. recognize the need to update their knowledge and professional development through continuing education
- b. to project their influence beyond the campus exhibiting cultural leadership in their community and performing community projects that impact their immediate surrounding or the specific needs of the region with a focus on action research.

**Bachelor of Arts in Elementary Education  
Majoring in Natural Sciences**

<b>Core courses General Education</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
HUMA 3111 - 3112	Western Culture I - II Compendium	6
CISO 3121 - 3122	Introduction to Social Sciences I - II	6
ESPA 3101 - 3102	Basic Spanish I - II	6
ESPA 3201-3202	Introduction to Literary Genres I - II	6
INGL 3101 - 3102 or INGL 3103 - 3104 or INGL (3XXX-4XXX)	Basic English I-II (450-539 points CEEB) Intermediate English I-II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
INGL 3021 - 3022	Oral and Written English I - II	6
HIST 3245	History of Puerto Rico Compendium	3
MATE 3171 - 3172	Pre-Calculus I - II	6
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical Foundations and Social 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 the Elementary School	3
EDPE 3016 or EDPE 3045	Teaching Music in School Plastic Arts in Elementary School	3
EDPE 3018	Teaching English as a Second Language in Elementary School	3
EDES 4006	The Exceptional Child with Assistive Technology component	3
HIST 3115	History of the United States (compendium)	3
TEED 3008	Introduction to Educational Technology	3
EDFU 3046	Health Education in the Elementary School	3
EDFI 3105 or EDFI 3585	Simple Corporate Games Basic rhythms	2
EDPE 4XXX *	Teaching Spanish and Social Studies in Elementary School *	3
EDPE 4115	Teaching of Science and Mathematics in Elementary School	3
EDPE 4016	Teaching Practicum in Elementary School ( <i>Capstone</i> )	6
<b>Sciences courses</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
BIOL 3031 - 3103	General Biology I - II	6
BIOL 3033 - 3104	Laboratory of General Biology I - II	2
QUIM 3131 - 3132	General Chemistry I - II	6
QUIM 3133 - 3134	General Chemistry Laboratory I - II	2
BIOL 3405 or 3415	General Zoology and Laboratory or General Botany and laboratory	4

<b>Free Electives</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
	<b>electives</b>	<b>9</b>
	<b>Total Credit Hours</b>	<b>130</b>

- *New Course submitted for coding.*

**Bachelor of Arts in Elementary Education  
Majoring in English**

<b>Core courses General Education</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
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	Introduction to Literary Genres I - II	6
INGL 3103 - 3104 or INGL 3231 - 3232	Intermediate English I - II Advanced Composition I - II	6
HIST 3245	History of Puerto Rico Compendium	3
MATE 3041 - 3042	Introduction to Mathematics I - II	6
CIBI 3001 - 3002 or ICIF 3001 - 3002	Fundamentals of Biology I - II Introduction to Physics I - II	6
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
ENGL 3021 - 3022	Oral and Written English I - II	6
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical Foundations and Social Education	3
EDFU 4019	Philosophical Foundations of Education	3
EDFU 3017	Learning Assessment	3
EDFU 4005	The Study of Man and Physical Environment	3
EDPE 3016 or EDPE 3045	Music Teaching at School or Plastic Arts in Elementary School	3
EDPE 3018	Teaching English as a Second Language in Elementary School	3
EDES 4006	The Exceptional Child with Technological Assistance Component	3
HIST 3115	History of the United States (Compendium)	3
EDFI 3105 or EDFI 3585	Simple Corporate Games or Basic rhythms	2
TEED 3008	Introduction to Educational Technology	3
EDFU 3046	Health Education in the Elementary School	3
EDPE 4XXX *	Teaching Spanish and Social Studies in Elementary School *	3
EDPE 4115	Teaching of Science and Mathematics in Elementary School	3
EDPE 4016	Teaching Practicum in Elementary School ( <i>Capstone</i> )	6
<b>Specialty Courses in English</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
INGL 4335	Second Language Acquisition	3
INGL 4326	Children's literature	3

INGL 3225	Introduction to Linguistics (requirement for other advanced linguistics)	3
XXXX INGL	Intermediate or Advanced Literature	6
XXXX INGL	Advanced linguistics	6
<b>Free Electives</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
	<b>electives</b>	<b>6</b>
<b>Total Credit Hours</b>		<b>131</b>

\* New Course Submitted for codification.

## Bachelor of Arts in Elementary Education Majoring in Special Education

<b>Core courses General Education</b>		
Code	Title	credit hours
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	Introduction to Literary Genres I - II	6
INGL 3101 - 3102 or INGL 3103 - 3104 or INGL (3221 -3222)	Basic English I - II (450-539 points CEEB) Intermediate English I - II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
HIST 3245	History of Puerto Rico Compendium	3
MATE 3041 - 3042	Introduction to Mathematics I - II	6
CIBI 3001 - 3002 or ICIF 3001 - 3002	Fundamentals of Biology I - II Introduction to Physics I - II	6
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
Code	Title	credit hours
INGL 3021 - 3022	Oral and Written English I - II	6
EDFI 3645	First Aid and Safety	2
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical Foundations and Social Education	3
EDFU 4019	Philosophical Foundations of Education	3
HIST 3115	History of the United States (Compendium)	3
TEED 3008	Introduction to Educational Technology	3
EDES 4096	Methodology and Teaching of Reading and Writing in K-12 Educ. Special	3
EDES 4097	Teaching Methodology and Language Arts. K-12 Educ. Special	3
EDES 4098	Methodology and Teaching Mathematics K-12 Educ. Special	3
<b>Specialty Courses / Major</b>		
Code	Title	credit hours
EDPE 4115	Teaching of Science and Mathematics in Elementary School	3
EDES 3017	Arts in Special Education	3
EDES 3018	Emotional disturbances	3
EDES 3019	Specific Learning Disabilities	3
EDES 4006	The Exceptional Student	3
EDES 4078 - 4079	Special Education Curriculum I - II	6
EDES 4086	Mental retardation	3
EDES 4087	The School Age Child Prevented	3
EDFI 3395	Teaching Physical Education for Disabled	3
EDES 4088	Assessment in Special Education	3
EDES 4089	Practicum in Special Education ( <i>Capstone</i> )	6

<b>Free Electives</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
	<b>electives</b>	<b>6</b>
<b>Total Credit Hours</b>		<b>128</b>

## Bachelor of Arts in Elementary Education Majoring in Spanish

### Core courses General Education

Code	Title	credit hours
Huma 3111 - 3112	Western Culture I - II Compendium	6
CISO 3121 - 3122	Introduction to Social Sciences I - II	6
ESPA 3201 - 3202	Introduction to Literary Genres I - II	6
INGL 3101 - 3102 or INGL 3103 - 3104 or INGL (3XXX-4XXX)	Basic English I - II (450-539 points CEEB) Intermediate English I - II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
ENGL 3021-3022	Oral and Written English I - II	6
HIST 3245	Compendium of History of Puerto Rico	3
MATE 3041 - 3042	Introduction to Mathematics I-II	6
CIBI 3001 - 3002 or ICIF 3001 - 3002	Fundamentals of Biology I - II Introduction to Physics I - II	6
INTD 3027	Interdisciplinary Seminar Freshman	3

### Non- Core courses

Code	Title	credit hours
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical Foundations and Social 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 EDPE 3045	Teaching Music in School Plastic Arts in Elementary School	3
EDPE 3018	Teaching English as a Second Language in Elementary School	3
EDES 4006	The Exceptional Child with the Technological Assistant Component	3
HIST 3115	History of the United States (Compendium)	3
EDPE 4008	Teaching Reading in the Elementary School	3
EDFI 3105 or EDFI 3585	Simple Corporate Games or Basic rhythms	2
TEED 3008	Introduction to Educational Technology	3
EDFU 3046	Health Education in the Elementary School	3
EDPE 4XXX *	Teaching Spanish and Social Studies in Elementary School *	3
EDPE 4115	Teaching of Science and Mathematics in Elementary School	3

EDPE 4016	Teaching Practicum in Elementary School ( <i>Capstone</i> )	6
<b>Spanish courses</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
ESPA 3291 - 3292	Spanish Grammar I - II	6
ESPA 3211 - 3212	Introduction to Spanish Literature I - II	6
ESPA 4231 - 4232	Puerto Rican Literature I - II	6
<b>Free Electives</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
	<b>electives</b>	<b>9</b>
	<b>Total Credit Hours</b>	<b>128</b>

\* Submitted to New Coding Course

## Bachelor of Arts in Elementary Education Majoring in Mathematics

<b>Core courses General Education</b>		
Code	Title	credit hours
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	Introduction to Literary Genres I - II	6
INGL 3101 - 3102 or INGL 3103 - 3104 or INGL (3XXX-4XXX)	Basic English I-II (450-539 points CEEB) Intermediate English I - II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
INGL 3021-3022	Oral and Written English I-II	6
HIST 3245	History of Puerto Rico Compendium	3
CIBI 3001 - 3002 or ICIF 3001 - 3002	Fundamentals of Biology I - II Introduction to Physics I - II	6
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
Code	Title	credit hours
MATE 3041- 3042	Introduction to Mathematics I - II	6
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical Foundations and Social 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 the Elementary School	3
EDPE 3016 or EDPE 3045	Teaching Music in School Plastic Arts in Elementary School	3
EDPE 3018	Teaching English as a Second Language in Elementary School	3
EDES 4006	The Exceptional Child with Assistive Technology component	3
HIST 3115	History of the United States (Compendium)	3
EDFU 3046	Health Education in the Elementary School	3
EDFI 3105 or EDFI 3585	Simple Organizational Games or Basic rhythms	2
TEED 3008	Introduction to Educational Technology	3
EDPE 4XXX *	Teaching Spanish and Social Studies in Elementary School *	3
EDPE 4115	Teaching of Science and Mathematics in Elementary School	3
EDPE 4016	Teaching Practicum in Elementary School ( <i>Capstone</i> )	6
<b>Courses in Mathematics</b>		
Code	Title	credit hours
MATE 3171	Pre-Calculus I	3
MATE 3015	Elementary Statistics	3
MATE 4026	Elementary School Mathematics Teacher	3

MATE 4057	History of Mathematics	3
<b>Free Electives</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
	<b>electives</b>	<b>9</b>
<b>Total Credit Hours</b>		<b>128</b>

## Bachelor of Arts in Secondary Education Majoring in Natural Sciences

<b>Core courses General Education</b>		
Code	Title	credit hours
HUMA 3111 - 3112	Western Culture I - II Compendium	6
CISO 3121 - 3122	Introduction to Social Sciences I - II	6
ESPA 3101 - 3102	Basic Spanish I - II	6
ESPA 3201 - 3202	Introduction to Literary Genres I - II	6
INGL 3101 - 3102 or INGL 3103 - 3104 or INGL (3XXX-4XXX)	Basic English I - II (450-539 points CEEB) Intermediate English I - II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
INGL 3201 - 3202 or	Composition and Reading I - II	6
HIST 3245	History of Puerto Rico Compendium	3
MATE 3211 - 3212	Pre-calculus with Experiments I - II	6
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
Code	Title	credit hours
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical Foundations and Social Education	3
EDFU 4019	Philosophical Foundations of Education	3
EDES 4006	The Exceptional Child with Assistive Technology component	3
EDFU 3017	Learning Assessment	3
EDFU 4005	The Study of Man and His Physical Environment	3
HIST 3115	History of the United States (Compendium)	3
TEED 3008	Introduction to Educational Technology	3
EDPE 4135	Theory and Methodology of Science Teaching in High School	3
EDPE 4006	Teaching Practicum in Secondary School ( <i>Capstone</i> )	6
<b>Specialty Courses / Major</b>		
Code	Title	credit hours
MATE 3052	Calculus I	3
BIOL 3031 - 3103	General Biology I - II	6
BIOL 3033 - 3104	Laboratory of General Biology I - II	2
QUIM 3131 - 3132	General Chemistry I - II	6
QUIM 3133 - 3134	General Chemistry Laboratory I - II	2
QUIM 3015	Organic Chemistry Compendium	3
QUIM 3015	Organic Chemistry Laboratory Compendium	1
FISI 3011 - 3012	General Physics I - II	6
FISI 3013 - 3014	General Physics Laboratory I - II	2
BIOL 3305	Genetics with Lab.	4
<b>Free Electives</b>		
Code	Title	credit hours
	<b>electives</b>	<b>9</b>
<b>Total Credit Hours</b>		<b>128</b>

## Bachelor of Arts in Secondary Education Majoring in Spanish

<b>Core courses General Education</b>		
Code	Title	credit hours
HUMA 3111 - 3112	Western Culture I - II Compendium	6
CISO 3121 - 3122	Introduction to Social Sciences I - II	6
ESPA 3101 - 3102	Basic Spanish I - II	6
INGL 3101 - 3102 or INGL 3103 - 3104 or INGL (3221 - 3222)	Basic English I - II (450-539 points CEEB) Intermediate English I - II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
ENGL 3201 - 3202	Composition and Reading I - II	6
HIST 3245	History of Puerto Rico Compendium	3
MATE 3041 - 3042	Introduction to Mathematics I - II	6
CIBI 3001 - 3002 or ICIF 3001 - 3002	Fundamentals of Biology I - II Introduction to Physics I - II	6
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
Code	Title	credit hours
ESPA 3211 - 3212	Introduction to Spanish Literature I - II	6
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical Foundations and Social Education	3
EDFU 4019	Philosophical Foundations of Education	3
EDES 4006	The Exceptional Child with Technological Assistant Component	3
EDFU 3017	Learning Assessment	3
EDFU 4005	The Study of Man and His Physical Environment	3
HIST 3115	History of the United States (Compendium)	3
TEED 3008	Introduction to Educational Technology	3
EDPE 4235	Theory and Methodology of Teaching Spanish in High School	3
EDPE 4006	Teaching Practicum in Secondary School ( <i>Capstone</i> )	6
<b>Specialty Courses / Major</b>		
Code	Title	credit hours
ESPA 3291 - 3292	Spanish Grammar I - II	6
ESPA 4011 - 4012	Hispanic Linguistics I - II	6
ESPA 4221 - 4222	American Literature I - II	6
ESPA 4231 - 4232	Puerto Rican Literature I - II	6
ESPA 4251 - 4252	Golden Age literature I - II	6
<b>Free Electives</b>		

<b>Code</b>	<b>Title</b>	<b>credit hours</b>
	<b>electives</b>	<b>9</b>
	<b>Total Credit Hours</b>	<b>129</b>

## Bachelor of Arts in Secondary Education Majoring in History

### Core courses General Education

Code	Title	credit hours
HUMA 3111 - 3112	Western Culture I - II Compendium	6
CISO 3121 - 3122	Introduction to Social Sciences I - II	6
ESPA 3101 - 3102	Basic Spanish I - II	6
ESPA 3201 - 3202	Introduction to Literary Genres I - II	6
INGL 3101 - 3102 or INGL 3103 - 3104 or INGL (3221 - 3222)	Basic English I - II (450-539 points CEEB) Intermediate English I - II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
INGL 3201	Composition and Reading I	3
MATE 3041 - 3042	Introduction to Mathematics I - II	6
CIBI 3001 - 3002 or ICIF 3001 - 3002	Fundamentals of Biology I - II Introduction to Physics I - II	6
INTD 3027	Interdisciplinary Seminar Freshman	3

### No Core courses

Code	Title	credit hours
ENGL 3202	Composition and Reading II	3
CISO 3085	Society and Culture of Puerto Rico	3
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical Foundations and Social 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
EDES 4006	The Exceptional Child with Technological Assistant Component	3
EDPE 4155	Theory and Methodology of Teaching History and Social Studies	3
TEED 3008	Introduction to Educational Technology	3
EDPE 4006	Teaching Practicum in Secondary School ( <i>Capstone</i> )	6

### Specialty Courses / Major

Code	Title	credit hours
GEOG 3165	Geography of Puerto Rico	3
HIST 3195	World of Antiquity	3
HIST 3185	Medieval History	3
HIST 3165	Renaissance History	3
HIST 3205	Contemporary World Issues	3
HIST 3241 - 3242	History of Puerto Rico I - II	6
HIST 3211 - 3212	Hispanic American History I - II	6
HIST 3111 - 3112	US History I - II	6
ECON 3085 or CIPO 3011	Economic and Social Development of Puerto Rico or Principles of Political Sciences	3

### Free Electives

Code	Title	credit hours
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	<b>electives</b>	<b>6</b>
	<b>Total Credit Hours</b>	<b>129</b>

## Bachelor of Arts in Secondary Education English Major

<b>Core courses General Education</b>		
Code	Title	credits hours
HUMA 3111 - 3112	Western Culture I - II Compendium	6
CISO 3121 - 3122	Introduction to Social Sciences I - II	6
ESPA 3101 - 3102	Basic Spanish I - II	6
ESPA 3201 - 3202	Introduction to Literary Genres I - II	6
INGL 3103 - 3104	Intermediate English I - II (540-640 points CEEB)	6
HIST 3245	History of Puerto Rico Compendium	3
MATE 3041 - 3042	Introduction to Mathematics I - II	6
CIBI 3001 - 3002 or ICIF 3001 - 3002	Fundamentals of Biology I - II or Introduction to Physics I - II	6
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
Code	Title	credit hours
INGL (3XXX - 4XXX) or INGL 3225	English Advanced Placement (Prerequisite: Intermediate or Advanced Level English) Introduction to Linguistics (Requirement: Intermediate or Advanced Level English)	6
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical Foundations and Social Education	3
EDFU 4019	Philosophical Foundations of Education	3
EDES 4006	The Exceptional Child with Technological Assistant Component	3
EDFU 3017	Learning Assessment	3
EDFU 4005	The Study of Man and His Physical Environment	3
HIST 3115	History of the United States (Compendium)	3
TEED 3008	Introduction to Educational Technology	3
EING 3515 *	Special Topics (Teaching Methodology "TESOL" K - 12) *	3
EING XXXX *	Teaching "ESL": reading and composition at the High School Level *	
EDPE 4006	Teaching Practicum in Secondary School ( <i>Capstone</i> )	6
<b>Specialty Courses / Major</b>		
Code	Title	credit hours
INGL 3335	Teen Literature	3
INGL 4335	Second Language Acquisition	3
INGL	Directed-Linguistics Intermediate or Advanced Composition	3
INGL	Addressed in Linguistics Advanced	6
INGL	Directed- Intermediate or Advanced Literature	12
INGL	Directed- Rhetoric or Critical Theory	3

<b>Free Electives</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
	<b>electives</b>	<b>9</b>
<b>Total Credit Hours</b>		<b>129</b>

*\* New Course submitted for Coding*

## Bachelor of Arts in Secondary Education Majoring in Mathematics

<b>Core courses General Education</b>		
Code	Title	credit hours
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	Introduction to Literary Genres I - II	6
INGL 3101 - 3102 or INGL 3103 - 3104 INGL 3221 - 3222	Basic English I - II (450-539 points CEEB) Intermediate English I - II (540-640 points CEEB) English Advanced Level English (641 or more points CEEB)	6
INGL 3201 - 3202	Composition and Reading I - II	6
HIST 3245	History of Puerto Rico Compendium	3
MATE 3211 - 3212	Pre-calculus with Experiments I - II	6
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
Code	Title	credit hours
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical Foundations and Social 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
HIST 3115	History of the United States (Compendium)	3
EDES 4006	The Exceptional Child with Technological Assistant Component	3
TEED 3008	Introduction to Educational Technology	3
EDPE 4145	Theory and Methodology of Teaching Mathematics in Esc. Secondary	3
EDPE 4006	Teaching Practicum in Secondary School ( <i>Capstone</i> )	6
<b>Specialty Courses /Major</b>		
Code	Title	credit hours
MATE 3052 - 3053	Calculus I - II	6
MATE 3015	Elementary Statistics	3
MATE 4031	Linear algebra	3
MATE 3019	College geometry	3
MATE 4032	Superior Algebra I	3
MATE 3054	Calculus III	3
FISI 3011 - 3012	General Physics I - II	6
FISI 3013 - 3014	General Physics Laboratory I - II	2
MATE 3046	Math Teacher at Secondary Level	3
MATE 3038	Introduction to Discrete Mathematics for Teachers	3
MATE 4057	History of Mathematics	3
<b>Free Electives</b>		

<b>Code</b>	<b>Title</b>	<b>credit hours</b>
	<b>electives</b>	<b>9</b>
	<b>Total Credit Hours</b>	<b>128</b>



## **PHYSICAL EDUCATION PROGRAM**

The Physical Education Program is an academic-administrative unit attached to the Pedagogy Department, which offers the Bachelor of Arts in Secondary Education with a major in Physical Education. It also offers a curricular sequence in Adapted Physical Education and Sports Training.

The program's vision is to aspire to create autonomous and sensitive individuals who believe in excellence as a standard of living, and that can be integrated into society as productive entities. In addition, provide learning experiences in physical education with a constructivist-humanistic and social Reconstructionism approach to promote the development of a productive and versatile human being, able to interact, adapt and be proactive in any environment.

The mission of the Physical Education Program is to provide a curriculum of excellence and academic strength and assist in the preparation of teachers / as regular physical education teachers and adapted physical education teachers.

The Faculty of the Physical Education Program understands that the goals of the program are:

1. Train the future physical educators and human movement specialists in the country with the knowledge inherent in their profession in its multiple facets and with the skills and competencies necessary for success in their professional endeavor.
2. Provide intellectual formative experiences and community service aimed at strengthening attitudes and skills in our graduates so that they are able to analyze and make critical judgments.
3. Form through a varied curriculum, students who can solve problems related to human movement in its multiple expressions with great potential for success.

The Faculty of the Physical Education Program understands that the general objectives of the program, and as a result of participation in the academic experiences offered by the program, students should be able to:

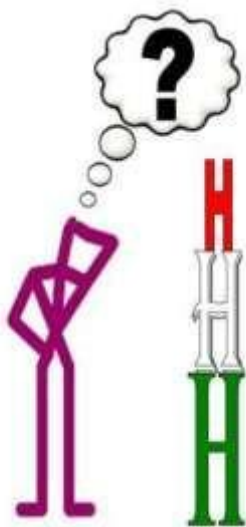
1. Apply the knowledge gained in community service experiences and other active learning environments such as laboratory, to prepare them to successfully enter the workforce.
2. Explain the scientific principles and other fundamental elements of the procurement process patterns right moves and proficient to humans.
3. Discuss the content of the different curricular documents related to the new approach of contemporary Physical Education.
4. Know and distinguish the different models and teaching styles of contemporary Physical Education and demonstrate skill and knowledge to meet the different student populations and their cultural differences and multiple intelligences.
5. Recognize and appreciate the enduring value of active lifestyles and healthy life and the teaching-learning of these, employing the use of authentic assessment as an indispensable instrument.
6. Will be prepared with the knowledge and skills that allow them to opt for certification in Secondary Level Physical Education and Adapted Physical Education.
7. May be certified in the areas related to physical education as CPR, First Aid, Rescue, Personal Training, among others.

## Bachelor of Arts in Secondary Education - Majoring in Physical education

<b>Core courses General Education</b>		
Code	Title	credit hours
HUMA 3111 - 3112	Western Culture I - II Compendium	6
CISO 3121 - 3122	Introduction to Social Sciences I - II	6
ESPA 3101 - 3102	Basic Spanish I - II	6
ESPA 3201 - 3202	Introduction to Literary Genres I-II	6
INGL 3101 - 3102 or INGL 3103 - 3104 or INGL (3XXX - 4XXX)	Basic English I - II (450-539 points CEEB) Intermediate English I - II (540-640 points CEEB) Advanced Level English (641 or more points CEEB)	6
HIST 3245	History of Puerto Rico Compendium	3
MATE 3041 - 3042	Introduction to Mathematics I - II	6
CIBI 3001 - 3002 or ICIF 3001 - 3002	Fundamentals of Biology I - II Introduction to Physics I - II	6
INTD 3027	Interdisciplinary Seminar Freshman	3
<b>Non- Core courses</b>		
Code	Title	credit hours
ENGL 3201 - 3202	Composition and Reading I - II	6
EDFU 3001 - 3002	Human Growth and Development I - II	6
EDFU 3007	Historical Foundations and Social Education	3
EDFU 4019	Philosophical Foundations of Education	3
EDES 4006	The Exceptional Child with Technological Assistant Component	3
EDFI 4045	Measurement, "assessment" and assessment in Physical Education K-12	3
EDFU 4005	The Study of Man and His Physical Environment	3
HIST 3115	History of the United States (Compendium)	3
TEED 3008	Introduction to Educational Technology	3
EDFI 4018	Methodology for Teaching Physical Education in the Elementary School	3
EDFI 4995	Pre-Practice in Physical Education	1
EDFI 4215	Seminar Curriculum and Teaching Methodology in Physical Education K-12	3
EDFI 4216	Teaching Practicum of Physical Education in High School ( <i>Capstone</i> )	6
<b>Specialty Courses / Major</b>		
Code	Title	credit hours
EDFI 3385	Physical efficiency	2
EDFI 4105	Exercise Physiology	3
EDFI 3105 or EDFI 3585	Simple and Organization Games or Basic rhythms	2

EDFI 3465	Personal Health and Community	3
EDFI 3555	History and Principles of Physical Education	3
EDFI 3645	First aid	2
EDFI 4115	Anatomy and Kinesiology	3
EDFI 4125	Administration of Physical Education	3
EDFI 3100	Motor learning	3
EDFI 4146	Law responsibility for Physical Education and Recreation	3
<b>Free Electives</b>		
<b>Code</b>	<b>Title</b>	<b>credit hours</b>
	<b>electives</b>	<b>9</b>
<b>Total Credit Hours</b>		<b>130</b>

## HONOR STUDIES PROGRAM



The Honor Studies program at the University of Puerto Rico in Cayey is a program dedicated to promoting high academic excellence. It is an active member of the National Collegiate Honors Council and the Honor Association of University Programs of Puerto Rico. In 2005 it received recognition from the Middle States Association as an exemplary honors program (Exemplary Honors Programs).

The program encourages comprehensive and interdisciplinary training and promotes the qualities that every college student needs, to address successfully, the time and historical space in which she/he lives. To this end, it encourages the development of attitudes, knowledge and skills necessary to carry out scientific research and promotes creative, artistic and literary activity. The Program fosters a climate that encourages critical thinking, self-directed learning, and exploring disciplines outside the field of expertise, leadership and commitment to improving society.

The Honor Studies Program allows a key segment of our students to have the opportunity to formalize more rigorous academic experiences and requirements. In this way gifted students have special attention and additional support and continuous reinforcement to the one received in their regular university courses and other experiences.

The program is rich in extracurricular activities. These develop leadership in the program members while providing the appropriate framework to impact students in the academic community who do not belong to the program, foster collaboration with professors from various departments, and attracts College students and professors from other institutions of the country, especially for discussion of problems and issues of our social environment. The **Meeting** of Honor programs held in Cayey since 1993, the workshops and conferences offered are evidence of the commitment with the reflection on those cultural, social, political, and educational aspects that have an impact on the work of the academic and surrounding community.

The quality and excellence of the program's students is reflected in its participation and presentation of papers in different academic activities such as the *National Conference Honors Council*, student associations, defenses of dissertations, and co-curricular activities. On the other hand, the publishing the magazine *Kalos* directed to the university community and cataloged in the *Latindex* has started. This allows the Program's students

to present their work and talents, while collecting curricular transformation and innovation that is experienced in the Program.

Finally, Community Service Practice allows students to serve and link their knowledge with the surrounding community, while helping and visualizing different solutions to the problems of living in community.

### **Honor Studies Program**

Honor Program students continue their regular bachelor curriculum in their major and complete, using elective credits or under provisions of Certification # 17 of the Board of Trustees of 1994-95, a minimum of 15 credits in the following activities:

1. **Research Seminar:** one semester course, with a value of one (1) to three (3) credit hours that aims for students to conduct scientific research and prepare a paper presenting the project and its results.
2. **Community Service Practicum:** semester course with value of three (3) credit hours which seeks to sensitize students about the problems faced by their community, while providing the tools for teamwork, carrying out the process decision making and problem solving. In it learners have the opportunity to offer their services through a responsible and ethical community intervention methodology. The communities can be diverse as well as the levels in which they work. The practicum is alternated with theoretical training. Communities may be urban or rural geographic areas or specific institutions, such as shelters, nursing homes, schools and others. Students can serve as mentors, facilitators, recreational leaders, readers and others.
3. **Languages and / or computers:** one to three course credit hours per semester. The study program will require at least two courses in languages and / or computers. These courses may represent more advanced levels of languages known by the student or the study of languages not known by her/him.

This may be achieved in various ways that are not understood as mutually exclusive:

- a) By studying advanced courses in English or Spanish for students who wish to achieve greater mastery than they have;
- b) with the study of a third language (Portuguese, French, German and others).
- c) By studying a computer course and of access to the Internet.

4. **Independent studies (directed Research):** These are semester courses with a load of one (1) to three (3) credit hours on a selected topic (the) student (s) in consultation with the Program Director and corresponding Area Representative (Advisory **Committee**), will help identify the most appropriate teacher for the project. Once (the) student (s) select (n) the professor who wants to work it will be the responsibility of the student (s) and the director to make the necessary approaches to the professor. The selected topic should represent a challenging and rigorous experience that meets the program objectives and the interests of the participants.

This type of educational experience aims to create a working team between the student and the professor who come together to explore a topic systematically, critically examine what is known about it and reach conclusions that the student presents clearly, with thoroughness and an open-mind.

5. **Dissertation (undergraduate):** The dissertation work will be worth three credit hours. It will be carried out with the collaboration of a research professor in the selected area. The theme may be in the student's area of specialization or another topic of particular interest to allow adequate preparation time. To meet this requirement, the student must submit his dissertation in writing to the *Dissertation Committee*. Once approved, the student will request a date for the defense of her/his work. The dissertation requirement is fulfilled when the student passes the oral defense of the project.

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

Students who understand that their occupational management is relevant to the subject of his dissertation may request the Committee authorization to include elements of it in its methodological design. However, work experience alone will not be validated for the dissertation requirement.

Similarly and in exceptional cases, the Committee may accept compliance with the requirement of equivalent dissertation another research work to be prepared for another agency or department of the institution. In these cases the student must obtain prior approval from the Program Committee. If approved at the end of the project, the student will have met the requirement, but will not get credit hours for it.

## **Philosophy**

The Honors Study Program encourages an interdisciplinary approach. It fosters the development of attitudes, knowledge and skills necessary to perform research, and creative, artistic and literary activity. It will provide a climate that encourages critical thinking, self-directed learning, the exploring of disciplines outside the field of expertise, leadership and commitment to improving society.

## **Program Objectives**

The Honor Studies Program aims to achieve a set of objectives which, are enforced in every college student, but in the program may be achieved to a greater degree. These objectives will also affect the rest of the students, faculty, institution and society in general.

### **The Honor Studies Program seeks:**

1. promote maximum integral development of its students;
2. provide opportunities for personal and professional development to faculty interested in working with students in the program;
3. strengthen the curriculum of the University by creating new courses and experiences and promote experimentation and innovation;
4. enrich the institutional environment and its level of intellectual life; and
5. contribute to improve the quality of life of the community and the solution of social problems.

### **Admission requirements for the program and its relationship with current general admission rules**

Sophomores onwards with **3.50** or more grade point average (GPA) may request admission to the program. 3.30 average or more for students with that are not part of the Program, Program courses count as free electives in interdisciplinary courses.

The program does not lead to degree or diploma, so their admission requirements are not in conflict with general admission rules in force. In light of the program objectives, the following admission requirements are proposed:

1. Has completed at least one semester at an accredited university and at most, be in their first semester of their third year classification;
2. grade point average (GPA) of 3.50 or more;
3. Interest and willingness to meet the requirements of the program;
4. Personal interview with members of the Advisory Committee of the candidate;
5. Complete the application form, letters of recommendation and essays;
6. Be recommended (a) for admission by the Advisory Committee

### **Academic requirements for granting the certificate**

The Honors Program of the Cayey University College will award a Special Certificate, not a degree or diploma because it is not a specialty. The student will obtain the degree or diploma by meeting the requirements set by the department for their specialty.

The Certificate awarded by the Honor Studies Program will be based on compliance with the following requirements:

Pass a minimum of fifteen (15) credit hours in five (5) core areas

- a. research seminars of one (1) to three (3) credit hours
- b. community service practicum three (3) credit hours
- c. languages and / or computers-one (1) to three (3) credit hours
- d. independent study - one (1) to three (3) credit hours
- e. dissertation (undergraduate)- three (3) credit hours

### **Additional Student Benefits**

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

1. Publication of their research and / or literary works in the Kalos Magazine, aimed at the university community and cataloged in the Latindex.
2. advance registration during the first day of the process.
3. priority access to Computer Center resources.
4. Equality of conditions with professors to make use of the
5. Exemption from payment of basic tuition.
6. individualized counseling.
7. Participation in conventions, cultural trips and co-curricular activities.
8. computer lab facilities, seminar rooms and audiovisual equipment.
9. Obtaining a certificate evidencing compliance with program requirements.
10. Payment of 15 additional credit hours in PEH courses (Cert. 027 Board of Trustees).
11. Publication of the dissertation (undergraduate), awarding of a medal and identification with a stole for UPR Cayey's graduation.
12. financial aid guidance, scholarships and internships in and outside of PR
13. graduate studies opportunities.

# **DIVISION OF CONTINUING EDUCATION AND PROFESSIONAL STUDIES AND THE EXTENDED UNIVERSITY**

## **Philosophy**

Throughout the life of human beings, education has contributed to the dissemination and preservation of cultural and ethical values, to a positive social change, the evolution of the workforce that promotes economic development, and therefore a sense of individual and collective realization that leads to a better quality of life. Historically, the Division of Continuing Education and Professional Studies and the Extended University, attached to the Dean of Academic Affairs, have contributed to fulfilling the mission of service to the University and has helped to expand the academic offer, both for the benefit of the internal and external community.

## **VISION**

The Division of Continuing Education and Professional Studies and the Extended University of the University of Puerto Rico with offices in the eleven institutional campuses of the system is a vehicle by which the University maintains close ties with its graduates; fulfills its mission to meet the needs of top communities in Puerto Rico and its educational environment, and its commitment to continuous search for new ways to respond fast and creatively to present and future challenges and opportunities. This synergistic relationship materializes through an innovative academic offer of excellence, relevant, comprehensive, dynamic, flexible and of high quality service, for professional and personal development of non-traditional students. In the globalization era and a knowledge-based economy, the University of Puerto Rico reaffirms its leadership in the Continuing Education and Professional Studies programs in Puerto Rico, and as the competitive educational alternative for individuals beyond the island's geographical barriers.

## **MISSION**

The Continuing Education and Professional Studies Division (DECEP) and the Extended University at the University Puerto Rico, reaffirms its shared mission of providing programs and innovative academic activities of excellence, with and without credit hours, aimed at facilitating learning throughout life . The DECEP allow, guarantee and perpetuate the mission of serving the University of Puerto Rico, its insertion into the globalization of education, and their contribution to socio-economic and cultural development, dealing fast and effectively with the immediate needs of areas in Puerto Rico and the surroundings, it serves.

## **STRATEGIC OBJECTIVES**

**Section 4.1** To raise awareness on the UPR students, graduates and the public about the importance of lifelong learning as an essential mechanism for personal and professional development conducive to ensuring their active participation in the social, cultural and economic development, raising the life level both individually and collectively.

**Section 4.2** provide an academic offering with and without credit hours- innovative, comprehensive, dynamic and flexible, that responds to the educational training of non-

traditional students of the different sectors of the Puerto Rican community and its surrounding.

**Section 4.3** Collaborate with academic departments and / or faculties in offering academic programs leading to certifications or degrees for non-traditional students.

**Section 4.4** To offer continuing education activities regulated by Laws applicable to the authorized practice of certain professions, in accordance with the requirements of Examining Boards and Professional Associations.

**Section 4.5** Establish partnerships with private, local, national and international, agencies and public entities to design and implement Academic Projects that meet their expectations and priorities.

**Section 4.6** Develop Academic Projects through consortiums and agreements between departments, colleges and universities within and outside the UPR system, and with Public and Private- Schools both at the local and international level.

**Section 4.7** Diversify, enrich and expand the Continuing Education and Professional Studies Academic Offer using various strategies, methodologies and technologies, including among these different modalities of Distance Education, in accordance with applicable policies in the UPR.

**Section 4.8** Identify needs and demands of Continuing Education and Professional Studies in Puerto Rico and its surroundings, as well as other services related to the mission and capabilities of DECEP, and propose and implement alternatives to address them.



## **EXTENDED UNIVERSITY (UNEX)**

The Extended University (UNEX) of the University of Puerto Rico in Cayey fulfilling the mission of the institution, offers programs of excellence by expanding the opportunity to study of our university's community with equal conditions and a faculty of excellence. The Office of the UNEX 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 credit hours per quarter. 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 of 5:00 to 10:00 pm Monday through Thursday and Saturday from 8:00 to 12:00 pm and 1:00 to 4: 0 0 PM.

### **PROGRAM OBJECTIVES**

1. Provide a relevant, flexible, and innovative academic offering of excellence to provide the students with a solid knowledge foundation.
2. Offer students new alternatives that fit their individual and particular needs with equal conditions and services offered during the daytime session for achieving a degree.
3. Offer a program in three cycles that allow the students to advance their terminal degree.

### **Continuing Education and Professional Studies Area**

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

Continuing education involves a process of continuous education that aims to harmonize education management with the reality of knowledge, its implications for the work world, and the need for professional and social improvement. The University of Puerto Rico in Cayey recognizes that education does not end with the basic training of the individual, but transcends it, offering enrichment opportunities in various professional fields. Thus, fulfilling its responsibility, Continuing Education, shows the development of the individual as a continuous need for growth and service.

### **Services offered:**

- Certificate Programs
- Short Courses Program
- Remedial Summer Program

- Co - sponsorship of educational activities for non-profit organizations and departments of the university system.
- Activities of Continuing Education for professionals regulated by law in keeping with the provisions of the Examining Boards and Professional Associations, providing with the corresponding continuing education credit hours.
- Training program for organizations, companies and government agencies.

### **Registration and Tuition Payment Procedure**

Anyone interested in participating in vocational and personal improvement courses should visit the DECEP facilities located in the annex of the institution's Gymnasium. DECEP's hours of operation are: Monday through Thursday from 8:00 AM to 8:00 PM, Friday 8:00 AM to 4:30 PM and Saturday 8:00 AM to 4:00 PM.

The enrollment starts by filling out a form and paying the full tuition amount by check, money order or credit card.

### **Withdrawals and Refunds**

The DECEP reserves the right to cancel courses which do not reach the required amount of student registration. Persons enrolled in these courses will be refunded all tuition paid. The student may withdraw from any of (the) course (s) enrolled at any time. To withdraw she/he must present the receipt of the amount of tuition paid and complete the required form for this purpose.

The student may claim a refund of 90% of the fees paid if withdrawal occurs before the course start. If withdrawal occurs before the second class she/he may claim 80% of tuition costs. No refund will be provided if withdrawal occurs after the second class.

### **Attendance**

The participant of continuing education programs must attend classes regularly. To receive a 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 attendance, the participant must meet the requirements set by the professor of each course.

## **TALENTED STUDENTS PROGRAM**

### **PROJECT OBJECTIVES >>>**

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

### **>>> Participants Selection Criteria**

- Be an 11<sup>th</sup> or 12<sup>th</sup> grade high school student.
- Have a grade point average (GPA) of 3.40 or more.
- Have interest in applying for admission to the University of Puerto Rico in Cayey.
- Defray the cost of tuition.
- Willingness to study on Saturday morning or afternoon hours.

### **>>> The Student Gets**

- Certificate of participation with the grade obtained in the course.
- A workshop on academic counseling.
- Fraternization activities day.

### **>>> Registration Procedures**

- The student will receive the printed registration form with the courses to take during the first two cycles. She/he shall make the payment for the first cycle.

### **>>> Registration Fee**

- This academic project is self - financed and is offered through the Division of Continuing Education and Professional Studies (DECEP). The tuition is paid in cycles.
- The academic year and is divided into three cycles from August to October / October to February / February to May. The student may take one course each semester equivalent to a cycle. \* The total cost per course is \$ 327.00. The costs of textbooks, materials, activities and education-related trips are not included in the tuition.
- 

### **>>> The UPR -Cayey informs that this activity:**

- Is of free participation. The income of the student in this activity does not commit the UPR-Cayey on the admission of the participant, if she/he does not qualify as presented in the institutional rules and procedures. The course taken by the student may be transferred to another unit of the UPR system involved in this project.

### **Accreditation system:**

Upon satisfactory completion of the continuing education activity through DECEP, the participant will receive an attendance or approval certificate, as applicable. If an activity is given the credential **Continuing Education Unit (CEU)\***, such information shall 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 sponsorship, able leadership and competent instruction.

## **Parking facilities**

DECEP will provide temporary permits for participants to use the parking facilities in UPR Cayey. These will be processed at the beginning of the course. The participants must complete the temporary parking permit application form and have paid their tuition.

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1 Certification Number 190 2000-2001  
2 Certification Number 190 2000-2001

## **WOMEN'S STUDIES PROGRAM**

The Women's Studies Project (Pro Women), founded in 1986 at the University of Puerto Rico in Cayey, is a pioneering effort in the country to advance the rights of women through education, research and community service.

Its specific functions are to promote education and research in gender and women's studies, providing curriculum enrichment and faculty training, and serve the internal and external communities.

Pro Women sponsors seminars and symposia outreach, research and training for faculty across the country on integrating gender studies to the traditional curriculum and professions. Maintains ties of mutual support with the Office of the Women Ombudsman for the Women of Puerto Rico, the Puerto Rican Organization of Working Women, the Julia de Burgos Protected House, and the Latin American Network of Women's Health, among others.

Pro Women annually publishes *Identidades*, a research journal in gender and women's studies, which provides an important forum for women researchers and researchers in general from Puerto Rico and abroad for publishing deep reflection work and recent research. An arbitrated and accredited by Latindex magazine, published in two languages, English and Spanish, and has an advisory board of feminists from Latin America and the United States.

The Office of Women Studies Project is located in the Communications Building. Hours of operation are Monday through Friday from 8:00 a.m. to 12:00 m. and from 1:00 pm to 4:30 pm. The phones are (787) 738-2161, extensions 2184, 2490, 2491 and (787) 738-4218 (direct).

For additional information, please write to the following address: [promujeres@cayey.upr.edu](mailto:promujeres@cayey.upr.edu)



## **INTERDISCIPLINARY RESEARCH INSTITUTE**

The Institute for Interdisciplinary Research is a unit of the University of Puerto Rico in Cayey that promotes research and academic development through implemented approach, regional and interdisciplinary projects. Our goal is to generate knowledge of relevance for Puerto Rico and especially for those communities in the region served by UPR Cayey, the towns of: Cayey, Aibonito, Cidra, Caguas, Aguas Buenas, Patillas, Arroyo, Guayama, Salinas, Coamo and Barranquitas. The Institute is also dedicated to facilitate the investigative work of professors and students; to promote the meeting between researchers from different disciplines and different universities and contribute to the curriculum renewal project.

The Institute was established in the year 2000 by a group of professors from the Department of Social Sciences. In August 2003, with the aim of expanding its interdisciplinary scope, the Institute became part of the Dean of Academic Affairs of the UPR in Cayey.

### **Program Goals**

1. Promote interdisciplinary research.
2. Facilitate the development of relevant knowledge to the country and the region served by the UPR at Cayey.
3. Facilitate research work in the UPR at Cayey.
4. Encourage research as input for curriculum renewal.
5. Provide a meeting place for researchers.

## ECOLOGICAL EDUCATION CENTER

The main purpose of the Center for Ecological Education is to educate and sensitize visitors and students about the evolution of life on Earth, species of plants and endangered animals in Puerto Rico and the planet's ecosystems, giving emphasis to Puerto Rico.

Exhibitions of marine ecosystems (, caves, dry forests, mangroves, grasslands, seagrass, coral reefs, abyssal zone, among others) are shown. Replicas of animals, skulls, mammals, turtle shells, shark jaws and others are exhibited. It also has gardens to present part of the Puerto Rico's flora such as: cactus, succulent plants and medicinal herbs. In the Ecological Education Center research is encouraged and promoted.



## MILITARY SCIENCES



The Military Sciences Program at the University of Puerto Rico at Cayey is an extension of the Río Piedras Campus's 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 commission as second lieutenant in the Reserve of the United States Army and the National Guard of Puerto Rico.

Its objectives are: to provide an understanding of the fundamental concepts in the arts and military sciences; 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 for both sexes and consists of four years with a total of 24 academic credit hours. These credits can be used as electives toward high school. They are divided into a basic course spanning the first two years and an advanced course of two more years.

The basic 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. Moreover, since all classes and activities are offered in English, the Program offers students the opportunity to improve their ability in this language.

The program provides financial assistance to those students who have the desire to make a military career after their college graduation. The scholarship provides tuition, books and lab fees for four academic years. It also includes financial assistance of \$ 100.00 a month during the academic year for personal expenses.

Students who pass the basic course can continue the advanced course, including leadership, personnel management and military operations techniques, while providing the same benefits as the basic course.

During the summer, third year students go to the US to a six-week camp in order to put into practice the knowledge learned in the early years of the program.

After passing the advanced course and coinciding with the completion of a bachelor's degree, 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 sciences course. Students receive the same financial aid as the advanced course students. Applicants to this program must possess the ability to converse in English, pass an exam and during

the summer attend a six week camp in the United States for basic military instructions that align these Two Year program students with the advanced course students. Interested students should go to the ROTC office during the month of April to fill-out the necessary documents for attending the camp.

# FACULTY

Acevedo Loubriel, Suzette. Associate Professor. MA and Ph.D. University of Wisconsin-Madison.

Acevedo Selva, Ana Luisa. Full Professor. B.S. Interamerican University, M.S. and Ph.D. University of Sao Paulo, Brazil.

Alonso Costa, Jose L. Full Professor. B.S. UPR Rio Piedras, M.S. and Ph.D. UMASS University.

Arce Nazario, Javier. Assistant Professor. B.A. UPR Rio Piedras, M.A. and Ph.D. Columbia University and Post Doctorate at the University of California.

Arocho Martinez, Myrna. Full Professor. B.F.A. School of Visual Arts, M.F.A. Memphis State University.

Bansal, Vibha. Assistant professor. BA, M.A. Padjap University, PhD. Indian Institute of Technology

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Rubin Josephson, Michael R. Full Professor, B.A., M.S. UPR-Rio Piedras, M.A. Interamerican University, Ph.D. Columbia University.

Rybarkiewicz, Wlodzimmier. Full Professor. M.A., Ph.D. University of Oregon.

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Vicente Lopez Nelson E. Associate Professor E. Nelson. B.A. UPR-Rio Piedras, M.A. University of Houston, Ed.D. Interamerican University of Puerto rico.

Vicente Santiago, Nidza. Associate Professor. B.S. UPR-Cayey, M.S. UPR-Rio Piedras.

## **DESCRIPTION OF COURSES**

Courses are listed in alphabetical order according to the coding of subjects. Course coding, the title, the number of credit hours (credits) and weekly meeting hours, course requirements and description are indicated. The syllabus for each course with the objectives, bibliography and other particulars can be obtained from the Office of Academic Affairs, in the corresponding academic department and the Library

**ADMI 4005**

Introduction to Management Activity  
3 credits, 3 hours

Requirement: PSIC 3005

Introduction to the most important theories related to management sciences within a framework of interdisciplinary study. Study of the various roles and responsibilities of the managers of contemporary organizations

**ADMI 4006**

Quantitative Analysis for Decision 3 credit hours, 3 hours

Requirement: ESTA 3002

Conceptualization, identification and formulation of management decision problems. Application of quantitative and qualitative analysis methods, to the solution and interpretation of the same. Emphasis on the use of computers.

**ADMI 4007**

Administrative Policy - Capstone

3 credits, 3 hours

Requirement: fourth-year students

Introduction to a comprehensive, conceptual scheme and decisional analysis to help the company assess its current condition, analyze the environmental forces that affect it, including competition and translate that information into objectives and strategies that allow it to compete effectively in the their industry. Emphasis on the responsibility of management to formulate programs that will keep the company competitive in the long term.

**ADMI 4045**

Public Regulation of Trade 3 credits, 3 hours

Requirements: PSIC 3005, ECON 3005

Study of the philosophy known as Total Quality Management, focused on improving organizational processes. Different theories are applied using the method of identifying, evaluating and improving organizational processes in a real scenario. It is proven how the Total Quality Management philosophy is applicable to all functional areas of the organization.

**ANTR 3005**

Introduction to Anthropology 3 credits, 3 hours

Requirements: CISO 3121, CISO 3122

Analysis of socio-cultural human behavior through comparative study of institutions in tribal society. Study of contemporary problems from anthropological perspectives.

**ANTR 3085**

Caribbean Culture and Society

3 credits, 3 hours

Requirements: CISO 3121, CISO 3122

Study of the Caribbean socio-cultural reality from a historical and anthropological perspective. Starting from a definition of the Caribbean as a living laboratory of hybridity and racial and cultural creolization, political and economic processes that have contributed to shape the racial / cultural reality of the region and the construction processes of racial / cultural identities in the postcolonial era are studied. Particular emphasis is given on the movement of vindication of Afro-Caribbean identity in the insular Caribbean, and indigenous identities in the continental Caribbean.

**ART 3056**

Calligraphy

2 credits, 4 hours

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

**ART 3105**

Puerto Rican Art

3 credits, 3 hours

The course offers the opportunity to see demonstrations of plastic culture of the Puerto Rican people as it has taken shape in the successive stages of our cultural development. To this end they are valued and analyzed from expressions of folklore to the more academic forms of art. It will be supplemented with visits to Old San Juan, exhibition halls and private collections, among others.

**ART 3107**

Hispanic American Art

3 credits, 3 hours

It will provide from a humanistic perspective fundamental aspects of artistic expression that have occurred in Latin America. This will allow a thorough understanding of their background, expansion, influences, trends and major exhibitors, as a position taken on the historiography of art.

**ART 3135**

Basic Painting

3 credits, 4.5 hours

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

**ART 3155**

Ancient and Medieval Art

3 credits, 3 hours

Requirement: HUMA 3102

Art study and analysis of the periods in question from prehistoric times, Egypt and Mesopotamia, through the Greco-Roman world to medieval art.

**ART 3156**

Modern and Contemporary Art

3 credits, 3 hours

Requirement: HUMA 3102

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

**ART 3171**

Drawing I: Basic Elements of Drawing

3 credits, 4.5 hours

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

**ART 3172**

Drawing II: Drawing and Composition of the Human Figure

3 credits, 6 hours

Requirement: ARTS 3171

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

**ART 3175**

Basic Engraving: Wood and Linoleum

2 credits, 4 hours

Study, practice and experiment with techniques and materials relating to the creation of prints, such as woodcuts, linoleum engraving and embossing. Its brief history in the arts is studied.

**ART 3231**

Design and Artistic Composition I

2créditos 3 hours

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

**ART 3405**

Experimental and Creative Drawing

3 credits, 4.5 hours

Different drawing techniques are studied, seeking new dimensions through the experiment, observation and development of the creative imagination. Various materials are used and will study various techniques such as: -frottage ||, -collage ||, textures and others.

**ART 4006**

Sculptural Processes I

3 credits, 4.5 hours

Study of the elements, principles and techniques relating to the three - dimensional (3D) creation. Experimenting with different materials and sculptural processes.

**ART 4007**

Serigraphy I

3 credits, 4.5 hours

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

**ART 4008**

Video Art

3 credits, 4.5 hours

In this course the techniques and the basics of video art are developed. Video artistic expression is analyzed through a brief introduction to the history of the moving image. The proper use of the video camera and the development of an artistic script is taught. Through exercises and projects the student explores and experiments with digital editing (images manipulated through the computer).

**ART 4015**

Visual Thinking

3 credits, 4.5 hours

Requirements: Third-year students

In this theoretical / practical course, through class exercises and slide shows, the formal and conceptual sides of an artwork are analyzed. Phenomena such as visual perception (color, composition, etc.) as the idea and the reading of the work are studied. Different approaches and artistic movements through topics related to art history are discussed. This course is designed for students to develop a personal work, chosen from the diversity of possible directions, in the creation of a plastic work.

**ART 4016**

Mural Painting

3 credits, 4.5 hours

Requirements: ART 3135 Basic Painting I and be a junior.

This course examines the historical significance of the mural and / or large format painting from the prehistoric to today. Teaches the development of the techniques, procedures and materials used in this medium. Experiments with new techniques and encourages creativity as the development of an idea. Through sketches and class exercises, the student presents a large format painting at the end of the course.

**ART 4017**

Watercolor I

3 credits, 4.5 hours

Study, practice and experiment with techniques and materials relating to the creation of watercolors.

**ART 4035**

Handmade Paper as Artistic Expression

3 credits, 4.5 hours

Study, practice and experimentation with natural plant fibers, industrial fibers, and recycled paper, for the production of artistic work with handmade paper. Its art history is briefly studied.

**ART 4266**

Set Design art

3 credits, 3 hours

Study and practice of the set design components that interact in the play. Studies the structure and functions of theater architecture. Emphasizes the notion of set design as conceptual text support and staging. Develops the design and composition of visual elements within the stage through the use of sketches and scale models.

**ART 4806**

Interdisciplinary Workshop (Installation, Conceptual Art and Performance)

3 credits, 3 hours

This course summarizes the processes, actions and attitudes that lead to a different form of communication and aesthetic approach. Starts with an analysis of the artistic movements from the second half of the twentieth century to the present. Pinpoints the role of the idea as the main instrument in creating a work of art. Discusses and reevaluates traditional approaches to art and their interpretations, enabling the development of a more comprehensive view of art. It encourages the creation of a personal work based on the search for new artistic forms and expressions.

**ASTR 3006**

Basic Astronomy

3 credits, 3 hours

Co-requirements: ASTR 3007 Requirements: FISI 3012, FISI 3014

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

**ASTR 3007**

Basic Astronomy Laboratory

1 credit, 3 hours

Co-requirement: ASTR 3006

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

**BIOL 3009**

Introduction to Basic Concepts, Methodology and Research Techniques in Biology

4 credits, 8 hours of lecture and 16 laboratory hours for 8 weeks and 6 fieldtrips (Total hours = 240: 64 conference, 128 laboratory and 48 trips) Requirements: Professor's and Biology's Department permission.

An intensive course presents and analyzes the fundamental characteristics of living systems, with emphasis on the molecular-cellular level keeping in perspective the organism and its environment. Basic principles of Cell Biology, Genetics and Ecology are studied. Theoretical and experimental aspects are integrated through laboratory practices that allow the student to develop an analytical discipline and attitude. Designed for talented freshmen from the Biology and Natural Sciences programs.

**BIOL 3018**

Developmental Biology

4 credits, 3 hours of lecture and 4 hours of lab

Requirement: BIOL 3305

Recommended: QUIM 3122, QUIM 3124

Study of the basic processes of development of animals and plants by analyzing the mechanisms that control these processes at the cellular, genetic, and molecular levels. Other aspects of development in adults such as continuous growth, regeneration, aging, cancer and Teratology are studied.

**BIOL 3031**

General Biology I

3 credits, 3 hours of lecture

Co-requirement: BIOL 3033

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

**BIOL 3033**

General Biology Laboratory I 1 credit, 3 hours per week Co-requirement: BIOL 3031

The laboratory course consists of a series of practical exercises where students can study the cellular and molecular concepts. Basics of Ecology and Evolution are included. Students will learn the use and operation of laboratory equipment and how it can be used to study different aspects of biology. The relationship between theory and practice in the study of biological systems at the cellular level is emphasized.

**BIOL 3095**

Biology Topics Literature

1 credit, 1 hour of lecture

Requirements: BIOL 3031, BIOL 3033

The course is intended to prepare the student in using reference resources available to perform a scientific bibliography or mini-review article. The student is trained in the traditional location and management of traditional printed sources of information as well as electronic databases accessible via the Internet. Discussion of scientific articles is focused on the development of reading skills that allow to locate relevant information in different types of journals regardless of content (subject) and the distinction by the student of the various types of scientific literature and its components.

**BIOL 3103**

General Biology II 3 credits, 3 hours of lecture

Requirements: BIOL 3031, BIOL 3033 Co-requirement: BIOL 3104

Comparative and evolutionary study of different functional systems in animals and plants. The evolutionary development of systems and different adaptations to their physical and biotic environment are analyzed. The laboratory includes microscopic, anatomical and physiological level practices. The practices analyze functional systems in plants and animals and the relationship between them and their environment. Laboratory topics correspond to those discussed in class.

**BIOL 3104**

General Biology Laboratory II 1 credit, 3 hours

Requirements: BIOL 3031, BIOL 3033

Co-requirement: BIOL 3103

Comparative study in the different functional systems in plants and animals using models, dissecting of preserves, movies and simple reactions that mimic the physiological activity of some functional systems in plants and animals. Analysis of evolutionary development of these systems for the adaptation of organisms with their environment.

**BIOL 3115**

General Ecology

4crédits, 3 hours of lecture and 4 hours of laboratory; they include excursions

Requirements: BIOL 3103, BIOL 3104 or BIOL 3415, BIOL 3405

Introduction to the knowledge of the fundamental principles of ecology and nature, and ecosystem properties, biotic communities and the dynamics of the forces controlling these biological systems. In the laboratory the different types of communities and the applicable ecological principles and concepts are studied with excursions to places of ecological interest. It includes independent research projects.

**BIOL 3205**

Embryology

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

Requirements: BIOL 3103, 3104 or BIOL 3405

Comparative study of the basic concepts of development in vertebrates (amphibians, birds and mammals) with an understanding of the mechanisms and sequences of the events involved in the formation of tissues and organs. The student will be introduced to abnormal development (congenital anomalies) in humans, with special emphasis on the etiology (genetic and environmental).

**BIOL 3305**

Genetics

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

Requirements: BIOL 3031, BIOL 3033

Co-Requirement: CHEM 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 management techniques used to establish the fundamental principles of heredity including techniques of molecular genetics and recombinant DNA are emphasized.

**BIOL 3405**

General Zoology

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

Requirements: BIOL 3031, BIOL 3033

General study of the physiology, reproduction, development, ecology and evolution of the animal kingdom. The study of local fauna stands out. In the laboratory a practical study of taxonomy, morphology and ecology of the various groups of animals is done. Supplementing the course trips to different communities of importance on the island are offered.

**BIOL 3407**

Biology of Invertebrates

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 local fauna. The laboratory introduces modern research methods for 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, BIOL 3033

Structure and metabolism of plants. The emphasis of the course is the study of flowering plants as a model for understanding the operation of the plants, their role in nature, evolution, and biodiversity. 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 students.

**BIOL 3701-02**

Human Biology

8 credits, 7 hours of lecture and laboratory

Requirements: BIOL 3103, 3104 or BIOL 3405 Study of structural and functional plan of the human body; starting from the fertilized egg and following a path that includes the histogenesis and organogenesis as a basis for understanding the adult structure and its functioning in a dynamic and integrated manner.

**BIOL 3705**

General Microbiology

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

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. The laboratory focuses on the techniques and procedures used for the cultivation, purification and identification of microorganisms.

**BIOL 3706**

Medical Microbiology

4 credits, 3 hours of lecture and 2 lab period 2 hours

Requirements: BIOL 3305, CHEM 3132, 3134

The study of the biology of pathogen organisms to humans. Virulence and pathogenicity factors of representative organisms are discussed giving emphasis on bacteria, viruses, fungi and rickettsia. Pathological conditions caused by representative microorganisms are presented, and the pathology, epidemiology and prevention of these is discussed. The laboratory focuses on the techniques and procedures used for cultivation and identification of common pathogens.

**BIOL 3755**

Human Gender Biology and Behavior 3 credits, 3 hours of lecture

Requirements: BIOL 3103, 3104 or CIBI 3002

Study of the most significant aspects of human sexology, normal and pathological behavior.

Complications in man and in society. The course emphasizes all those clinical conditions that relate to this science.

**BIOL 3955**

Research Seminar in Biology

3 credits, 3 hours of lecture

Requirement: BIOL 3095

The course provides knowledge and skills needed to apply the scientific method to research in biology, including important techniques and interpretation of data. It also provides experiences for the development of writing skills and scientific communication for use in the preparation of proposals, scientific books and oral presentations. The course provides students with the skills for the presentation and management 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 4018**

Cellular and Molecular Biology

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

Requirements: BIOL 3305, CHEM 3122, 3124

Study of the ultrastructure, composition and molecular organization of prokaryotes, eukaryotes cells and viruses. Use of the latest scientific literature is made to make a more accurate interpretation of cellular function as a result of its structural components. In the laboratory the scientific methods used in the derivation of the relationship between cell structure and function are emphasized.

**BIOL 3955**

Research Seminar in Biology

3 credits, 3 hours Conference Requirement: BIOL 3095

The course provides knowledge and skills needed to apply the scientific method to research in biology, including important technical and interpretation of data. It also provides experiences for the development of writing skills and scientific communication for use in the preparation of proposals, scientific books and oral presentations. The course provides students with management skills 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 4018**

Cellular and Molecular Biology

4 credits, 3 hours of lecture and 4 lab

Prerequisite: BIOL 3305, CHEM 3122-3124

Study of the ultrastructure, composition and molecular organization of prokaryotes, eukaryotes and viruses. Use of the latest scientific literature is made to make a more accurate interpretation of cellular function as a result of its structural components. In the laboratory the scientific methods used in the derivation of the relationship between cell structure and function are emphasized.

**BIOL 4048**

Medical Mycology

4 credits, 3 hours of lecture and laboratory

Requirements: BIOL 3031, BIOL 3033 and BIOL 3305, being ranked third or fourth year student in Natural Sciences or Biology and / or permission of the professor or the Director Department. It is offered once a year, second semester.

Introductory course to Medical Mycology exposes the student to the interesting world of fungi that turn out to be pathogenic to humans. The student will learn basic concepts of mycology as identification and classification, and to describe the different types of fungal infections in the world. Fungal diseases will be discussed with emphasis on the most common and most relevant to Puerto Rico. In addition it will focus on air pollutants, space for scientific discussions concerning the topic will be provided and research related to mycotic microscopic contaminants will be incorporated.

**BIOL 4056**

General Immunology

3 credits, 3 hours 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 consistency in its internal environment when confronted with substances, both of an endogenous and exogenous origin, which are not recognized as its own.

**BIOL 4135**

Cellular Biochemistry

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

Requirements: CHEM 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 aims to stimulate scientific curiosity with questions and answers of characteristic topics about basic science : cell recognition of extracellular signals, the principle of function optimization, transformation and biological adaptation of metabolic intermediates, metabolic reactions (biocatalysts) the physiochemical conditions within cells and other cell / 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 4356**

Human genetics

3 credits. 3 hours lecture

Requirements BIOL 3305

Application of genetic concepts to human beings and society. Detailed study of heritage characteristics and individual genetic differences at the cellular, molecular and population level. Controversial issues related to genetics in contemporary society are presented.

**BIOL 4430**

Parasitology

4 credits, 3 hours of lecture and 4 hours laboratory

Requirements: BIOL 3405 or BIOL 3103-3104

Through this course the biology of parasites that are directly or indirectly related to human 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 by laboratory exercises related to each group of parasites studied in conference.

**BIOL 4370**

Bioinformatics

4 credits, 4 hours lecture and practice (computer lab).

Requirements: BIOL 3305 and / or permission of professor

The Bioinformatics course provides students, through lectures, presentations, workshops, and individualized projects, basic concepts and skills needed to evaluate and use critically and effectively genetic information. Bioinformatics is the management and analysis of all biological information. This information includes nucleic acid sequences (DNA and RNA) and amino acids (proteins); RNA and protein structures; Evolutionary conservation, phylogenetic trees and groups of organisms; patterns of gene expression, functional interactions between molecules and metabolic pathways, among other topics.

**BIOL 4915**

Integrative Topics Seminar in Biology - *Capstone*

3 credits, 3 hours

Requirements: BIOL 3031, BIOL 3033, BIOL 3305, BIOL 3405, BIOL 3415, CHEM 3132, QUIM 3134, FISI 3012-3014. It is ranked in 4th year. Permission from the Director of the Biology Department.

The course provides knowledge and skills needed to apply the scientific method to research in biology, including important techniques and data interpretation. The course provides the students skills for the presentation and management of experimental data. It offers experiences for the development of writing skills and scientific communication in several areas, including proposals, scientific books and oral presentations. It will also include the ethical and legal aspects applicable to biological research. The particular subject varies according to student interest and professor's Specialty.

**BIOL 4990**

Introduction to Biological Research

1 to 3 credits, 3 to 9 hours. It can be repeated up to nine credit hours. A student with an incomplete grade may not enroll until the previous course is completed.

Requirement: Permission from professor, or be a Natural Sciences, Psychology, or Secondary Education in Science student. The course introduces students to research emphasizing the methodologies used in different areas of biology.

**BIOL 4997**

Seminar in Biology

1 to 3 credits, 15-45 hours a semester.

Requirement: Third or fourth year Natural Sciences students professor's or Department Director's permission.

Discussion of recent publications in various areas of biology. Focuses on a specific topic per semester. Student specific topics for discussion are assigned. Provides for the participation of visiting professors.

**CIBI 3001**

Fundamentals of Biology I

3 credits, 3 hours of lecture. Several trips. Not validated for BIOL 3031. Only for Arts and Business Administration students.

From a human perspective the student examines the principles and basic concepts of biology such as the external environment, the origin of life, cellular organization, simple life forms, photosynthesis, cellular respiration, genetics and heredity.

**CIBI 3002**

Fundamentals of Biology II

3 credits, 3 hours of lecture. Several trips. Not validated for BIOL 3103. Only for Arts and Business Administration students.

Requirement: CIBI 3001

From a human perspective introduces the student to the organization structure of life from the cell to the basic mechanisms of functioning of systems, evolutionary processes and reproduction in a relevant way for his future as a professional in other branches of knowledge.

**CIFI 3001**

Introduction to Physics I

3 credits, 3 hours of lecture

Requirement: MATE 3041

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

**CIFI 3002**

Introduction to Physics II

3 credits, 3 hours of lecture

Requirement: CIFI 3001

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

**CIMI 3011**

Introduction to Military Sciences

2 credits

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

**CIMI 3012**

Basic Military Skills

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 leadership development 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 improving oral expression. Laboratory or leadership workshop.

**CIMI 3022**

Fundamentals of Military Tactics II

2 credits

Requirements: CIMI 3012

Continued study of unit - level military tactics. Principles of military strategy. Study of military formations. Military collateral support and communication.

**CIMI 3041**

Today's English Speaking and Comprehension- Beginner Level (Entry Level)

1 credit, 1 hour of lecture

Requirement: Take placement test to establish the appropriate level according to their skills in the English language.

The course is designed for students of military sciences who have demonstrated deficiencies in English language skills on the test results, English Comprehension Level (E.C.L.) offered by the Defense Language Institute.

**CIMI 3042**

English Speaking and Comprehension

1 credit, 1 hour of lecture

Requirement: CIMI 3041

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

**CIMI 3043**

English Speaking and Comprehension- Intermediate Level

1 Credit 2 hours of lecture

Requirement: Take placement test to establish the appropriate level according to their skills in the English language.

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

**CIMI 3044**

English Speaking and Comprehension

1 credit

Requirement: CIMI 3043

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

**CIMI 3051**

English Speaking and Comprehension- Advanced Level

1 credit, 1 hour

Requirement: Take placement test to establish the appropriate level according to their skills in the English language.

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

**CIMI 3052**

English Speaking and Comprehension- Advanced level

1 Credit 1 hour

Requirement: CIMI 3051

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

**CIMI 4011**

Communication and Psychology in the Military Leadership

4 credits

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

**CIMI 4012**

Fundamentals of Military Strategy

4 credits

Study of the principles and foundations on the development of military strategy; responsibilities and functions of officers in handling military units. Principles for the defense of a country. Leadership laboratory.

**CIMI 4021**

Military Leadership and Management History

4 credits

Writing in military style. Military administration. Compendium of military and world history that begins with the basic principles of war and military movements and ends revising the Spanish - American War, First and Second World Wars, Korea and Vietnam. Leadership laboratory.

**CIMI 4022**

Seminar: Leadership and Military Administration

4 credits

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

**CIPO 3011**

Principles of Political Sciences I

3 credits, 3 hours of lecture

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 analysis of processes and institutions, decision-making and dynamic aspects, and universal mechanisms used in the preservation of social order through political structures. The analysis applies particularly to Puerto Rico.

**CIPO 3035**

Puerto Rican Political System

3 credits, 3 hours of lecture

Requirements: CISO 3121, CISO 3122

The historical development of the Puerto Rican political system is studied, its history under Spanish rule, the emergence of a political consciousness, the period of domination of the United States, the Constitution of the Commonwealth, the system that it created and power structures that it constitutes, with special consideration to the problem of the political status of Puerto Rico and its relationship with the United States.

**CIPO 3036**

Sexual Politics in Puerto Rico

3 credits, 3 hours of lecture

Requirements: CISO 3121, CISO 3122

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

**CIPO 3075**

Introduction to Public Administration

3 credits, 3 hours of lecture

Requirements: CISO 3121, CISO 3122

The field of public administration in the political context is delimited, based on the difference and relationship between politics and administration, and considering public, and general cultural bases. The internal aspects of public bureaucratic organization is studied and organizational theories that explain them. The process of generalization and implementation of public policy is discussed, emphasizing accountability in the exercise of public functions.

**CIPO 3085**

Theories and Methods of Political Sociology

3 credits, 3 hours of lecture

Requirement: SOCI 3261

The effects of politics on social behavior are studied. The fields of political behavior through methodological knowledge are demarcated. Different theories, concepts, institutions, groups and political movements in the social framework are studied and how their expression and action achieve permanency and social change.

**CIPO 4006**

Seminar: Public Opinion and Propaganda

3 credits, 3 hours of conference

Requirements: CISO 3121, CISO 3122

It contains a definition of public opinion and its role in democratic and totalitarian systems; psycho-sociological determinants of public opinion, how its communicated and measured, what is its influence

on political action; agitation operations, propaganda and mass persuasion techniques, and the role of media, including radio, television and newspapers.

**CIPO 4175**

Civil Rights in Puerto Rico  
3 credits, 3 hours of lecture

Requirements: CISO 3121, CISO 3122

Study of the origin, content and evolution of civil liberties, with emphasis on the Magna Carta, the United States Constitution, the Universal Declaration of Human Rights of the United Nations, the Pact of San Jose, Costa Rica and the Bill of Rights of Puerto Rico, as well as other legal instruments such as the Civil Rights Commission of Puerto Rico and the Investigative Commission, Processing and Appeals (CIPA).

**CIPO 4995**

Special Topics in Political Sciences  
3 credits, 3 hours of lecture

Discussion of various topics in political sciences, incorporating recent literature for it. Topics may vary from semester to semester.

**CISO 3085**

Society and Culture of Puerto Rico  
3 credits, 3 hours of lecture

Requirements: CISO 3121 and CISO 3122 Semester: First

A comprehensive social science course derived from the different disciplines that facilitate the understanding of a particular area: Puerto Rico. It includes analysis of institutions, structures and basic functional systems of Puerto Rico.

**CISO 3121**

Introduction to Social Sciences I  
3 credits, 3 hours of lecture

General Education study in Social Sciences; analytical study of the most important areas of anthropology, sociology, psychology, political science and economics. The main topics of each subject and concepts such as culture, society, personality, organization, power, human and productive resources, structure and system, and 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 of lecture

Requirement: CISO 3121

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

**CISO 3155**

Fundamentals of Statistical Reasoning

3 credits, 3 hours of lecture

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

Reasoning, calculation and limitations of basic statistics applied to experience and research in psychology and social sciences. Without discarding the theory, emphasizes the practical aspects and includes graphs, z, t, chi square tests, correlations and experimental design.

**CITE 4005**

Introduction to Earth Sciences

4 credits, 4 hours (40% lecture and 60% laboratory)

Requirements: FISI 3011 and Quim 3131

It is a study of physical and chemical phenomena that occur on land, in the oceans, the atmosphere and in space. It includes the study of: measurements of time and space, earth materials such as minerals, rocks, soils, water and the atmosphere, physical processes and chemico-coastal as tectonics, volcanism, metamorphism, weathering, erosion, sedimentation, and climatological phenomena such as temperature, pressure, wind, cloud formation, rain and hurricanes. The course emphasizes the dynamics of the processes of earth materials and space. Whenever possible topics will be illustrated with demonstrations in Puerto Rico. It includes excursions.

**CONT 3005**

Introduction to the Fundamentals of Accounting I

4 credits, 4 hours

Requirements: MATE 3171

Familiarizes the student with the nature, scope and objectives of accounting, and how it has been affected in their development by the various sectors of society. The theory and methodology is studied, emphasizing the transaction log of income and expenses, and the forms used for the presentation of financial information. The student is familiarized with the uses and importance of accounting for the owners, management, creditors and the general public who have different interests in financial reporting.

**CONT 3006**

Introduction to the Fundamentals of Accounting II

4 credits, 4 hours of lecture

Requirements: CONT 3005

Study of concepts and accounting principles and their application in operations in the company. Internal control systems, costing and depreciation methods are discussed. Familiarizes the student with the different organizations (corporations, corporations and own business) analyzing the components of capital, characteristic and differences. The student applies the knowledge acquired in the analysis of financial statements using proportion measures of surrounding rates and immediate solvency.

**CONT 3015**

Elemental Accounting for Secretaries

3 credits, 3 hours of lecture

It includes an overview of the basic elements of double accounting with application to special wages, higher subsidiaries and other related books. Petty cash control system, payroll preparation and analysis and financial statements, preparation of adjustments, closing entries, worksheet, checks, reconciliation, invoices, purchase orders and other business documents. General aspects of income tax and its implications for business and individual organizations.

**CONT 3025**

Cost Accounting

4 credits, 4 hours of lecture

Requirement: CONT 3006

Study of the principles of cost accounting and its function in administrative decisions. Different techniques of cost accounting applicable to various forms of production are studied. It includes Budget principles and methods to establish the basis on which the cost is determined and routine procedures are analyzed for collecting information on costs.

**CONT 3101**

Philosophy, Theory and Problems of Financial Accounting I- Problems, Philosophy, and Theory

3 credits, 3 hours of lecture

Requirement: CONT 3006

The course includes the study of the principles generally accepted in financial accounting. The pronouncements issued by the governing bodies of accounting and its application to business transactions are analyzed, and the presentation of financial states from merchant industries. It includes transaction analysis, accounting registration, settings, worksheets and preparation of financial statements. The statements related to the topics of current assets are evaluated.

**CONT 3102**

Philosophy, Theory and Problems of Financial Accounting II

3 credits, 3 hours of lecture

Requirement: CONT 3101

Analysis of the pronouncements issued by the governing bodies of accounting and its application to business transactions and presentation in the financial statements of transcripts related to the acquisition of land, buildings, machinery, furniture, equipment, intangible assets, liabilities, current, long-term contingencies. It also includes the evaluation of methods of depreciation, amortization and depletion of assets, valuation and presentation of the capital structure of corporations and investments in the short and long term.

**CONT 3103**

Philosophy, Theory and problems of Financial Accounting III

3 credits, 3 hours of lecture

Requirements: CONT 3102

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

**CONT 4006**

Management Accounting

3 credits, 3 hours

Requirement: CONT 3006

It emphasizes the need of management to know the uses of accounting, know the techniques used in it, to understand and appreciate the value of this information in decision-making. The student is familiarized with the basic functions of management in the areas of planning, organization, direction, supervision and control of the activities of the company.

**CONT 4007**

Federal Income Tax

3 credits, 3 hours of lecture

Requirement: CONT 3006

Analysis of the law of federal income tax. It includes inclusions and exclusions from gross income, deductions, capital assets, withholding tax credits for taxes paid to foreign countries and determination of the contribution to pay.

**CONT 4008**

Government Accounting

3 credits, 3 hours of lecture

Requirement: CONT 3006

Procedures and accounting methods and financial reporting of public entities and the various funds used in government and municipalities are studied. In addition, non-profit organizations such as hospitals and universities are included.

**CONT 4009**

Income Tax in Puerto Rico

3 credits, 3 hours of lecture

Requirement: CONT 3006

Analysis of the Puerto Rico income tax law of Puerto Rico and its regulations, including taxable income, including and excluding items, allowable deductions, current and accelerated depreciation; basis for computing the income or capital losses; credit; calculations of the normal tax and surtax as they affect the individuals. Practical problems and payroll preparation.

**CONT 4015**

Theory and problems Advanced Accounting

4 credits, 4 hours of lecture

Requirement: CONT 3102

It includes the study of the concepts of financial accounting and analysis problems arising from the application of these concepts in specialized organizations (companies, subsidiaries, affiliated companies and non-profit institutions) and bankrupt.

**CONT 4026**

Accounting Internship

4 credits, 350 hours. The (the) student must complete a total of 350 hours during the period of internship. Students attend an internship center 23 hours a week for a period of 14 weeks. In addition, the student will attend 28 seminar meeting hours.

Requirement: CONT 3005, CONT 3006, CONT 3101, CONT 3102 and CONT 3025 with a rating of " C " or more. The Audit Course (CONT 4040) and Puerto Rico's Income Tax (CONT 4009), may be required in some internship centers. To apply for the course must have an average of 25 hours per week available or the two summer months so that the student can meet the required internship time.

It is a full - time practicum in a workplace where the student has the opportunity to apply the theoretical concepts acquired in the classroom. The student is exposed to a number of situations that only a center of that nature can provide, and that it serve to develop trust and emotional maturity needed to function successfully in their professional lives. The course also enables students to acquire more judgement to determine the particular area within the field of accounting in which to develop their professional practice.

**CONT 4028**

Federal Income Tax - Corporations, Partnerships and Consortiums

3 credits, 3 hours of lecture

Requirement: CONT 4007

The course is intended to prepare and familiarize accounting students wishing to obtain a broader knowledge about the law of Federal taxes. It is designed to present a research approach of the following topics: Corporate Tax, Income Tax and Corporate Income Tax of consortiums and partnerships.

**CONT 4040**

Audit of Commercial Companies and other Professional Services.

4 credits, 4 hours of lecture

Requirements: CONT 3025, CONT 3102

The course is designed to cover the services of the evidence that public accounting professionals provide. It includes the study of contemporary audit practices, complications and revisions. Emphasis is placed on the knowledge of Generally Accepted Auditing Standards in the United States (GAAS), and its application to commercial enterprises. The student is trained in the preparation of audit programs and procedures used to obtain and evaluate evidence related to accounting events and transactions, and serve as a basis for issuing an opinion on the content of financial statements of these companies. It familiarizes the student with other services witnessing or testimony (Attestation), emphasizing services compilation and review of financial statements. The course also includes discussion of the Code of Professional Conduct governing the profession of Certified Public Accountant (CPA) issued by the American Institute of Certified Public Accountants.

**CONT 4056**

Audit of Governmental Entities and Nonprofit Organizations

4créditos 4 hours of lecture

Requirements: CONT 4040

The course is designed to broaden the knowledge of students in the area of audit. Knowledge of the Generally Accepted Auditing standards (GAAS) will be broadened, the Government Auditing Standards (GAS) contained in- the Yellow Book || be discussed, known as the Government Auditing Generally Accepted Standards (GAGAS), issued by the General Office Accounting (GAO) of the United States, and the circulars issued by the Office of Management and Budget (OMB) of the United States, with emphasis on OMB circular a-133. Audits of States, Local Governments and Nonprofit Organizations and new requirements -Single audit. Act || 1984, as amended in July 1996 (Public Law 104-156).

**DEME 4005**

Commercial law

4 credits, 4 hours of lecture

Requirement: 3<sup>rd</sup> or 4<sup>th</sup> year student

Familiarizes the student with the general principles of public and private law and the judicial system. It also provides an introduction and discussion to Puerto Rican trade law: commercial contracts in kind, the legal structure of societies and corporations, and elements of exchange law (negotiable instruments).

**ECON 3005**

Economy

3 credits, 3 hours of lecture

Requirement: CISO 3121-3122

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

**ECON 3021**

Principles of Economy I

3 credits, 3 hours of lecture

Requirements: CISO 3121- CISO 3122

Introduction to the fundamentals of economy and methods of economic analysis. The purpose of the course is to create student awareness and understanding of the economic world in which they live and phenomena and problems it poses. Introduces the modern microeconomic analysis. Examines the nature of the economic problem, the theory of consumer choice, analysis of production and the market mechanism as an instrument for ordering economic activity.

**ECON 3022**

Principles of Economy II

3 credits, 3 hours of lecture

Requirement: CISO 3121 and CISO 3122 Semester: Second

Introduction to macroeconomic analysis. 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 of lecture

Requirements: ECON 3022 or ECON 3005 and MATE 3042

Analysis of the basic concepts of statistics that are applicable to the field of economy. Description of frequency distributions, measures of central tendency, measures of dispersion, skewness and kurtosis measures. Probability theory. theoretical frequency distribution.

**ECON 3032**

Statistical Methods II

3 credits, 3 hours of lecture

Requirement: ECON 3031 Semester: Second

Analysis of the concepts of statistics that have application in the field of economy. Theory of sample selection. Inferential statistics, hypothesis testing. Theory of small samples. Correlation and simple and multiple 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 of lecture

Requirements: ECON 3005 or ECON 3022 \*\*

Analysis of the economic system of Puerto Rico, highlighting the economic structure, the fundamental problems of the country and possible solutions. The most important structural changes during this century are discussed and the interaction between economic variables and social order. The acquisition of analysis tools that enable to understand and systematically examine the economic and social development of Puerto Rico is encouraged.

**ECON 4005**

Microeconomics

3 credits, 3 hours of lecture

Requirement: ECON 3021

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

**ECON 4015**

Economic development

3 credits, 3 hours of conference

Requirements: ECON 3021 or ECON 3005

Development measurement. 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 of lecture

Requirements: ECON 3021 or ECON 3005

Study of the decision-making process in companies and application of economic theory and quantitative analytical methods of this process.

**ECON 4025**

Monetary Theory and Policy

3 credits, 3 hours of conference

Requirements: ECON 3022 or ECON 3005

Economic principles governing the organization and functioning of the monetary and banking systems. Resources and obligations of banks, banking policy, commercial banks in Puerto Rico, the Federal Reserve system, the value of the currency and its relation to the general price level. Monetary problems of the postwar relationship between monetary policy and fiscal policy.

**ECON 4035**

Mathematics for Economists

3 credits, 3 hours of lecture

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, static-comparative economic analysis and optimization. Conditioned optimization, inequalities (inecuaciones) and linear programming.

**ECON 4045**

Comparative Economic Systems

3 credits, 3 hours of conference

Requirement: ECON 3022

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

**ECON 4075**

Intermediate Macroeconomic Analysis

3 credits, 3 hours of lecture

Requirement: ECON 3022

Review of Keynesian thought as the origin of contemporary aggregate reasoning. The economic cycle and its classical economic tradition. Economic models and construction. The economic model of Maynard Keynes and some subsequent modifications. Determining the level of employment and the overall balance. Aggregate demand and its determinations. The Keynesian theory and the integration of monetary theory and the theory of income.

**ECON 4085**

International economy

3 credits, 3 hours of lecture

Requirement: ECON 3022

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

**ECON 4115**

Seminar of Contemporary Economic Thought

3 credits, 3 hours of lecture

Requirement: ECON 3021

Analysis of recent developments in economic thinking, as it is reflected in books, magazine articles, speeches and statements.

**ECON 4166**

Economy of Puerto Rico

3 credits, 3 hours of lecture

Requirement: ECON 3022

Analysis of the characteristics and trends of our economy. It includes: geography and economic history; the role of agriculture and of specific agricultural products; land tenure: the population and the working group; economic relations with the United States; revenue and expenditure; banking and credit; transport and communications; net income, gross domestic product and balance of external payments; industrial development and possibilities for future development; government economic policy.

**ECON 4175**

Accounting for Economists

3 credits, 3 hours of lecture

Requirements: ECON 3021-3022

The fundamental accounting principles governing the preparation of financial statements and application of accounting to the various fields of the economy.

**ECON 4355**

Introduction to Econometrics

3 credits, 3 hours of lecture

Requirements: ECON 4035 and ECON 3031- 3032

Detailed study of the nature of the classical linear regression analysis, the cases in which they are based and the problems that arise when they are violated: autocorrelation, multicollinearity and heteroscedasticity. Besides, issues such as identification, and instrumental use of dummy variables, autoregressive models with distributed lags and the use of simultaneous equation models are discussed.

**EDES 3017**

Arts in Special Education

3 credits, 3 hours of lecture

This course will cover the basic principles of the use of music, arts and theater of students with special needs. Creativity development and the use of the arts to develop academic skills and language behavior in students with special needs; through the various means of artistic expression will be emphasized. The integration of information skills to the course content will provide the teacher candidate the opportunity to develop the skills for identifying informational needs to offer alternatives, to make informed decisions and solve problems the right way, in tune with the course subject . The teacher candidate will apply the knowledge acquired to perform ten (10) hours of community service.

**EDES 3018**

Emotional Disturbances

3 credits, 3 hours of lecture

Requirement: EDFU 3001

This course will cover the historical development and bequeaths of emotional impairments as well as its definition, causes, characteristics and various theories of treatment including different methods focusing on behavior modification techniques. The teacher candidate will learn how to plan and implement a behavior modification program. The application of technological assistance will be discussed and the services available in the community for these people and their families examined. The integration of information skills to the course content will provide the teacher candidate the opportunity to develop the skills to identify their need for information to offer alternatives, to make informed decisions and troubleshoot successfully, depending on the course subject.

**EDES 3019**

Specific Learning Disabilities

3 credits, 3 hours of lecture

Requirement: EDFU 3001

The historical development of the condition, educational intervention for students with specific learning disabilities, their definitions, causes and characteristics will be studied. The legal basis for special education with an emphasis on the implications for the population of specific learning problems will be examined. Issues such as Individualized Education Plan (PEI), technological assistance and inclusion for this population will be studied. . The integration of information skills to the course content will provide the teacher candidate the opportunity to develop the skills to identify their need for information to offer alternatives, to make informed decisions and solve problems correctly, depending on the course subject.

**EDES 4006**

The Exceptional Student

3 credits, 3 hours of lecture

Requirements: EDFU 3001-02

This course will examine the definitions, causes and characteristics of each of the exceptionalities. The teacher candidate will develop the knowledge, experience, skills and attitudes to identify students with special needs. The analysis of existing laws, planning and implementing technological assistance and inclusion to ensure an appropriate education. Provide the candidate to master the knowledge and tools needed to work with families and agencies, and the community that provide services to people with disabilities. Information competencies will be integrated to the course content these will provide the teacher candidate the opportunity to develop the skills to identify their need for information to offer alternatives, so they can make informed decisions and solve problems correctly, according to the course content.

**EDES 4078**

Special Education Curriculum I

3 credits 3 hours of lecture

Requirement: EDES 4006

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 evaluate short and long term goals, to do task analysis, and how to plan the curriculum and use the appropriate materials for each child and each objective. The teacher candidate learns to use the methods of individualization of instruction and how to write an Individualized Education Plan (PEI) while integrating technological assistance and inclusion. Information skills will be integrated into the course content which will provide the teacher candidate the opportunity to develop the skills to identify their need for information to offer alternatives, make informed decisions and solve problems correctly, according to the course content.

The teacher candidate will apply in the pre-practicum the knowledge acquired in class by visiting a school with special education groups or the family's living room and accumulate ten (10) hours.

### **EDES 4079**

Special Education Curriculum II

3 credits, 3 hours of lecture

Requirement: EDES 4078

This course develops the knowledge and skills necessary for teaching students with special needs, with an emphasis on teaching math, reading and writing. It includes teaching materials, such as the sequence of skills and learning assessment. Theories underlying teaching methods are discussed and concepts are put into practice with students with special needs. The teacher candidate writes the Individualized Education Program (IEP); while integrating technological assistance and considers inclusion. Information skills will be integrated into the course content which provide the teacher candidate the opportunity to develop the skills to identify their need for information to offer alternatives, make informed decisions and solve problems correctly, according to the course content. The teacher candidate will apply in the pre-practicum the knowledge acquired in class when visiting a public school with special education groups or in the family's living room and accumulate ten (10) hours.

### **EDES 4086**

Mental retardation

3 credits, 3 hours of lecture

Requirement: EDES 4006

This course will cover the history of mental disabilities and its definition, causes, characteristics, theories of intelligence and treatment including different methods and materials. The legal background of the special education program, emphasizing law enforcement in the development of services to children and youth with mental retardation will be discussed. The application of technological assistance to this population is studied. Examines the available services in the community for these people and their families. The integration of information skills course content will provide the teacher candidate the opportunity to develop the skills to identify their need for information to offer alternatives, to make decisions.

### **EDES 4087**

The Special Child School Age

3 credits, 3 hours of lecture

Requirement: EDES 4006

This course examines different areas of learning in preschool children with special needs, such as intellectual, motor skills, social-emotional, self-reliance and creativity. Skills to be taught in each area, as well as methods and materials that can be used are discussed. The integration of information skills to the course content will provide the teacher candidate the opportunity to develop the skills to identify their need for information to offer alternatives, to make informed decisions and solve problems correctly, according to the course content. The teacher candidate will apply the knowledge acquired in class by visiting a school with special education groups or family's living room and comply with ten (10) hours of community service.

### **EDES 4088**

Assessment in Special Education

3 credits, 3 hours of lecture

Requirement: EDES 4006

The course gives importance to the study, management and interpretation of instruments of formal and informal assessment used for collecting data related to the performance of students with special needs in the various educational levels. They examine the various tests including intelligence, perception, motor development, learning skills and academic achievement. The implications of the

evaluation process for diagnosis, placement and preparation of PEI for students with special needs are analyzed. The integration of information skills to the course content will provide the teacher candidate the opportunity to develop the skills to identify their need for information to offer alternatives, to make decision. Possible accommodations, and technological assistance for achieving educational goals are considered. The teacher candidate will develop informal diagnostic tests in the areas of reading, writing and of math mastery applying what they have learned. Finally, the use of alternative techniques and evaluation -assessment is reviewed.

### **EDES 4089**

Practicum in Special Education - Capstone

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

Requirement: 4th year student and have departmental approval

This course is designed to serve as a link between the theoretical teaching received during college preparation and educational realities of the classroom where the special education teacher candidate may experience the diversity of educational strategies and implement the use of technology, research, assessment, management of students with special needs, planning and administrative process, effective communication, collaboration with parents, incorporates self-assessment and reflection in the search for solutions. The integration of information skills to the course content will provide the teacher candidate the opportunity to develop the skills to identify their need for information to offer alternatives, to make informed decisions and solve problems correctly. The teacher candidate will apply the acquired knowledge and complete (300) hours.

### **EDES 4096**

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

3 credit 3 hours of lecture

Requirements: EDES 4006, EDES 4078, EDES 4079

This course is designed for students to apply the theoretical and practical foundations in the process of teaching reading and writing for children and young people with disabilities using the Spanish curriculum at the elementary, intermediate and secondary levels. Methods and strategies appropriate to the population are examined, taking into consideration measurable writing goals and objectives of the Individualized Education Program (PEI). It works on the design of how to plan a unit, including the preparation of teaching materials, technological assistance and assessment of learning.

### **EDES 4097**

Methodology of Teaching Language Arts in Special Education K-12

3 credit 3 hours of lecture

Requirements: EDES 4006, EDES 4078, EDES 4079

This course offers the student the opportunity to manage, understand and apply the components of language arts (listening, speaking, reading and writing) to Special Education. Examines the methods and remediation strategies that best suit the needs of students with disabilities. It aims to integrate the different information skills to the course content, giving students the opportunity to broaden skills to identify, solve and make the right decisions, according to the course content.

### **EDES 4098**

Methodology of Teaching Mathematics in Special Education K - 12

3 credit 3 hours of lecture

Requirements: 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 in the elementary and secondary levels. Formal and informal tests for the diagnosis, methods and strategies used in teaching mathematics are examined. It takes into consideration writing measurable goals and objectives of the service program (PEI) in the area of mathematics. It works on the design of how to plan a unit, including the

preparation of teaching materials, technological assistance and assessment of learning. The information competencies will be integrated to the course content, which will provide the student the opportunity to develop the skills to identify their need for information to offer alternatives, make informed decisions and solve problems correctly, according to the course content. Finally, the student applies the acquired knowledge through an educational intervention.

**EDES 4995**

Special Topics in Special Education

Credits: 1 to 3

Weekly Hours: Variable (1 hour / credit) advanced level seminars on selected topics in Special Education.

**EDFI 3025**

Volleyball Basics

2 credits, 2 hours of lecture

Study of the history and development of volleyball. Practice and teaching strategies, fundamental skills of the sport and the application of the rules. Includes: volleying, service return, services, simple strategies for offense and defense of the game and scoring.

**EDFI 3034**

Measurement and Evaluation in Regular and Adapted Physical Education

3 credits, 3 hours of lecture

Basic concepts of measurement, assessment 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 of lecture

Study of the history and development of basketball. The practice of fundamental skills of the sport, and the application of rules, offensive and defensive strategies, scoring. Includes: passing, dribbling, shooting, free throw, rebounds, etc.

**EDFI 3045**

Softball

2 credits, 2 hours of lecture

History and development of the sport, its rules and scoring. Practice skills and implementing offensive and defensive strategies of the game.

**EDFI 3075**

Skills, Training and Techniques in Sports (Track and Field)

2 credits, 2 hours of lecture

Study of the history and development of track and field events. Practice and teaching strategies of the techniques of the different events. Study and application of the rules. Preparation and training of the following track events: 100 meters, 200 meters, 400 meters, 1.500 meters, distance running, relays. Preparation and training in the following field events: shot put, javelin, high jump, pole vault, long jump, triple jump and others.

**EDFI 3098**

Methods and Techniques- Adapted Physical Education

3 credits, 3 hours of lecture

Methodology in assessment, prescription, programming and implementation of physical education programs for people with disabilities since childhood. Emphasis on the administration and interpretation of tests, writing individual education plans (PEI) in physical education within the PEI and PISF. Techniques on individualize instruction and intervention are emphasized, based on the development and functional model. It includes family-centered approaches and ecology.

**EDFI 3100**

Motor Learning

3 credits, 3 hours

History and development of motor learning inside and outside the area of Physical Education.

Definition and explanation of the factors involved in learning motor skills during the development of human beings.

**EDFI 3105**

Simple Organization Games 2 credits, 2 hours of lecture

Study and practice in teaching games requiring few facilities or materials. Appropriate games for all levels, with special interest in the elementary level. After completing the course the student will have their own game manual.

**EDFI 3195**

Massage and Bandaging

2 credits, 2 hours of lecture

Practical course to familiarize students with the basic concepts of bandages and their physiological effects, like the need and implementation of preventive and protective dressings. (Students must provide their own materials)

**EDFI 3385**

Physical Efficiency

2 credits, 2 hours of lecture

Knowledge and information about physical efficiency and affinity to health. Means for obtaining the level necessary to maintain desirable physical proportions physical conditioning.

**EDFI 3395**

Teaching physical education for the disabled.

3 credits, 3 hours of lecture

Study of the historical aspects of people with physical, mental, emotional disabilities or other disadvantages and appropriate activities for them. It includes the origin and development of physical exercises, methods of rehabilitation and recreation, focusing on the educational aspects of physical education and in tune 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 of lecture

Requirement: EDFI 3025

This course will analyze and develop the sport of volleyball at the highest level and its problems, trends and possibilities. Promote study of the sport and its peculiarities.

**EDFI 3425**

Weightlifting

2 credits, 2 hours of lecture

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

**EDFI 3441**

Introduction to Swimming

2 credits, 2 hours of lecture

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

**EDFI 3442**

Intermediate Swimming

2 credits, 2 hours Of lecture

Requirement: EDFI 3441

Skills and styles of swimming and perfecting them. This course is intended to train students in styles that require greater coordination, such as breaststroke, butterfly, sideways on arms, chest invested, trudgeon crawl, and seafaring stroke or trudgeon stroke.

**EDFI 3447**

Rescue and Water Safety

2 credits, 2 hours of lecture

Requirement: EDFI 3442

This course aims to train students in the techniques and skills required for lifeguard training. It Includes: accident prevention, approach the victim, trailing (remolques), defense, search for missing persons, first aid and CPR. The student who wishes so may take the lifeguard exam of the Red Cross.

**EDFI 3451**

Tennis

2 credits, 2 hours of lecture

Theory about the history and development of tennis, terms and related concepts, rules and scoring. Individual and group practice of basic skills of the game: volley, service (direct blow or forehand and backhand), basic techniques and tactics.

**EDFI 3452**

Tennis Advanced.

2 credits, 2 hours of lecture

Requirement: EDFI 3451

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

**EDFI 3465**

Personal Community Health

3 credits, 3 hours of lecture

Systematic discussion and understanding of important concepts and issues in the areas of health that concern us today. It is largely focused on the emotional, social and environmental behavior. Emphasis is placed on prevention of health problems and its relationship with society so that the individual can cope more skillfully.

**EDFI 3545**

Folk dances

2 credits, 2 hours of lecture

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

**EDFI 3555**

History and Principles of Physical Education

3 credits, 3 hours of lecture

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 of lecture

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

**EDFI 3645**

First Aid and Safety

2 credits, 2 hours of lecture

The study and application of first aid procedures in the treatment of simple wounds and sports injuries. Also studied, the appropriate procedures for the prevention and treatment of injuries. It Includes: fractures, poisoning, burns, suffocation and others. Certification exam is optional.

**EDFI 4018**

Methodology for Teaching Physical Education at the Elementary Level.

3 credit 3 hours of lecture

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

Study of the basic principles of the physical education curriculum for the elementary school. Emphasis on design, editing, organization and adaptation of content that best meets the needs, learning styles and abilities of the student. Theoretical, philosophical and research approaches that provide the basis of curricular principles will be discussed. Emphasis on the following topics: strategies and teaching methodologies, group management, assessment and evaluation. Discussion of research principles and ethical issues in elementary education. Using emerging technology as a teaching strategy at the elementary level. Requires clinical experience observations in the elementary school.

**EDFI 4045**

Evaluation in Physical Education

3 credits, 3 hours of lecture

General and fundamental considerations of testing criteria and motor performance, introduction on procedures and analysis, uses and limitations of testing and evaluation, introduction to statistics, qualities of a test and variety of types of tests used in construction of measuring 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 issue of participating in sporting events in Puerto Rico. The nature of exercise physiology, energy metabolism, muscle fiber types, 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 of lecture

Requirements: CIBI 3012 or BIOL 3002

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 body movements in relation to Physical Education.

**EDFI 4125**

Administration and Supervision of Physical Education Programs

3 credits, 3 hours of lecture

Requirements: EDFI 3555

Study on how to organize and manage the physical education programs at different levels of education. It includes the study of management and control of the facilities, equipment, budget, intramural and intercollegiate programs, legal aspects and others. This course provides practical laboratory experiences.

**EDFI 4199**

Courses for special topics in transient offer.

**EDFI 4215**

Seminar in Curriculum and Methodology of the Teaching of Physical Education K-12

3 credit 3 hours of lecture

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 posed by the new physical education curricular approach from the public and private schools programs in Puerto Rico. It will analyze and further develop the spectrum of teaching styles applied to Physical Education as well as some instruments or-assessment techniques || Suitable for the teaching-learning process. Throughout the course the student will demonstrate and evidence theoretical domain and practical 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 set out in the document: Physical Education Standards of the Department of Education of Puerto Rico.

**EDFI 4216**

Teaching Practicum of Physical Education in the Secondary Level - Capstone

6 credits, 350 hours (includes a concurrent seminar once a week and insertion into a Center for Teaching Practice during the semester)

This course assigns the student-practitioner to an accredited public or private school in Puerto Rico (practice center) and where 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's director. It is also compulsory to attend a concurrent practicum seminar once a week for half an hour where she/he will meet with the supervisor of teaching practice of UPR Cayey to analyze and discuss problems, positive aspects, theories and concepts related to the teaching practicum process. Through this process the student-practitioner develops and implements the knowledge, skills, techniques,

attitudes and values in a real educational scenario, under a systematic monitoring process. It will help to develop critical and analytical skills to organize a Physical Education program, considering aspects such as cultural differences, inclusion processes and different – assessment techniques || applied to physical education.

### **EDFU 3001**

Human Growth and Development

3 credits, 3 hours of lecture

Provide future teachers knowledge about the nature and scope of educational psychology as a background for understanding the educational process. Confront the student with knowledge about the growth and development of children and adolescents. Examines the natural and environmental forces that contribute to the development of a healthy personality.

### **EDFU 3002**

Educational Psychology

3 credits, 3 hours of lecture

Requirement: EDFU 3001

Familiarizes students with psychological principles that explain the teaching and learning process and individual and social conditions that affect them. The different theoretical frameworks on learning and teaching and their applications to the classroom are analyzed. Part of the time is devoted to the study of the evaluation process, with special attention to the principles governing the construction of educational tests and student promotions.

### **EDFU 3007**

Historical and Social Foundations of Education

3 credits, 3 hours of lecture

Requirements: EDFU 3001, EDFU 3002

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

### **EDFU 3017**

Learning Assessment

3 credits, 3 hours of lecture

Requirements: EDFU 3001; 3002; EDPE 4001 and being ranked a third year student.

Diagnostic functions and improving instruction in the classroom through testing and measurements; elementary statistical techniques to study tests prepared for teachers, and other intelligence tests, and their use in the classroom.

### **EDFU 4005**

The Study of Man and His Physical Environment

3 credits

Requirements: None

Study of the physical environment in which human beings unfold, describing, observing, evaluating and comparing the structure and processes that shape the surface of the earth. The atmosphere and its processes, climate, composition and structure of the lithosphere, hydrosphere, biosphere, and the effect of the rotation and translation on the planet and the human being as an agent of change in the Earth's surface. An interdisciplinary approach between the natural sciences that allow students to integrate theoretical knowledge framed in human reality. Pedagogy prescribed course.

**EDFU 4019**

Philosophical Foundations of Education

3 credits, 3 hours of lecture

Requirements: EDFU 3001, EDFU 3002, EDFU 3007

The relationship between philosophical and practical theories. Big problems caused by conflicting educational philosophies in terms of their historical development and current impact. The role of the teacher in the light of the educational objectives, curriculum and assessment. Analysis of the basic philosophical problems. Ways in which the development of the scientific method, changes in social and economic institutions, and progress in human knowledge required in the philosophical attitudes and practices.

**EDPE 3002**

Language Arts in Elementary School

3 credits, 3 hours of lecture

Requirements: ESPA 3102, EDFU 3001-3002

The vernacular as a learning tool in the elementary school curriculum. The nature of the linguistic process; the importance and role of the vernacular as an instrument of communication and expression; relationship between the process of developing language skills; language arts curriculum in total, the program of progressive teaching the vernacular in its phases of listening, speaking, reading and writing; technical, educational materials and other resources used in the development of basic language skills.

**EDPE 3016**

Teaching of Music in Elementary School

3 credits, 3 hours of lecture

Development of methodologies to identify and promote creative expression of children in the area of music. Music as an educational resource.

**EDPE 3018**

Teaching English as a Second Language in Elementary School

3 credits, 3 hours of lecture

Requirements: ENGL 3102, ENGL 3022, EDFU 3002

Introduction to reflexive application of the purposes, scope, goals, objectives and methodology of teaching English as a second language in Puerto Rico. The experience includes laboratory practice with children.

**EDPE 3045**

Plastic Arts in Elementary School

3 credits, 3 hours of lecture

The different stages of artistic development of children, practicing various techniques of artistic expression, teaching methodology and ways to assess the child's work. This course presents artistic creation as a means of communication: plastic, literary, dramatic, musical and kinesthetic, which relate and articulate with the teaching-learning process of the different disciplines at school.

**EDPE 4001**

Seminar: Curriculum and Teaching Elementary School I

3 credits, 3 hours of lecture

Requirement: Being ranked as a third year student.

Analysis and discussion of the problems faced in the interpretation and implementation of the curriculum of Social Studies and Sciences in elementary school: reading and discussion of the most appropriate means for understanding. Special consideration to the following aspects: adaptation and use in accordance with the purposes pursued; planning and evaluation of teaching; role of the teacher in relation to children, school and community.

**EDPE 4002**

Seminar: Curriculum and Teaching Elementary School II

3 credits, 3 hours of lecture

Requirements: To be ranked as a third year student.

Careful analysis and discussion of the problems faced in the interpretation and implementation of the mathematics curriculum in elementary school: readings, discussion and exchange of ideas as to the most appropriate means for understanding it. Special consideration is given to the following aspects: adaptation and use in accordance with the purposes pursued; approach and evaluation of teaching, teacher's role in relation to children, school and community.

**EDPE 4005**

Seminar: Curriculum and Teaching in the Secondary Level

3 credits, 3 hours of lecture

Requirements: ESPA 3101-3102, EDFU 4019, EDFU 3017

Particularly the following aspects related to the area of specialization are considered: adaptation and use of resources and materials; teaching techniques; role of the teacher in relation to students, school and community. Analysis and discussion of the problems faced in the interpretation and implementation of the secondary level curriculum; readings and discussion of the most appropriate means to address them.

**EDPE 4006**

Teaching Practicum Secondary Education - Capstone

6 credits, 350 hours (includes a concurrent seminar once a week and insertion into a Center for Teaching Practicum during the semester)

Requirement: Permission from the Department

Teaching practicum in the subject of her/his specialty in middle and high school for a period of no less than three hours a day; five days a week, under the direction, guidance and supervision of cooperating teachers and supervisors in the field. Observation of lectures, teaching practice and participation in other activities related to the work done by a teacher in active service. Study and analysis of those problems arising in the practice of teaching in a weekly seminar of one hour under the direction of the specialty's supervisor.

**EDPE 4008**

Teaching Reading in the Elementary School

3 credits, 3 hours of lecture

Requirement: EDPE 3017

Aimed to familiarize future teachers of elementary grades with learning basic reading techniques in the mechanical, instrumental, and recreational aspects. It includes the study of the skills that a good reading program tries to develop so as to create not only an efficient student reader but also one that makes the most of the act of reading. Exposure to basic reading series in use in schools across the country, as well as works of recreational reading and enrichment. Methods, problems and current approaches to reading instruction will be studied.

**EDPE 4016**

Teaching Practice in Elementary School - Capstone

6 credits, 350 hours (includes a concurrent seminar once a week and insertion into a Center for Teaching Practicum during the semester)

Requirement: Permission from the Department

Students complete a minimum of one semester, morning or afternoon, in a public school. Assume responsibility for teaching duties in an actual school situation under the guidance of the University and the cooperative school. A weekly hour will be devoted to interdisciplinary seminars with university supervisors. The student teacher will be governed by academic semester of teaching practicum.

**EDPE 4115**

Teaching Science and Math in Elementary School

3 credit 3 hours of lecture

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

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

**EDPE 4135**

Theory and Methodology of Science Teaching Secondary Level

3 credit 3 hours of lecture

Requirement: EDFU 3001, EDFU3002, EDFU 3007, EDFU 4019

Theoretical and practical approach to the teaching-learning process. All aspects of science education at the secondary level will be studied: planning, innovative education and curriculum analysis; basic content in the area; preparation, adaptation and use of resources; methodology, techniques and teaching strategies; basics of measurement and evaluation. Students will complete at least 15 hours of laboratory experiments. These experiences will enable them to develop critical, dynamic and creative attitudes to the prevailing educational problems in our Puerto Rican reality.

**EDPE 4145**

Theory and Methodology of Teaching Mathematics Secondary Level

3 credit 3 hours (plus 15 hours of observations in a school during the semester)

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

Theoretical and practical approach to the teaching-learning process. all aspects related to the teaching of mathematics at the secondary level are studied such as planning, educational innovations, curriculum analysis; basic content in the area of specialization, preparation, adaptation and use of resources; methodology, teaching techniques and strategies; and fundamentals of measurement and evaluation. These contents are integrated into a practical basis. All students must complete at least fifteen hours of laboratory experiences in a public or private school. These experiences will help the student develop critical, dynamic and creative attitudes towards educational problems of Puerto Rico.

**EDPE 4155**

Theory and Methodology of Teaching History and Social Studies

3 credit 3 hours (plus 15 hours of observations in a school during the semester)

Requirement: EDFU 3001, EDFU3002, EDFU 3007, EDFU 4019

Theoretical and practical approach to the teaching-learning process. All aspects related to the teaching of Social Studies and History at the secondary level will be studied; such as planning, educational innovations, curriculum analysis and basic content in the area, among others. Preparation, adaptation and utilization of resources, methodology, techniques and teaching strategies besides fundamentals of measurement and evaluation. Students will complete at least 15 hours of laboratory experiments in public or private schools. These experiences will enable them to develop critical, dynamic and creative attitudes towards educational problems of the educational system of Puerto Rico

**EDPE 4235**

Theory and Methodology of Teaching Spanish Secondary Level

3 credit 3 hours (plus 15 hours of observations in a school during the semester)

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

Theoretical and practical approach to the teaching-learning process. All aspects related to the teaching of Spanish at the secondary level will be studied: planning; innovative education and curriculum analysis; basic content in the area; preparation, adaptation and use of resources; methodology, techniques and teaching strategies; basics of measurement and evaluation. Students will complete at least 15 hours of laboratory experiments. These experiences will enable them to develop critical dynamic and creative attitudes towards educational problems.

**ESCO 3001**

Psychology of Communication I

3 credits 3 hours of lecture

Requirement: ESPA 3102

The course examines those aspects of grammar, logic and psychology necessary for the process of oral and written communication.

**ESCO 3002**

Psychology of Communication II

3 credits, 3 hours of lecture

Requirement: ESCO 3001

In the second half the classroom becomes a laboratory where students apply the aspects studied to produce, analyze and criticize various types of, reports, memos, circulars letters and other printed work.

**ESMA 4345**

Statistical Methods

3 credits, three hours of lecture

Requirement: MATE 3172

In this course the statistical methods required for analyzing data from observational and experimental studies are discussed. Emphasis on the use of computer programs for statistical data analysis and research report writing is done.

**ESMA 4366**

Sampling

3 credits, 3 hours of lecture

Requirements: MATE 3015 or ESMA 4385

Introduction to sampling. Discussion of the various sampling techniques to estimate the parameters of a population: random sampling, stratified, cluster and systemic. Using statistical scheduled (programados estadísticos) and computer technology.

**ESMA 4369**

Design of Experiments

3 credits, three hours of lecture

Requirement: ESMA 4345

Introduction to experimental design techniques; experiment planning, variables control, statistical power and sample size. Methods of analysis for some designs commonly used: completely randomized, factorial, Latin square, 'split-plot', blocks, among others.

**ESMA 4380**

Regression Analysis

3 credits, 3 hours of lecture

Requirement: ESMA 4345

Introduction to the analysis of multivariate linear regression, model diagnostics and remedial measures, selection of models.

**ESMA 4385**

Computational Statistics

3 credits, 3 hours of lecture

Requirement: ESMA 4345

Scheduling algorithms for statistical analysis of data using a high-level language: probability distribution, descriptive statistics, generate charts, analysis of variance and regression analysis. Development of simulations to estimate parameters: Monte Carlo, 'bootstrapping' and 'jackknife' methods.

**ESMA 4001**

Mathematical Statistics I

3 credits, 3 hours of lecture

Requirement: MATE 3053, MATE 3045

Nature of statistics, probability, random variables and their probability distributions, generating functions, sampling distributions and the central limit theorem.

**ESPA 0002**

Remedial Spanish

0 credits, 40 hours

It is offered only during the summer.

The course is aimed at addressing those skills in which students have more difficulty, because success in the Basic Spanish depends largely on the domain of the vernacular, the management of it, on the property and correction of oral and written expression. In the Pre-University Spanish course, the correction of written language is emphasized: hyphenation, stress, words of dubious writing, punctuation and capitalization. In addition, some common expression errors are corrected. The course is required for students to take Basic Spanish.

**ESPA 0020**

Spanish Workshop I

0 credits, 2 hours of lecture

Co-requirement: ESPA 3101

Basic Spanish course includes in both semesters, a workshop on development of communication skills, in which students work on improving oral and written expression.

**ESPA 0021**

Spanish Workshop II

0 credits, 2 hours of lecture

Co-requirement: ESPA 3102

Second half of the workshop. It will work with techniques to build descriptive and narrative texts. They shall be exercised in the characteristics of narrative and descriptive speeches.

**ESPA 3101**

Basic Spanish I

3 credits, 3 hours of lecture

The basic Spanish course aims to ensure that students master the basic skills of speaking and writing through exercises vocabulary, spelling and language corrections. It also aims to interest them in reading literary works and familiarizing them with some of the figures and main expressions of Spanish letters. In the first half some works of contemporary Spanish literature, beginning with the generation of 98 up to the present time are studied.

**ESPA 3102**

Basic Spanish II

3 credits, 3 hours of lecture

Requirement: ESPA 3101

In the second semester contemporary American literature is studied, with special attention to Puerto Rican literature. The basic Spanish course includes in both semesters, a workshop for development of communication skills, in which students work on improving oral and written expression.

**ESPA 3115**

Introduction to Linguistics

3 credits, 3 hours of lecture

Requirement: ESPA 3102

In this course the different linguistic manifestations of this century will be studied: Structuralism, functionalism, "generativismo" and "variacionamismo". Theoretically and descriptively: phonology, morphology, syntax, semantics and sociolinguistics will be applied.

**ESPA 3201-3202**

Introduction to Literary Genres I and II

3 credits, 3 hours of lecture (each part, for a total of 6 credits)

Requirements: ESPA 3101-3102. Both courses offered annually. In summer one of the two parts of the course could be offered.

The various literary genres are studied through the analysis of representative works. Besides theory and literary criticism, it focuses on the historical, social, cultural and artistic processes that influence the creative expression through the ages. ESPA 3201 includes narrative and drama; ESPA 3202 covers poetry and essays.

**ESPA 3205**

Diagnosing and Correcting Common Errors

3 credits, 3 hours of lecture

The course will enable students to detect and correct, based on practical exercises, the most common errors in the use of our language. Of interest to any student who wants to improve her/his oral and written expression.

**ESPA 3211**

Introduction to Spanish Literature I

3 credits, 3 hours of lecture

Requirements: ESPA 3102

This is a scenic course that includes the history of Spanish literature from its origin (11<sup>th</sup> century) to the present. During the first half the medieval, Renaissance and Baroque eras are studied.

**ESPA 3212**

Introduction to Spanish Literature II

3 credits, 3 hours of lecture

Requirement: ESPA 3211

The second semester will continue with the Baroque to the present day. The most representative works of each period will be analyzed and or discussed.

**ESPA 3287**

Women Presence in the Puerto Rican Literature

3 credits, 3 hours of lecture

Requirement: ESPA 3102

Given the lack of knowledge about Puerto Rican women writers, many of them marginalized by history and literary criticism, this elective course chronologically examines a representative sample of the participation of women through the literary history of Puerto Rico from the 19<sup>th</sup> century to the present. It tries that students study the relationship between historical and social processes and characteristics of women's literature from the perspective of many texts, and proximity to the literary canon. Lectures, discussion and research are offered.

**ESPA 3291**

Spanish Grammar I

3 credits, 3 hours of lecture

Requirement: ESPA 3102

The course of Spanish grammar intends to examine the elements of the language, and the organization and functioning of all these elements. During the first semester, the language is analyzed in its communicative function and the act of communication is studied. The study of language as system starts. Phonological, orthographic and morphological appearance is studied, and the study of the simple sentence from a morphosyntactic point of view begins.

**ESPA 3292**

Spanish Grammar II

3 credits, 3 hours of lecture

Requirement: ESPA 3291

In the second semester, the study of the simple sentence is completed and the compound sentence is studied.

**ESPA 3299**

Special topics

3 credits, 3 hours of lecture

Requirements: ESPA 3102

It is a specialized course of study in which the topic varies, as well as the professor. Open to Spanish students and all students from other departments who have successfully completed the basic Spanish course and who show interest in the subject. The purpose of this course is to offer students the opportunity to conduct a deeper study, than the ones performed in introductory courses, on a topic, period or author in particular.

**ESPA 3351**

Research Seminar (offered every semester)

0 credits, 3 hours of lecture

Requirement: ESPA 3102

The Research Seminar course is designed for students majoring in Hispanic Studies, but we recommend it for all students of the institution. The purpose of the course is that students master the different stages in the development and writing of academic research. In this course, different bibliographic formats can be distinguished, will improve the bibliographical sources researching skills

necessary for their work and will be led, step by step in writing a research paper. At the beginning of the semester, the student will begin his critical work and will be directed and evaluated at each stage of the research and writing. The course is designed to create a job in the area of literature or linguistics, however, it is open to students who want to improve their research skills. The seminar provides support to all Department courses, so it should be taken, at the latest in the second semester of the second year.

### **ESPA 3358**

Female voices of Puerto Rican Literature in the 70s

3 credits, 3 hours of lecture

Requirement: ESPA 3102

The characteristics and themes on the narratives of four Puerto Rican writers of the 70s generation are studied: Rosario Ferre, Carmen Lugo Filippi, Magali García Ramis and Ana Lydia Vega.

### **ESPA 4011**

Hispanic Linguistics I

3 credits, 3 hours of lecture

Requirement: ESPA 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 phonetical (descriptive and historical) and morphological aspects.

### **ESPA 4012**

Hispanic Linguistics II

3 credits, 3 hours of lecture

Requirement: ESPA 4011

In the second semester the characterizing features of the Spanish of Latin America and Puerto Rican modality are studied.

### **ESPA 4221**

Spanish- American Literature I

3 credits, 3 hours of lecture

Requirement: ESPA 3102

The process of Latin American literature is studied in the framework of the social history of the culture. Aesthetic and thought currents are examined, and texts by authors who excel in different periods are analyzed. The first semester part of the Pre- Columbian literature and progresses until the late nineteenth century is studied.

### **ESPA 4222**

Spanish-American Literature II

3 credits, 3 hours of lecture

Requirement: ESPA 4221

The process of Latin American literature is studied in the framework of the social history of the culture. Aesthetic and thought currents are examined, and texts by authors who excel in different periods are analyzed. In the second semester, the twentieth century literary creation is studied.

### **ESPA 4231**

Puerto Rican Literature I

3 credits, 3 hours of lecture

Requirement: ESPA 3102

In the Puerto Rican literature course the development of our literature is studied by in the first place, using a chronological focus, linking the student not only with the main characteristics of the various

moments of our literary history, but also the most representative and better achieved works by our authors. In the first semester, our literary production is studied from its origins to Modernism.

**ESPA 4232**

Puerto Rican Literature II  
3 credits, 3 hours of lecture

Requirement: ESPA 4231

In the Puerto Rican literature course the development of our literature is studied by in the first instance, using a chronological focus, linking the student not only with the main characteristics of the various moments of our literary history, but also the most representative and best achieved works of our authors. The second semester is studied from the Avant-Garde (Vanguardismo) to date.

**ESPA 4251**

Golden Age literature I  
3 credits, 3 hours of lecture

Requirement: ESPA 3212

The fundamental purpose is the study of Spanish classical literature, from the Pre-Renaissance to the Baroque. The course includes the study of the characteristics of each period, and the most prominent authors, linked to the analysis of representative works. The first semester is devoted to the study of the literature of the sixteenth century.

**ESPA 4252**

Golden Age Literature II  
3 credits, 3 hours of lecture

Requirement: ESPA 4251

The fundamental purpose is the study of Spanish classical literature, from the Pre-Renaissance to the Baroque. The course includes the study of the characteristics of each period, and the most prominent authors, linked to the analysis of representative works. During the second semester lectures accompanied by readings and analysis of major works of the seventeenth century prose, poetry and drama are offered.

**ESPA 4311**

Contemporary Literature of the Twentieth Century  
3 credits, 3 hours of lecture

Requirement: ESPA 3102

This course covers a period of almost one hundred years, from the late nineteenth century to today. Literary movements such as Realism, Naturalism, Symbolism, Expressionism, Modernism, Surrealism, Existentialism and New Realism are discussed, highlighting their generalities and direct influences and analyzing representative works. This course appears divided into literary genres. During the first semester the narrative (story and novel) and theater are studied.

**ESPA 4312**

Twentieth Century Literature  
3 credits, 3 hours of lecture

Requirement: ESPA 4311

The second semester is devoted to the study of the essay and poetry.

**ESPA 4377**

The Puerto Rican Short Story (Cuento)  
3 credits, 3 hours of lecture

Requirements: ESPA 3102

In this course the Puerto Rican short story-production is studied from two aspects. First briefly discussed the folktale, which is, as throughout Latin America, the first island short story

demonstration. Second, the story of famous authors, emerging as such in the mid-nineteenth century, and extending increasingly refined and vitalized until today is studied.

### **ESPA 4496**

Research Seminar - *Capstone*

3 credits, 3 hours and / or hours of individual consultation

Requirements: ESPA 3101, ESPA 3102 and be classified as a fourth-year student. This is the Hispanic Studies Program capstone course, designed to be taken during the last semester of studies. It is offered once a year, second semester.

The Research Seminar is designed for students majoring in Hispanic Studies, but we recommend it for every student of the institution. The purpose of the course is that students master the different stages in the development and writing of academic research. The student will distinguish between different bibliographic styles, improve their skills in researching information necessary for their work, become familiar with the institutional regulations governing research with human participants and will be led, step by step, in the drafting of a research trial. At the beginning of the semester, students begin their critical work and will be directed and evaluated at each stage of the research and writing. The course is designed for the creation of a work in the area of literature or linguistics, however, it is available to students who want to improve their research skills. The seminar serves to strengthen the skills and knowledge acquired in other courses.

### **ESTA 3001**

Statistical Analysis I

3 credits, 3 hours of lecture

Requirement: MATE 3172

Statistical Analysis I is aimed at creating in the student a broad and solid base with which to successfully face the understanding and solution of quantifiable business problems and the market. The one-year course in Part I covers the basics of statistics, collection, analysis and presentation of data, probability theory, probability distributions and sampling distributions. In Part II of the course, statistical estimation, hypothesis testing, regression analysis and correlation and projection techniques are studied.

### **ESTA 3002**

Statistical Analysis II

3 credits, 3 hours of lecture

Requirement: ESTA 3001

Statistical Analysis II is intended to create in the student a broad and solid base with which to successfully face the understanding and solution of quantifiable business problems and the market. The one-year course in Part I covers the basics of statistics, collection, analysis and presentation of data, probability theory, probability distributions and sampling distributions. In Part II of the course, statistical estimation, hypothesis testing, regression analysis and correlation and projection techniques are studied.

### **FILO 3001**

Introduction to Philosophy I

3 credits, 3 hours of lecture

Requirement: HUMA 3102

This is an introduction to philosophy, but taking into account its development from Greece 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 the evolution of society. During the first semester (Philosophy 3001) besides the study of the concept of philosophy, its themes and methods, a historical tour from the Pre-Socratics to late scholasticism is taken.

**FILO 3002**

Introduction to Philosophy II

3 credits, 3 hours of lecture

Requirement: HUMA 3102

This is an introduction to philosophy, but taking into account its development from Greece to the present, without being a History of Philosophy course, it aims to highlight the fact that philosophy has developed historically and its understanding is essential to the evolution of society. In the second semester (Philosophy 3002) modern philosophy from Descartes to today is studied.

**FILO 4007**

General Logic

3 credits, 3 hours of lecture

Requirement: HUMA 3101

The course familiarizes students with the history, language and the most important problems of Aristotelian logic and symbolic logic. Considers the knowledge, truth and language as activities that can be explained in the light of logical principles. It also aims to introduce students to a series of abstract exercises that should serve as instruments for their intellectual task.

**FILO 4015**

Logic and Dialectic

3 credits, 3 hours of lecture

Requirement: HUMA 3102

The contradictory nature of things is studied and how this constant external conflict of things allows change to everything in existence. The different currents within the dialectical philosophy and comparison between classical and dialectic logic are analyzed.

**FILO 4021**

Ethical Principles

3 credits, 3 hours of lecture

General study of the relevant philosophical ethical issues including issues of social and professional ethics. The following subjects are analyzed: man as a subject of morality, the existence or non-existence of a universal moral standard of morality, the hierarchy of values, fair distribution of wealth, work and professions, violence and terrorism.

**FILO 4056**

Aesthetics

3 credits, 3 hours of lecture

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 theories of schools such as formalist, intuitionistic, psychological, sociological, axiological, etc. will be studied.

**FILO 4261**

Twentieth Century Philosophy Part I

3 credits, 3 hours of lecture

Requirement: HUMA 3102

After a historical introduction to the philosophy of the twentieth century and its main trends, it gives special attention to existentialism. In the problem of knowledge this self-consistent system as a possible solution to the long struggle between realism and idealism is brought upon. Moreover, specific issues such as existentialist ethics, death, nothingness, the existence of God, the absurdity will be discussed...

**FILO 4265**

Puerto Rican Thought

3 credits, 3 hours of lecture

Requirement: HUMA 3102

A reflection on the Puerto Rican thought, taking especially into account the theoretical logic that characterizes it . Their points of contact with foreign thinkers and their chances of fertility for the future, while reference to the -political alternatives are discussed || with which it is identified.

**FILO 4471**

Philosophy of Science I

3 credits, 3 hours of lecture

Requirement: HUMA 3102

Study of the main philosophical concepts for the structure of thought and practice of modern science, and understand its success: theory and experience, facts and laws, -Convention || and a truth, experiment, measurement -observable ||, -Confirmation || ( or alternatively -corroboration || ), etc.

**FILO 4495**

Philosophical Anthropology

3 credits, 3 hours of lecture

Requirement: HUMA 3102

After an interpretation of the concept of evolution, issues such as: who is the human being, the meaning of life, the mission of the human being, individual and society, human values, humanism, human future, etc. are analyzed

**FILO 4535**

Philosophy of Religion

3 credits, 3 hours of lecture

Requirement: FILO 3001

What kind of topics have been developed around the religious aspect? How, where and when? Answering these questions is what this course is directed by making phenomenology of the divine fact and considering it historical, philosophical and literary, without losing sight of specific traditions such as Eastern and Mohammedan. Splits occurred in Christianity and the Enlightenment movements and schools like the Liberal Theology, Conservative Theology and Liberation Theology are also analyzed.

**FILO 4581**

Philosophy of History.

3 credits, 3 hours of lecture

Requirement: HUMA 3102

Analyzes the emergence of conceptions of history from the Jewish civilization, its development in the Middle Ages and through modernity, and tries to become a decisive point of departure of human activity over the past two centuries. Considers the question of whether historical facts, such as natural phenomena are governed by laws that could be called scientific, or if instead history resists such an approach and is the product of what has been called the creative freedom of man. It also seeks to confront current problems in light of the study of history.

**FINA 3006**

Commercial Finance

3 credits, 3 hours of lecture

Requirements: ECON 3007, CONT 3006

The course covers the general principles of financial management. Includes mainly the following topics: operational and legal context of the company, financial analysis, planning techniques and financial control, management, capital budgeting, cost of capital, sources of funding and overall

financial aspects of the organization, expansion and settlement of a company, overall financial aspects of the organization, expansion and liquidation of a company

### **FINA 3007**

Money and Banking

4 credits, 4 hours of lecture

Requirement: CONT 3006

The course aims to bring the student to the knowledge of the fundamental principles that seek to explain economic activity within the context of the monetary object. The problem of defining the monetary object, the concept, development and economic importance of the monetary order, financial institutions and their role in development and economic growth, the structure and behavior of the banking industry, central banking and monetary policies, monetary economic theory and general aspects of the international monetary system.

### **FISI 3005**

Intermediate Mechanics

3 credits, 3 hours (65% lecture, 35% discussion)

Requirements: FISI 3012 and MATE 3053

This course is intended to introduce students to the concepts, laws and methods of study and application of classical mechanics. The course is an intermediate level and immediately follows an introductory course in general physics. It is geared towards students of Natural Sciences and Education.

### **FISI 3007**

Basic Electronics

3 credits, 3 hours (40% lecture and 60% discussion)

Requirement: FISI 3012 Co-requirement: FISI 3008

This course is an introduction to the field of semiconductors and detailed analysis of the construction and operation of semiconductor circuits. It includes diodes, photodiodes, filters, transistors, phototransistor, field effect transistors, power amplifiers, operational amplifier and integrated circuits.

### **FISI 3008**

Basic Electronics Laboratory

1 credit, 3 hours of Lab

Co-requirement: FISI 3007

In this course the student will use the elements, circuits and measuring instruments studied in the course of Basic Electronics. Application of the concepts and principles studied in class.

### **FISI 3011**

College Physics I

3 credits, 2 hours of lecture, 1 discussion (67%, 33%)

Co-requirement: FISI 3013, MATE 3052

Cinematics and dynamics of particle and rigid body. Newton's laws applied to linear and angular movement. Laws of conservation of energy, linear and angular momentum. Calorimetry and the laws of thermodynamics. Calculus and computerization are used.

**FISI 3012**

College Physics II

3 credits. Two hours of lecture and one discussion (67%, 33%)

Requirement: FISI 3011

Co-requirement: FISI 3014

Electric and magnetic fields and laws of electromagnetism: In this course electricity and magnetism is studied. Waves, rope waves, sound, and electromagnetic waves. Modern physics, relativity and the foundations of quantum theory.

**FISI 3013**

College Physics Laboratory I

1 credit, 3 hours (80% practice and 20% practical discussion)

Co-requirement: FISI 3011

This course complements the skills acquired by the student in the 3011 course. Through practical exercises in the Physics laboratory the student will gain a greater understanding of the concepts taught in class, learn various experimental methods in physics and will analyze the results of a given experiment.

**FISI 3014**

College Physics Laboratory II

1 credit, 3 hours (80% practice and 20% practical discussion)

Co-requirement: FISI 3012

This course completes the skills acquired by the student in the course FISI 3012. Through laboratory practices the student will gain a greater understanding of the concepts taught in class, and become familiar with various tools and methods to take electrical measurements.

**FISI 3016**

Modern physics

3 credits, 3 hours of lecture

Requirement: FISI 3012

The course covers concepts of the special relativity theory, particle properties of waves and wave properties of the particles, the Schrodinger equation, the spin, the structure of the atom, the nucleus and elementary particles.

**FISI 3020**

Physics for Biosciences

4 credits, 6 hours (3 hours 3 hours lecture and 3 hours laboratory)

Requirements: FISI 3012 and FISI 3014

The purpose of this course is that students who are interested in bioscience and medicine apply some of the concepts and principles of physics to situations of biological interest, pharmaceutical, medical, physical therapy and physical education, to help them in their professional work in those areas and in preparation for the corresponding graduate schools.

**FISI 3191**

Integrated College Physics I

4 credits, 6 hours per week (laboratory-class)

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 force laws and laws of motion, superposition principle, and principles of conservation of energy, translational and rotational moment. Modern technology (computers, software and other) as a scientific tool to take, organize and display, and model actual data is used.

**FISI 3192**

Integrated College Physics II

4 credits, 6 hours per week (laboratory-class)

Requirements: FISI 3191 or FISI 3011/ FISI3013 AND MATE 3053

Course in which several natural phenomena are explained on a macroscopic scale using the concepts and basic laws of electromagnetic theory, such as; electric charge, polarization, time-varying fields, electromagnetic induction, radiation of electromagnetic waves and Maxwell's laws in a vacuum. Microscopic models are incorporated to explain phenomena at the macroscopic level. Modern technology (computers, software and other) as a scientific tool to take, organize, analyze, visualize, and model real data is used.

**FISI 4000**

Elements of Quantum Mechanics

3 credits, 3 hours (80% lecture, 20% discussion)

Requirements: FISI 3012, MATE 3053.

Relate the student with the concepts and laws of quantum mechanics and its application to the movement and in the under microscopic world existing interactions.

**FISI 4005**

Methods of Mathematical Physics

3 credits, 3 hours (80% lecture, 20% discussion)

Requirements: FISI 3012, MATE 3053

This course is intended to introduce students, through a unifying development, to the language, content, style and attitude of the physic, into those areas of mathematics that have relevance in contemporary physics.

**FISI 4057**

Thermodynamics and Statistical Mechanics.

3 credits, 3 hours. (80% lecture, 20% discussion)

Requirements: FISI 3012, MATE 3053

This course is intended to introduce students, through a unifying development, to the language, content, and attitudes of the physic, towards those areas of mathematics that have contemporary relevance in physical style.

**FISI 4068**

Electromagnetism.

3 credits, 3 hours (80% lecture, 20% discussion)

Requirements: FISI 3012, MATE 3053

This course is intended to introduce students to the concepts, laws and methods of study and application of electromagnetic interactions: Electrostatics, current, magneto static, electrodynamic and electromagnetic waves. The course is intermediate level and follows immediately after the introductory general physics course. It is geared towards students of Natural Sciences and Education.

**FISI 4075**

Experimental Methods

1 credit, 3 hours

Requirements: FISI 3012, MATE 3053

Study of the methodology, tools, design, implementation and communication of the experimental laboratory results, examination of the hypotheses proposed as solutions to physical problems of science and technology.

**FISI 4995**

Special Topics in Physics

1 to 3 credits. A weekly hour per credit.

Requirements: FISI 3012, MATE 3053

This course is intended to familiarize students with the concepts and methods of specific areas of physics through a formal course or supervised scientific research and testing. Directed towards applications of physics to specific interests of students of Natural Sciences and Education in Natural Sciences.

**FRAN 3021**

Experimental French I

3 credits, 6 hours of lecture

The study of the French language with emphasis on communication addressing diverse and varied aspects of French society and the Francophonie. Approach and technology management in French.

**FRAN 3022**

Experimental French II

3 credits, 5 hours and 1 laboratory

Requirement: FRAN 3021

Continued study of the French language with emphasis on communication, addressing diverse and varied aspects of French society and the Francophonie. Approach and technology management in French.

**FRAN 3036**

Conversational French

3 credits, 3 hours of lecture

Requirement: FRAN 3021

The course enables students to use French as a means of oral communication.

**GEOG 3155**

Elements of Geography

3 credits, 3 hours of lecture

Requirement: CISO 3122

The physical environment where human groups develop. It will emphasize the study of geographical physical factors such as: climate, soil, vegetation and relief among others, and the relationship of these with human societies. In addition, it is interested in the spatial organization, geopolitics, economics, urbanization and urban phenomenon, the metro-politization (metropolitacion) of regions and cities, the location, size and territorial structure of human societies, and the influences of natural conditions in that organization. In this course, emphasis will be given to the impact of human spatial behavior and decisions on natural environments.

**GEOG 3165**

Geography of Puerto Rico

3 credits, 3 hours of lecture

Requirement: GEOG 3155

It covers issues of location, size and shape, and landscape elements including natural resources and the need for their conservation; population and economic and social structure and geographical regions from the human organization of space.

**GEOG 3175**

Political Geography

3 credits, 3 hours of lecture

Requirement: GEOG 3155

Analysis of geographical bases of the State, including, among other things, the study of geographic patterns and structures. Investigates the organic relationship between natural and political phenomena.

**GEOG 4105**

Economic Geography

3 credits, 3 hours of lecture

Requirement: GEOG 3155

Studies the spatial structure of economic activities, analyzing the population and technological development in relation to the need for extensive knowledge of the physical environment, including the most rational use of natural resources and conservation of the ecological balance established by nature.

**GEOG 4115**

Urban geography

3 credits, 3 hours of lecture

Requirement: GEOG 3155

The study of 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, metro-politization (metropolitization), industrialization and the shopping malls phenomenon.

**GEOG 4125**

Geomorphology

3 credits, 3 hours of lecture

Requirement: GEOG 3175

Study of landforms on the surface of the earth in terms of age, structure and key processes of their formation. The emphasis is on processes that include human as geomorphic agent and relations between certain forms of relief and types of land usage. Physical forms relieves in Puerto Rico are examined.

**GEOG 4135**

Assessment, Management and Conservation

3 credits, 3 hours of lecture

Requirement: GEOG 3155

The primary objective of this course is to achieve an objective view of the physical, biotic and human resources, so that a deep concern for their use and disuse is enforced. Economic and aesthetic qualities, along with methods for resource management and conservation are studied.

**GEOG 4315**

Production and Operations Management

3 credits, 3 hours of lecture

Requirement: ADMI 4006

Study of the operational problems of the company and analysis techniques available for their solution. It includes the design, operation and review of production systems and operations.

**GEOP 4316**

Manufacturing Firms Management

3 credits, 3 hours of lecture

Requirement: ADMI 4006

The study of the application of modern methods to industrial and commercial enterprises management. The nature of management, the responsibility to make decisions, how to improve the methods of procedures and physical facilities to achieve greater economy and establish patterns is discussed. Product design and inspection; purchases; inventory and production control; price fixing; wage and hour administration and incentive creation.

**HIST 3111**

US History I

3 credits, 3 hours of lecture

Requirement: 2<sup>nd</sup> year students and beyond.

Study of the history of the United States of America from the colonial era to the Civil War.

**HIST 3112**

US History: From the Civil War to the Present

3 credits, 3 hours of lecture

Requirement: HIST 3111

Study of the history of the United States of America from the period after the Civil War to the present.

**HIST 3115**

History of the United States Compendium

3 credit 3 hours of lecture

Requirements: None

Study of the history of the United States of America since the time of their independence until the present time.

**HIST 3121**

US Diplomatic Relations Until 1900

3 credits, 3 hours of lecture

Requirements: HUMA 3201, HUMA 3111

Study of the emergence and transformation of US diplomatic relations since the beginning of the revolutionary process until 1900 and its manifestations today.

**HIST 3145**

History of Spain

3 credits. 3 hours of lecture

General study of the processes in antiquity and the Middle Ages gestate the emergence of Spain and the consequent historical action that materializes from modernity until today.

**HIST 3155**

Europe in the Nineteenth century

3 credits, 3 hours of lecture

Study of historical events in the socio-political field, revolutions, tensions and conflicts of the nineteenth century.

**HIST 3165**

Renaissance history

3 credits, 3 hours of lecture

Social and economic transformations in Europe in the Renaissance. Emergence of new states and their conflicts. The struggle for hegemony. geographical discoveries and colonization. Reformation and Counter-Reformation. Puritan revolution.

**HIST 3185**

The Medieval World

3 credits, 3 hours of lecture

Discovery of the values of a geocentric Christian society mainly the great influence of this society and other peoples, whose story unfolds in this period, in our society: Advantages and setbacks of 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 century of iron); City and Town Planning; University and Scholastic Philosophy; Trade and League of workers and traders; the arts and sciences; political and military power; wars (the Hundred Years' War) and the origin of modern nations.

**HIST 3195**

World of Antiquity

3 credits, 3 hours of lecture

Discovery of the values of ancient civilizations, in whose institutions are more or less remotely found our current ways of life: Egypt, Mesopotamia, Mediterranean cultures, Greece, the Roman Empire, and Christianity.

**HIST 3205**

Contemporary World Issues

3 credits, 3 hours of lecture

Requirement: HUMA 3102

The intention of the course is to show the distant origins of the main problems and conflicts of the immediate history. For example, the mechanisms of underdevelopment, the Israeli-Palestinian conflict, the great revolutions, the Cold War, etc. are studied. In view of the impossibility of exhausting the endless list of problems of the twentieth century, the main emphasis is on the clarification of concepts and the development of a historical vision that goes beyond episodic and journalistic conception of contemporary conflicts.

**HIST 3211**

Spanish-American History (colonial Stage)

3 credits, 3 hours of lecture

Study of the development of the Spanish colonization in America since the time of the conquest to independence movements.

**HIST 3212**

History of the Spanish-American Independence

3 credits, 3 hours of lecture

Study of the historical evolution of the Hispanic peoples since their struggles for independence to the present.

**HIST 3241**

History of Puerto Rico I

3 credits, 3 hours of lecture

This course studies, from the facts that contributed to the eventual gestation of the "puertorriqueñidad", its forging and origin as a subject, until the '98 crisis.

**HIST 3242**

History of Puerto Rico II

3 credits, 3 hours of lecture

Requirements: HIST 3241

This course examines the Puerto Rican historical process from the so-called change of sovereignty in 1898 until today.

**HIST 3245**

History of Puerto Rico Compendium

3 credits, 3 hours of lecture

This course examines the historical development of Puerto Rico since its discovery until 1952.

**HIST 3265**

The Arab World and Culture

3 credits, 3 hours of lecture

Given the political and economic importance of the Arab countries in the past and in the present, this course presents a possible characterization of Islamism and an overview of the origin and historical-cultural development of the peoples of Arabic language, its relations with the Western world and its relevance in the contemporary world.

**HIST 4090**

History of Women in Latin America

3 credits, 3 hours of lecture

Requirements: HUMA 3102

Study of the work and contribution of women in the historical development of the pre-Hispanic and Hispanic America.

**HIST 4150**

History of Modern and Contemporary Caribbean

3 credits, 3 hours of lecture

Study of the evolution lived by societies belonging to the Caribbean region. The course will take as its starting point the Spanish colonial system and its concept-Mare Clausum ||, the plantation system and the British, Spanish, and French trade developed in the region will be analyzed. The distinctive elements of the ethnic diversity of the Caribbean will be discussed. In particular the economic, historical, Geopolitical, and cultural importance of the Caribbean will be analyzed.

**HIST 4173**

Modern History of Russia and the Soviet Union

3 credits, 3 hours of lecture

Requirements: HUMA 3101- 3102

Study of its relevant figures and events are highlighted. Special consideration to modern times.

**HIST 4225**

Theory of History

3 credits, 3 hours of lecture

Not available to freshmen.

This is a series of conceptual considerations a historiographical task as it has been understood especially in the last two centuries. Theoretical interpretations that have influenced the current historical notions and the specific methodologies that make them possible are analyzed. It ends with some reflections about 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 of lecture

Requirements: HIST 3241, HIST 3242 or HIST 3245

The use of methods and techniques of historical research.

**HIST 4230**

Three Independence Movements in American History

3 credits, 3 hours of lecture

Requirements: HIST 3245 or HIST 3241 or HIST 3111 or HIST 3212 or 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 Latin America (Iberoamerica).

**HIST 4305**

Seminar on the Puerto Rican Historical Present from a Legal and Political Perspective

3 credits, 3 hours of lecture

Requirements: HIST 3242 / Professor's permission.

Seminar in which the most important and recent dimensions of the historical Puerto Rican reality are studied in a legal and political context. Incidentally, in retrospect the significant events throughout the twentieth century that lay the foundation for our present reality will be studied.

**HIST 4315**

Seminar on the Historical Interpretation of the International Financial Order in the Nineteenth and Twentieth Centuries

3 credits, 3 hours of lecture

It will include the study of readings and discussion of concepts, notions and vocabulary of economic history. And it will address issues of the nineteenth century such as trade, currency, credit, banking and depression from 1873 to 1895. For the twentieth century topics such as: wars and international economy will be discussed. Changes in national and international market capitals. The external debt of the third world.

**HUMA 3010**

Field Trip to Europe

6 credits

Includes study tour during the summer. Panoramicly the historical processes of political and artistic of selected European countries are studied. A trip to complement the theoretical knowledge will be taken. At the end of the trip it is intended that the student knows the cultural artistic and socio-political institutions that have arisen as a result of these processes within the cultural mosaic of Europe, its transformations in today's society and its relevance in the Puerto Rican national culture.

**HUMA 3101**

Study of Western Culture I

3 credits, 3 hours of lecture

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 by analyzing the works and the most significant original texts emphasizing particularly ancient Greece and its relationship to the present.

**HUMA 3102**

Study of Western Culture II

3 credits, 3 hours of lecture

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 by analyzing the works and the most significant original texts emphasizing particularly ancient Rome, the origins of Christianity and the passage of the Hellenistic period to the Middle ages and its relationship to the present.

**HUMA 3111**

Western Culture I and II Compendium

3 credit 3 hours of lecture

Requirement: None

Study of the most representative aspects of Western culture throughout the periods: Greek, Roman and medieval, through critical analysis of the great literary, philosophical, artistic and religious works.

**HUMA 3112**

Western Culture III and IV Compendium

3 credit 3 hours of lecture

Requirement: HUMA 3111

Study of the most representative aspects of Western culture since the Renaissance to the present day paying special attention to modern times. Will be studied through the analysis of great literary, philosophical, artistic and religious works.

**HUMA 3201**

Study of Western Culture III

3 credits, 3 hours of lecture

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 times and their relationship with the Contemporary World.

**HUMA 3202**

Study of Western Culture IV

3 credits, 3 hours of lecture

Requirement: HUMA 3201

Critical reflection on the Western cultural process from the eighteenth century to the present, emphasizing the areas of literature, philosophy, art, history and religious ideas through the analysis of the most representative works and texts of those times.

**HUMA 3515**

Travel to Central America: pre-Hispanic and Colonial

6 credits, the theoretical part will consist of three

(3) hours per week for eight (8) weeks, the travel experience (June and / or July) will last approximately 25 days.

Requirements: None

Provide students with general knowledge about some of the cultures that make up the ancient pre-Columbian civilizations of the Mesoamerica area, and the colonial period. The course will culminate in a trip to some parts of Mexico and Guatemala through which the student can combine the theoretical component of their studies with direct experience.

**HUMA 3517**

Study Tour: South America: Chile and Argentina

6 credits three hours for eight weeks and 18 days of travel

Requirements: None

Provide students with general knowledge about the historical and cultural development of the countries in the southern cone. The course will culminate in a trip to some parts of Chile and Argentina through which the student may supplement the theoretical component of their studies with direct experience.

**HUMA 4025**

Introduction to Semitic Cultures

3 credits, 3 hours of lecture

Comparative study of the social and cultural development of Judaism, Christianity and Islam. The course examines how the formation of the Semitic religions results in the construction of an identity and a religious community.

**HUMA 4026**

Caribbean Cultural Theory

3 credits, 3 hours of lecture

Requirements: HIST 3241, HIST 3242 or HIST 3245

Study of the Caribbean culture through an interdisciplinary approach, i.e. analyzing different readings from the historical oral, ethnographic, literary and feminist perspective, among others. This course will focus on the study and analysis of cultural spaces of race, class and gender, and its various manifestations in Caribbean culture.

**HUMA 4105**

Seminar on Research or Creation in Humanities - Capstone

3 credit 3 hours of lecture

Requirement: HUMA 3202, be classified as fourth year student and permission of the Department's Director. It is offered the second semester of each year.

This course is aimed at the development and application of methods and research techniques in various areas of the Humanities (History, Literature, Philosophy, Theater, Arts, Music and Cultural Theory).

The course allows the students to complete their studies sequence in either of the Humanities programs. It is open to exploring the work of art, with or without aesthetic specificity, its organization, its symbols, or its receiving public. Through this course students can conduct research creating artistically, contributing to the development of the visual arts, music, theater, history, art history, literature, philosophy and cultural studies.

**HUMA 4995**

Special Topics.

3 credits 3 hours per week

Advanced level seminars on selected topics in the Humanities.

**INCO 3005**

Business Communication I

3 credits, 3 hours of lecture

Requirements: INGL 3102; INGL 3104 or more than 3 points on the AP exam.

Introductory course on commercial communication designed for students majoring in Business Administration. Practice the correct use of English grammar, the structure of English, business vocabulary, writing techniques for business letter, and the basic principles of commercial communication is available.

**INCO 3006**

Business Communication II  
3 credits, 3 hours of lecture

Requirement: INCO 3005. Second semester of each year.

This course is a continuation of INCO 3005. It is designed for students majoring in Business Administration and Secretarial Sciences. The course focuses on the drafting of commercial messages using the basic principles of written communication and the indirect and persuasive communication method.

**INCO 4005**

Pronunciation techniques  
3 credits, 3 hours of lecture

Requirements: INGL 3102; INGL 3103; INGL 3104. Offered every semester each year.

This course is designed for students majoring in Business Administration whose proficiency in spoken English is limited. The course is aimed at developing interpersonal communicative skills for commercial and / or business scenario.

**INGL 0002**

Remedial English

0 credits, 40 hours of class and 2 weekly hours of laboratory. It is offered only during the summer.

Requirements: 450 or less in the test of English Achievement (CEEB)

From the year 1995 onwards students who had to take English before 3011 and 3012 before (those who obtained between 641-800 test in English CEEB) will take second year courses to pass their first six credits of English. To meet their last six credits of English these students will take second level courses, i.e. third or fourth year courses.

This is a preparatory course designed to enable the student to meet subsequent English requirements. It will develop oral, reading, listening and writing skills. And it seeks to amend the student attitudes toward learning this language.

**INGL 3001**

English Literature to Neoclassicism  
3 credits, 3 hours of lecture

Requirement: INGL 3104, INGL 3012, 4/5 in the Advanced Test in English, or permission from the English Department.

The first semester is offered in alternate years.

This course studies English Literature from its origins to the Neoclassicism period (18th century). The literature is offered in its intellectual and cultural context, and its relation to historical and political events of the period under review. The student is expected to formulate an idea about the movements and / or trends of literature during these periods and from one period to another. It is also expected that the student explore the main genres represented, particularly as these genres are conceived in different literary periods.

**INGL 3002**

English Literature from Romanticism to the Present  
3 credits, 3 hours of lecture

Requirements: ENGL 3104; 4/5 in the Advanced Test in English, honor student. The second semester is offered in alternate years.

This course studies English Literature from the Romanticism to the Present. The literature is offered in its intellectual and cultural context, and its relation to historical and political events of the time are examined while exploring relevant, biographical details.

**INGL 3021**

Oral and Written English I  
3 credits, 3 hours of lecture

Requirements: INGL 3102; INGL 3104 or 4/5 in the Advanced English Test. First semester of each year.

This course is designed for future elementary school teachers. It is designed to help students improve their proficiency and enforcement in the area of oral and written communication in English.

**INGL 3022**

Oral and Written English II  
3 credits, 3 hours of lecture

Requirements: INGL 3102; INGL 3104, INGL 3021 INGL second semester of each year.

This course is designed for future elementary school teachers. It is designed to help students improve their proficiency and enforcement in the area of oral and written communication in English. This part of the course gives more attention to writing in English.

**INGL 3055**

Film and Literature  
3 credits, 3 hours of lecture

Requirements: INGL 3104/ INGL 3012; 4/5 in the Advanced Test in English; honor student.

This course explores what makes the film a literary art taking into account the similarities and differences in techniques, styles and genres and cinematic narrative. The film will be studied as an independent art form. Written works of fiction will be compared with their film versions.

**INGL 3101**

Basic English I  
3 credits, 3 hours of lecture

Requirement: 450-539 in the CEEB. Students with 450 or less must pass ENGL 0080

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 per week of oral and written analysis of texts and an hour of reading in the language lab and / or time tutoring students recommended by the department.

**INGL 3102**

Basic English II  
3 credits, 3 hours of lecture

Requirements: INGL 3101 or equivalent. The second semester, it is offered each year.

This course is designed for the student to improve reading and writing skills for academic purposes. The course content focuses on issues relevant to academic studies and today's society. The course includes three hours per week of oral and written analysis of texts and an hour of reading in the language lab and / or time tutoring students recommended by the department.

**INGL 3103**

Intermediate English I  
3 credits, 3 hours of lecture

Requirement: 540-640 in the CEEB test. The first semester, it is offered each year.

This course is designed for freshmen who have an intermediate level of English proficiency. The emphasis of the course is to improve reading and writing skills so that students can demonstrate a better enforcement in the academic environment.

**INGL 3104**

Intermediate English II

3 credits, 3 hours of lecture

Requirement: INGL 3103

This course is a continuation of ENGL 3103. The course is designed for freshmen who have an intermediate level of English proficiency. The emphasis of the course is to improve reading and writing skills so that students can demonstrate a better enforcement in the academic environment.

**INGL 3155**

London Immigrant voices

3 credits, 3 hours of lecture

Requirements: INGL 3104; honor student- freshman; 4/5 in the Advanced English Test. Offered alternate years, second semester.

This course offers students the opportunity to explore the English literature of the twentieth century through reading English texts produced by immigrants to Britain, particularly London, its capital, and intellectual life. State affairs, such as the role of language and education in previous colonies, and the history of the former British colonies, will provide the 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 of lecture

Requirements: 6 credits in English and an interview with the professor. Offered each semester according to the academic demand.

This course is designed for students who are not proficient in English, particularly in oral communication. The course emphasizes the essential skills of interpersonal communication.

**INGL 3201**

Grammar, Composition and Reading I

3 credits, 3 hours of lecture

Requirements: INGL 3102; 4/5 in the Advanced English Test.

This course focuses on the development of three main skills: critical thinking, analytical reading, and objective writing.

**INGL 3202**

Grammar, Composition and Reading II

3 credits, 3 hours of lecture

Requirement: 3201

This course focuses on the development of three main skills: critical thinking, analytical reading, and objective writing.

**INGL 3205**

Modern English Syntactic Features

3 credits, 3 hours of lecture

Requirements: 6 credits in English, or English as a first language. Offered every other year, first semester.

This course aims to develop in students a level of knowledge of grammatical structures of English. The method of generative transformational syntax directs the questioning and research.

**INGL 3221**

Introduction to Literature I

3 credits, 3 hours of lecture

Requirements: 6 credits in English

It is offered every year, every first semester

Introduction to the assessment and analysis of short stories, essays and novels.

**INGL 3222**

Introduction to Literature II

3 credits, 3 hours of lecture

Requirements: 6 credits in English.

It is offered every year, every second semester. INGL 3221 is not required.

Introduction to the assessment and analysis of short stories, essays and novels.

**INGL 3225**

Introduction to Language

3 credits, 3 hours of lecture

Requirements: INGL 3104 or 4/5 on the Advanced Test of English; Honor Students- freshmen.

This course is an introduction to the field of linguistics. It covers the basics of morphology, syntax, and English phonology. The course includes topics on trends meaning of language, language use, language acquisition, variation and changes in language, language and cognition, and the basics in the field of psycholinguistics.

**INGL 3229**

The Caribbean Experience in Literature

3 credits, 3 hours of lecture

Requirements: INGL 3104/ INGL3012; 4/5 in the Advanced Test of English; Honor student freshman.

This course is an introduction to the Caribbean-English literature with emphasis on the contemporary period. It includes reading and discussing poetry, essays, short stories, novels, and dramas. The writers discussed in the course are: VS 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, and others.

**INGL 3231**

Advanced Composition I: Introduction to Rhetoric and Composition

3 credits, 3 hours of lecture

Requirements: INGL 3104; INGL 3012; 4/5 in the Advanced Test of English; Honor student freshman.

Based on the fundamentals of rhetoric-the art of persuasive communication-this course invites the student to consider the written language as a function of reason and social purpose. The course focuses on the analysis and understanding of social issues and written arguments aimed at solving them. The student will analyze and discuss various texts, applying what they learn about the rhetoric, and contributing to the ongoing debate on a particular issue writing their own argument.

**INGL 3232**

Advanced Composition II: Introduction to Rhetoric and Composition.

3 credits, 3 hours of lecture

Requirements: INGL 3231, INGL 3103, INGL 3104; 4/5 in Advanced English Test. Honor student freshman. Second semester each year. Continues the work of INGL 3231.

This course gives students the opportunity to improve their writing skills by using models of writing and composition while interacting in a workshop.

**INGL 3246**

Modern literature by and about women

3 credits, 3 hours of lecture

Requirements: 6 credits in English; 4/5 in the Advanced English Test. Validated for INGL 3201, INGL 3202, INGL 3221, and INGL 3222.

This is a course of reading, analysis and interpretation of short stories and novels written by women. A collection of essays and literary criticism where popular stereotypes, myths and ideals that permeate the concept -Women in contemporary society is also explored.

**INGL 3247**

Writing and Analysis

3 credits, 3 hours of lecture

Requirements: INGL 3104; INGL 3012; 4/5 in the Advanced English Test.

This course is an introduction to the forms of legal writing. The course is designed to improve in the students the skills to read critically. It will also help to develop students' writing skills through the study of a variety of legal issues.

**INGL 3248**

Basic translation: Theory and Practice

3 credits, 3 hours of lecture

6 credits in English or department's permission.

This course is an introduction to the theory, practice and analysis of translation of texts from Spanish to English. It will offer students the opportunity to consider translation as a cultural / art practice when treated critically becomes an active way of questioning on the role of translation (such as a meeting across cultures), the role that translation plays in the politics, evolution, and interpretation of literature. The course covers basic translation in the context of literature, law and medicine.

**INGL 3251**

American Literature I

3 credits, 3 hours of lecture

Requirements: INGL 3103, INGL 3104; 4/5 in the Advanced English Test.

The course is aimed at the study of American literature from the colonial period to the period of the civil war. The course focuses on the study of political and cultural identity as seen in the relationship between politics and literary art. This is accomplished by exploring several sub-themes such as religion, idealism, individualism, slavery, history and law, among others. The concept of literature-American as a dissident and radical individualistic literature is questioned and subject of review.

**INGL 3252**

American Literature II

3 credits, 3 hours of lecture

Requirements: INGL 3104; 4/5 in the Advanced English Test; Honor student freshman.

This course covers American literature from 1850 to the present. Through a multicultural approach, how American literature responds to the transformation of the United States to a modern society and a world power is examined. Topics include the interplay of race, class, gender and nationality, and the question of the existence of an American identity. The authors studied are: Whitman, Twain, Hemingway, Wright, Faulkner, Morrison, Rich, Yamamoto, Pynchon, Islas, and others.

**INGL 3265**

English Across Culture

3 credits, 3 hours of lecture

Requirements: 6 credits in English; 4/5 in Advanced English Test.

This is a course of language and culture. 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 can be substituted by INGL 3202-3202 or other intermediate level courses (3000).

**INGL 3295**

Principles of Oral Communication

3 credits, 3 hours of lecture

Requirements: 6 credits in English

This course is an introduction to the basic principles of verbal communication. It is designed to help students increase their knowledge and understanding of the impact of the result of verbal communication focusing on activities and strategies that enrich their ability to communicate effectively at a professional and social level. Issues such as non-verbal communication, speech, organization of ideas, and communication in small groups are part of the course curriculum.

**INGL 3335**

Teen Literature

3 credits, 3 hours of lecture

Requirements: INGL 3103; INGL 3104; 4/5 in the Advanced English Test.

After an introduction to adolescent psychology, the focus is on literature, history, genres, literary aspects, evaluation and communicative relationship with the media and censorship. Selected readings from a multicultural literature include works of Hispanic and Caribbean writers.

**INGL 3360**

Video, Culture and Literature

3 credits, 3 hours of lecture

Requirements: INGL 3102 or INGL 3104; first year Honor student; 3/4 in the Advanced English Test or Department's permission.

This course provides students the opportunity to examine how the concept of meaning is produced in the study of academic disciplines and forms of cultural production in the mass media. Through the reading of popular texts, television shows, movies, magazines, and music videos students will analyze how the commercial product and cultural texts reception are produced based on market demands, and how these texts influence the audience's daily life.

**INGL 3365**

Literature of the Puerto Rican Experience in the United States

3 credits, 3 hours of lecture

Requirements: INGL 3103, INGL 3104; 4/5 in the Advanced English Test.

Validated for INGL 3201, INGL 3202, INGL 3221 or INGL 3222.

Introduction to Puerto Rican writers born or raised in the United States who mostly write in English (though not exclusively). The course covers autobiography, novel, drama, the short story, essay and poem. Some of the authors studied include Judith Ortiz Cofer, Thomas, Miguel Algarín, Miguel Piñero, Nicholasa Mohr, among others.

**INGL 3367**

The Vietnam War in the Popular Culture of the United States

3 credits, 3 hours of lecture

Requirements: INGL 3103, INGL 3104; 4/5 in the Advanced English Test.

Validated for INGL 3201, INGL 3202, INGL 3221 or INGL 3222

This course examines the image of the Vietnam War and its veterans as they are presented in movies, books and music. The topics are organized based on trend and questions, rather than a chronology to educate the student on the assumptions and hidden agendas of writers and producers of movies. The works included represent various periods, from the innocence of the fifties and sixties to the second current flowering of movies, books and television shows.

**INGL 3370**

She said, He said: Language and Gender

3 credits, 3 hours of lecture

Requirements: 6 credits of English (3103-3104); 4/5 in the Advanced English Test.

This is an intermediate course that examines the relationship between language and gender. It includes topics on the role of language in creating and sustaining gender differences. It also examines the trends of sexism in language.

**INGL 3375**

Gay and Lesbian Narratives

3 credits, 3 hours of lecture

Requirements: INGL 3103, INGL 3104; 6 credits in English or permission of Department's Chair permission.

A theoretical framework on what constitutes the gay and lesbian literature is established, especially narrative to analyze and discuss stories, movies, autobiographical writings and novels that fall within the definition of gender.

**INGL 3385**

Detective Fiction as a Genre

3 credits, 3 hours of lecture

Requirements: INGL 3103, INGL 3104; 4/5 in the Advanced English Test.

Validated for INGL 3201, INGL 3202, INGL 3221 or INGL 3222.

The detective literature, beginning with Edgar Allan Poe, and ending with contemporary works of the genre. The film and television representations are studied in this course.

**INGL 3515**

Special Topics in English

3 credits English, 3 hours of lecture

Requirements: 6 credits of English; Honor student freshman; 4/5 in the Advanced English Test.

This is an intermediate course that serves as an umbrella for various topics related to literature, languages and cultures of English speaking people. The students will explore specific issues as a way to refine their writing skills, reading and oral communication in English.

**INGL 3517**

Special Topics in English Literature before 1800.

3 credits, 3 hours of lecture

Requirements: INGL 3102, 4/5 in the Advanced English Test. 6 credits in English, Honor student and Department's permission. Offered the first semester in alternate years

Validated for INGL 3201, INGL 3202, INGL 3221 or INGL 3222.

Courses under this title include English literature before 1800. They focus on a writer, a literary movement, a genre, theme or some other aspect of literature, language or culture.

**INGL 4011**

English Phonetics and Phonology

3 credits, 3 hours of lecture

Requirements: 12 credits in English; Honor, sophomore English majors.

This course involves a study of the sound system of English. It is based on principles and traditional structural concepts and modern linguistic principles. Examines the production and inventory of sounds of English; Assimilation, phonetics and relationship between spelling and pronunciation and stress and intonation.

**INGL 4185**

Seminar on Cultural Studies

3 credits, 3 hours of lecture

Requirements: 12 credits in English; Honor, sophomore English majors.

This seminar combines the study of elitist and popular cultures with questions about the social and individual identity. Students read written, visual, cultural texts and 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 of lecture

Requirements: 12 credits in English; Honor, sophomore English majors.

The role of literary discourse is examined in creating, perpetuating and challenge a meaningful, perhaps the fundamental organizing principle of human society: gender.

**INGL 4210**

Discourse and Grammar

3 credits, 3 hours of lecture

Requirements: 12 credits in English including 3 credits in an intermediate level language course; or Department's permission.

This course explores the grammar of English in an oral and / or written context as people use it in real life situations. The course objective is to establish a link between discourse and grammar theories, resulting from research and classroom practices.

**INGL 4245**

Comparative analysis of English and Spanish

3 credits, 3 hours of lecture

Requirements: INGL 3205 or INGL 4206, or a preliminary exam given by the English Department; ESPA 3101, ESPA 3102.

This course makes a comparative analysis of the linguistic foundations of Puerto Rican Spanish and North American English with emphasis on morphology and syntax. Its approach is for elementary and secondary teachers, or anyone interested in linguistics.

**INGL 4290**

Seminar in Linguistics

3 credits, 3 hours of lecture

Requirements: 12 credits in English; Honors, sophomore English majors.

Each seminar will present a particular area of linguistic study and its relation to topics such as cognitive process, culture, gender, social stratification and nonverbal communication. Possible seminar topics could include: Semantics, Pragmatics, Functional Syntax, language and communication across cultures, Discursive Analysis, and linguistic theory.

**INGL 4295**

Composition and Advanced Rhetoric Seminar

3 credits, 3 hours of lecture

Requirements: 12 credits of English; INGL 3231 or INGL 3232 or any other intermediate level composition course; Honor Student (641 + English test in CEEB) with 6 credits in English; or Department's permission. An example of student's writing is required in some cases.

The theory rhetoric is studied and applied (rhetoric is understood as art of persuasive communication) within specific contexts to improve writing. This seminar can cover topics such as: Classical Rhetoric and Modern Writing, Writing for the Magazine, The Roots of Essay Rhetoric, Forensic rhetoric and Eloquent Forensics, among others.

**INGL 4326**

Children's literature

3 credits, 3 hours of lecture

Requirements: 6 credits of English or Department's permission.

This course examines the literature for children 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 of lecture

Requirements: INGL 4205; INGL 3205

After an introduction to research methods, the course focuses on the acquisition of language; theories and factors related to the acquisition of a first and second language, similarities and differences between the two processes; relevant studies of the field. Students make their own research.

**INGL 4365**

Seminar on the History of Literature

3 credits, 3 hours of lecture

Requirements: 12 credits of English; Honor, sophomore English majors.

The development of literary practices within their historical settings. The literature of an era or movement may be studied, theories of literary history as a method of organizing the study of literature, and / or works of writers selected due to their influences on the development of literature.

**INGL 4370**

Modes and Genres Seminar

3 credits, 3 hours of lecture

Requirements: 12 credits of English; Honor, sophomore English majors.

The role of genres, like the novel, and / or modes, such as narrative, in the study of literature are examined.

**INGL 4375**

Seminar on Race, Ethnicity and Literature

3 credits, 3 hours of lecture

Requirements: 12 credits of English; Honor, sophomore English majors.

The literature from the perspective of race and / or ethnicity, the literature by and about an ethnic or racial group; theories of race and ethnicity as critical approach; racial or ethnic literature in dialectic with other political and cultural formations.

**INGL 4380**

Critical Theory Seminar

3 credits, 3 hours of lecture

Requirements: 12 credits of English; Honor English students; 6 credits in English; or Department's permission. Second semester, alternate years.

This seminar gives an opportunity for the student to study critical theory as a particular type of reading experience different from reading literary texts. The student will read critical theory and develop her/his own analysis when working with the readings ideas. Seminars in this area could include: The study of literature; Theory and Criticism; Gender Issues: Readings on Feminist Theory; What is / was Postmodernism; Cultural Marxism.

**INGL 4407**

Closing Experience in English Seminar (Capstone)

3 credits, 3 hours per week

Requirements: This course is for students who have achieved credits equivalent to their eighth semester (completing 105 credits); including 24 credit hours in the English major, particularly INGL 3231 Advanced Composition; have participated in annual meetings and counseling have completed the training of mid-career assessment (mid-career; 45-60 credit hours), i.e., at least 45 credit hours in advance, to enroll in the seminar. The seminar is offered once a year in the second semester (when required by students who are close to completing their studies).

This course provides closing experience for students in the baccalaureate program with an English major. Through a development project of a portfolio, exposition, and verbal and written presentation, and through additional work, the students: integrate interdisciplinary knowledge with general education skills; 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 in Cayey.

**INTD 3027**

Freshman Interdisciplinary Seminar

3 credits, 3 hours per week during the second semester.

Requirements: First year student.

This freshman seminar promotes interdisciplinary discussion and implementation as part of the student training in the context of the skills and content associated with the general education component.

**INTD 3175**

Principles of Informatics in Health Sciences

3 credits, 3 hours of lecture

Requirements: MATE 3171 or MATE 3041 and BIOL 3103 or CIBI 3002

Introduction to the study of computer applications in Health Sciences (-medical / health informatics ||). It includes practical experience with tools for creating and managing documents and computational tools for storage, processing and data analysis. Emerging computer technologies in the field of health are studied.

**INTD 4116**

Interdisciplinary Research Experiences for Students

1 to 3 credits, 3 to 9 hours (Each credit equals a minimum of 3 hours per week of research. Students with incomplete grade may not enroll again in the same seminar until they have removed the incomplete.)

Requirement: None. It will only be required for the professor in charge of the course to authorize the student to take the course. The authorization depends on the subject of research selected by the Professor and the courses approved by the student. The professor, meanwhile, must have a project or research proposal endorsed by an institutional body (FIDI Program, Institute or Department) or by an

outside agency to the UPR (federal agency, foundation, government agency, etc.). In addition the professor must submit the outline of the course to the Advisory Board of the Institute for Interdisciplinary Research for approval.

The course will offer students the experience and research skills in various disciplines through their participation in research designed by the professor in charge. The student will participate as a research assistant in one or more phases of the professor's research project. In this process of teaching and learning the student will become familiar with various theoretical aspects, methodologies and techniques of the professor's research project teacher.

### **INTD 4995**

Special Topics in Interdisciplinary Studies

Credits: Variable (1 to 6 credits)

Weekly Hours: Variable (1 hour / credit) of conference in addition to the hours of workshops and research.

Requirements: Students classified as second year onwards. Additional requirements may be established according to the subject and grade level.

Topics respond to the thematic and methodological diversity of the interdisciplinary research and studies that are of interest to the University of Puerto Rico in Cayey.

### **ITAL 3071**

Experimental Italian I

3 credits, 6 hours of lecture

Basics of oral and written Italian. Reading texts elementary texts and conversation emphasizing the most common idiomatic expressions.

### **ITAL 3072**

Experimental Italian II

3 credits, 6 hours of lecture

Requirement: ITAL 3071

Continuation of ITAL 3071.

### **LITE 3011**

Modern Literature.

3 credits, 3 hours of lecture

Requirement: HUMA 3102

A survey of Western literature from the Middle Ages to the eighteenth century, from a comparative perspective and highlighting gender, current movements and most influential figures in subsequent periods and literatures.

### **LITE 3012**

Contemporary literature

3 credits, 3 hours of lecture

Requirement: HUMA 3102

The panoramic study of Western literature from the nineteenth century to the present, from a comparative perspective and highlighting genres, movements, currents and most influential figures.

**MATE 0005**

Pre-college Mathematics

0 credits

In this course the student will acquire and apply basic concepts of elementary algebra required for pre-calculus course and subsequent courses. It includes sets, numeric systems and their properties, algebraic expressions, linear equations in one and two variables, systems of linear equations in two variables, exponents, algebra of polynomials, factoring, algebraic fractions, literal equations and applications.

**MATE 3004**

Algebra

3 credits, 3 hours of lecture

The basic operations with algebraic expressions and polynomials, factorization, basic operations with algebraic fractions, systems of linear equations with two variables, radicals, application problems.

**MATE 3015**

Elementary Statistics

3 credits, 3 hours of lecture

Requirements: MATE 3172 or MATE 3212

Summary techniques and presentation of statistical data. Introduction to probability theory: additive and multiplicative laws of probability; conditional probability, marginal and combined, Bayes theorems. Probability distributions: binomial, hypergeometric, multinomial, Poisson and normal. Estimate Point and interval averages and difference of proportions, statistical inference through confidence intervals and punctual hypothesis testing. Brief introduction to the theory of small samples; the distribution.

**MATE 3019**

College geometry

3 credits, 3 hours of lecture

Requirements: MATE 3172 or MATE 3212

Course for future mathematics teachers at the secondary level. The approach is transformational geometry. Study of the related groups, Euclidean, similarities, and rotation and their main invariants in plane and spatial situations. Applications of the geometric drawing. Set measures distances, areas, and volumes.

**MATE 3038**

Discrete mathematics

3 credit 3 hours of lecture

Requirement: MATE 3212 or MATE 3172 or equivalent

This course is an introduction to various topics of discrete mathematics which should serve to enrich the academic training of future teachers of mathematics at the secondary level. Topics such as: logic and inductive reasoning; combinatorial and probability; and an introduction to graph theory and trees are studied.

**MATE 3041**

Introduction to Mathematics I

3 credits, 3 hours of lecture

This course is intended to provide basic mathematical concepts and skills to liberal arts students. It includes elementary set theory and mathematical logic; the complete and ordered field of real numbers; mathematical systems; metric system. Geometry concepts.

**MATE 3042**

Introduction to Mathematics II

3 credits, 3 hours of lecture

Requirement: MATE 3041

This course is intended to provide basic mathematical concepts and skills to liberal arts students.

Includes: equations and inequalities with and without absolute value, graphs, linear and quadratic functions, quadratic solution using the formula, systems of linear equations, solution for removal and replacement, basic concepts of probability and statistics, most common graphs in statistics.

Elementary instructions in the operation of a computer.

**MATE 3046**

Mathematics for Secondary School Teachers

3 credit 3 hours of lecture

Requirements: MATE 3212 or MATE 3172 or equivalent.

Course for high school students in secondary education in mathematics. The mathematics content at the secondary level such as: functions, polynomials, function graphs, solving equations and inequalities, basic concepts of probability and statistics and the use of the graphic calculator in solving problems, among others is reviewed and applied. Activities for developing conceptual understanding of the content of the secondary level through appropriate use of technology, "assessment" techniques and problem solving strategies will be designed and presented.

**MATE 3052**

Calculus I

3 credits, 3 hours of lecture

Requirement: MATE 3172 or MATE 3212

In this course the student will acquire and apply basic concepts of differential and integral calculus.

Including: Notions of limit and continuity, derivatives, slope curve, rates of change, kinematics; derivation rules, statements of theorems of the mean value, boundedness of continuous functions, mean value theorems with applications to the theory of ends; Maxima and minimum, function graphs; antiderivatives and differential; Integration as anti-derivation; 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 reverse function and its derivative; exponential and logarithmic functions. This course is required for all students in science and mathematics.

**MATE 3053**

Calculus II

3 credits, 3 hours of lecture

Requirement: MATE 3052

Techniques of integration: algebraic and trigonometric substitution, by parts, partial fractions. differential equations of first and second order, applications to problems of growth and periodic movements. Sequences and series, convergence theory, polynomial approximations, Taylor series, indeterminate forms. Improper integrals.

**MATE 3054**

Calculus III

3 credits, 3 hours of lecture

Requirement: MATE 3053

This course covers the following topics: Euclidean  $\mathbb{R}^n$  space. Path, curves and tangent vectors.

Differential application as linear application. Partial derivatives highs and lows. Taylor series.

Statements of inverse function theorems and implicit function. Multiple integrals, integration techniques. Curvilinear integrals, differential forms and accurate and closed vector fields. Theorems of Green and Stokes.

**MATE 4057**

Seminar History of Mathematics Topics

3 credit 3 hours of lecture

Requirement: To be ranked as a fourth year student, and consent from the department's chair. 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, measurement systems, statistics and probability, including the contributions of the various cultures are studied.

**MATE 3171**

Pre-calculus I

3 credits, 3 hours of lecture

Requirements: MATE 0005 or MATE 3004 or equivalent (650 points or more in mathematical achievement in the entrance examination of CEEB).

Linear and quadratic equations in one variable. Systems of linear and quadratic equations in two variables. Application problems. Linear and quadratic inequalities in one variable, absolute value. Relations, algebraic and graphical functions. Conic.

**MATE 3172**

Pre-Calculus II

3 credits, 3 hours of lecture

Requirements: MATE 3171 or MATE 3211

The field of complex numbers. Polynomial equations. Exponential and logarithmic inverse function. Exponential and logarithmic equations. Application problems. Systems of equations, matrices, determinants. Trigonometric functions, polar coordinates. Arithmetic and geometric progressions. Introduction to functions of two variables.

**MATE 3211**

Pre-calculus with Experiments I

3 credits, 5 hours of lecture

Requirements: MATE 0005 or MATE 3004 or equivalent (650 points or more in the CEEB achievement test, pass the placement test or permission of the Department's Chair).

This course is a practical introduction to the study of functions. Students will learn to use math functions, with special emphasis on linear and exponential cases, as tools to describe and analyze processes of change (dynamic). The course emphasizes problem solving in context and prepares students for the study of calculus and scientific research tasks. The fundamental concepts of the course are: function, rate of change, model, continual-discrete and limit. The basic skills for problem solving are: identification of patterns, abstraction, approach and identification of scale effects. The main topics are: the set of real numbers, functions and their multiple representations, the rate of change, linear, exponential and logarithmic functions, exponential and arithmetic sequences, lineal regression  $t$ , inverse functions and growth patterns.

**MATE 3212**

Pre-calculus with Experiments II

3 credits, 5 hours of lecture

Requirement: MATE 3211

This course is a practical introduction to the study of functions. Students will learn to use math functions, with special emphasis on trigonometric and polynomial cases, as tools to describe and

analyze processes of change (dynamic). The course emphasizes problem solving in context and prepares students for the study of calculus and scientific research tasks. The fundamental concepts of the course are: function, rate of change, model, continual-discrete and limit. The basic skills for problem solving are: identification of patterns, abstraction, approach and identification of scale effects. The main topics are: operations, trigonometric functions and their inverses, periodic phenomena, triangle trigonometry and analytic trigonometry, polynomial and rational functions, extreme and zeros of polynomial functions.

### **MATE 4009**

Ordinary Differential Equations

3 credits, 3 hours of lecture

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 dynamic phenomena. It includes: introduction to basic concepts of linear algebra, definitions and Preliminary concepts of differential equations, existence and uniqueness theorems, differential equations of first degree nonlinear solution of differential equations by series, numerical methods Laplace transformed. Applications.

### **MATE 4026**

Mathematics for Elementary School Teachers

3 credits, 3 hours of lecture

Requirements: MATE 3172 or MATE 3212 Session: first semester

This course includes decimal numbers 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. Euclidean algorithm. Perfect, deficient, abundant and amicable numbers. Fermat factorization method. Concepts of elementary Euclidean geometry of the plane and space, constructions.

### **MATE 4031**

Linear algebra

3 credits, 3 hours of lecture

Requirements: MATE 3172 or MATE 3212

This course contains linear vector spaces over IR. Linear transformations. Eigenvalues and eigenvectors. Matrix algebra. Decisive function. Systems of linear equations. IR vectors. Function spaces.

### **MATE 4032**

Superior Algebra I

3 credits, 3 hours of lecture

Requirements: MATE 3172 or MATE 3212

This course aims to provide students, through concrete examples, the language and mathematical rigor that allow them to generate demonstrations so as to understand the basis of more general theories. Nomenclature includes sets, applications, numerical systems, algebraic structures: groups, rings and fields. Theory of divisibility of integers.

Polynomial ring and theory of polynomial equations. Body fractions and algebraic extensions.

**MATE 4033**

Superior Algebra II

3 credits, 3 hours

Requirement: MATE 4032

Groups, rings and fields. Homomorphisms and quotient structures. Isomorphism theorem. Euclidean rings, polynomials over commutative rings. Bodies extensions, Galois Theory elements and constructions with ruler and compass. Finite bodies.

**MATE 4035**

Real analysis

3 credits, 3 hours of lecture

Requirement: MATE 3054

This course covers the following topics: Metric spaces. Limit, continuity, open and closed sets. Connected spaces, compact spaces.  $\mathbb{R}^n$  topology. Continuous functions and their properties. Differentiable functions and their properties. Function spaces.

**MATE 4125**

Mathematics Seminar

1 credit, 1 hour of lecture

Requirement: 3<sup>rd</sup> or 4<sup>th</sup> year students.

This course is intended to encourage students on conducting research, discussion and development of several mathematical topics.

**MATE 4997**

Special Topics in Mathematics

1 to 3 credits. A weekly hour per credit.

Requirements: MATE and permission of the Director of the Department and professor.

Discussion of various topics in mathematics, incorporating recent literature for it. Topics may vary from semester to semester.

**MERC 3115**

Principles of Marketing

3 credits, 3 hours of lecture

Requirements: ECON 3005, PSIC 3005

Introduction to the study of the marketing process as a general function. Emphasis on analysis, planning, implementation, organization and control of marketing programs.

**MERC 4006**

The Salesmanship

3 credits, 3 hours of lecture

Requirement: MERC 3115

Analysis of personal sales as a marketing stage: product knowledge, consumer research and needs, sales planning, seller's personality, sales presentation, closing and customer follow-up.

**MERC 4027**

Advertising

3 credits, 3 hours of lecture

Requirement: MERC 3115

Development and implementation of marketing strategies in the context of a retail business. Emphasis on effective analysis of the environment in which the company competes and marketing strategies that result from the changes that occur in that environment.

**MERC 4215**

Retail Sales Management

3 credits, 3 hours of lecture

Requirements: MERC 3115

Development and implementation of marketing strategies in the context of a retail business. Emphasis on effective analysis of the environment in which the company competes and marketing strategies that result from the changes that occur in that environment.

**MERC 4219**

Intermediate Marketing

3 credits, 3 hours of lecture

Requirements: MERC 3115, ADMI 4005, CONT 3006, ESTA 3002.

Application of the administrative functions to marketing; strategic planning for marketing; organization, management and control of marketing operations. Administration 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, developing and managing of public relations in the organization.

**MERC 4227**

Marketing Research

3 credits, 3 hours of lecture

Requirements: MERC 3115, ECON 3022, ESTA 3002

Study of the tools and methods of public relations. Emphasis on designing activities to support marketing strategies.

**MUSI 3046**

Puerto Rican music

3 credits, 3 hours of lecture

A survey of Puerto Rican music, its historical foundations and its constituent elements from the pre-Columbian period to the present day: Indian, European and African roots, traditions and popular genres and cults, typical instruments, performers, composers and stylistic aspects over the XIX and XX centuries.

**MUSI 3181**

Band I

1 credit, 4 hours

Requirement: Audition or professor's permission.

Develop knowledge and skills in playing a musical instrument. Develop excellence in the quality of interpretation and analysis of musical literature through progressive rehearsals. Interpretation of works and repertoires of a Concert's Band, both folk and popular. Concerts and performances for the university community and the general community.

**MUSI 3182**

Band II

1 credit, 4 hours

Requirement: Audition or professor's permission. Develop knowledge and skills in playing a musical instrument. Develop excellence in the quality of interpretation and analysis of musical literature through progressive rehearsals. Interpretation of works and repertoires of a Concert's Band, both folk and popular. Concerts and performances for the university community and the general community.

**MUSI 3183**

Band III

1 credit, 4 hours

Requirement: Audition or professor's permission.

Develop knowledge and skills in playing a musical instrument. Develop excellence in the quality of interpretation and analysis of musical literature through progressive rehearsals. Interpretation of works and repertoires of a Concert's Band, both folk and popular. Concerts and performances for the university community and the general community.

**MUSI 3184**

Band VI

1 credit, 4 hours

Requirement: Audition or professor's permission. Develop knowledge and skills in playing a musical instrument. Develop excellence in the quality of interpretation and analysis of musical literature through progressive rehearsals. Interpretation of works and repertoires of a Concert's Band, both folk and popular. Concerts and performances for the university community and the general community.

**MUSI 3195**

Music Theory

3 credits, 3 hours of lecture

Study of the musical elements of rhythm, melody and basic harmony through the development of both theoretical concepts as well as aural receptive skills, music reading, eurhythmic and singing. The activities of rhythmic, melodic and harmonic performance by the student are of fundamental importance for the learning process as the application of musical concepts through their corresponding skills is the basis of the course.

**MUSI 3201**

Choir I 1 credit, 4 hours

Requirement: Audition or professor's permission. Theoretical and practical knowledge of the voice by singing. Auditions of the most famous vocal musical works. Vocal exercises. Rehearsals of secular, vocal musical works popular: classical, religious and folk. Choral concerts: solo, a cappella singing- || and with musical instruments.

**MUSI 3202**

Choir II

1 credit, 4 hours

Requirement: Audition or professor's authorization

Theoretical and practical knowledge of the voice by singing. Auditions of the most famous vocal musical works. Vocal exercises. Rehearsals of secular, vocal, musical works: popular, classical, religious and folk. Choral concerts: solo, a cappella singing- || and with musical instruments.

**MUSI 3203**

Choir III 1 credit, 4 hours

Requirement: Audition or professor's permission. Theoretical and practical knowledge of the voice by singing. Auditions of the most famous vocal musical works. Vocal exercises. Rehearsals of secular, vocal, musical works: popular, classical, religious and folk. Choral concerts: solo, a cappella singing- || and with musical instruments.

**MUSI 3204**

Choir VI 1 credit, 4 hours

Requirement: Audition or professor's permission. Theoretical and practical knowledge of the voice by singing. Auditions of the most famous vocal musical works. Vocal exercises. Rehearsals of secular,

vocal musical works: popular, classical, religious and folk. Choral concerts: solo, a cappella singing- || and with musical instruments.

### **MUSI 3225**

Appreciation of the Elements of Music

3 credits, 3 hours of lecture

Course designed to develop in students the general basic knowledge of the art of music: principles governing musical notation, panoramic view of musical expression through the history of mankind, the elements of a musical work, means of interpretation and evolution of styles and musical forms.

### **MUSI 4037**

Vocal Technique

3 credits, 3 hours of lecture

Requirement: Audition or professor's authorization

Basic training of the vocal apparatus for its use in singing. Study of the elements of artistic vocal production: correct use of the physical apparatus and repertoire interpretation techniques. Practice vocal exercises and repertoire interpretation both individually and in groups.

### **NUTR 4177**

Nutrition and Health - Capstone

3 credits, 3 hours of lecture

Requirements: BIOL 3103, BIOL 3104, MATE 3053, QUIM 3132, QUIM 3134, FISI 3012, FISI 3014, CISO 3122. A 2.50 or more average (GPA) in these courses. Being ranked a fourth year student. Permit from the Natural Sciences Program Coordinator.

This seminar aims to introduce students to topics about nutrition and health in an interdisciplinary way. Situations will be analyzed through the integration of the theories and methods of the various scientific disciplines and other branches of knowledge. This seminar is aimed at students in their last year of undergraduate studies.

### **PSIC 3001**

Introduction to Psychology I

3 credits, 3 hours of lecture

Requirement: CISO 3122

Different areas and methods of study of psychology are presented. Mainly about the history, methodology, biological bases of behavior, principles of learning, emotion, sensation and perception.

### **PSIC 3002**

Introduction to Psychology II

3 credits, 3 hours of lecture

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 assessment of personality, psychopathology, psychotherapy and social psychology.

### **PSIC 3005**

General Psychology

3 credits, 3 hours of lecture

Requirement: CISO 3122

Presentation of the basics of human behavior based on theories that make-up the scientific traditional and contemporary psychology. Emphasis on learning processes, encouragement, perception, attitudes, personality, social behavior and the applicability of that knowledge to the understanding of human behavior.

**PSIC 3006**

Social Psychology

3 credits, 3 hours of lecture

Requirement: PSIC 3001 Semester: First

Comprehensive study of the formation, aspects and determinants of interpersonal relationships.

Among the phenomena being studied: interpersonal attraction, nature and attitude change, prejudice and aggression, cooperation and morality in society, group behavior, social classes, leadership and compliance, institutional change and effectiveness of organizations.

**PSIC 3009**

Psychology and Personal Development

3 credits, 3 hours of lecture

Requirement: PSIC 3001

A discussion course to help students understand principles of hygiene and mental health through participation and personal development. It is conducted in small groups that allow the experience and interaction.

**PSIC 3015**

Theories of Personality

3 credits, 3 hours of lecture

Requirement: PSIC 3001

Study of the development and structure of the normal personality from the point of view of dynamic psychology. Analyzes the main current theories of personality, while seeking a synthesis that clarifies the process of differentiation, integration and maturation of the individual.

**PSIC 3016**

Psychopathology

3 credits, 3 hours of lecture

Requirement: PSIC 3001 Semester: second.

The intention is a psychological analysis of the dynamics, diagnosis and prognosis of individual and group abnormal behavior. Specifically analyzes neurosis and major psychoses, personality disorders such as sociopathy, drug and alcohol addiction, sexual deviations, etc., and acute and chronic brain disorders. A global vision of the various psychotherapies used in the treatment of abnormal behavior.

**PSIC 3017**

Measurement of Personality

3 credits, 3 hours of lecture

Requirements: PSIC 3001 and CISO 3155 Semester: first

Introduction to theories and measurement techniques in order to understand the principles and problems of tests and demonstrate the general techniques of psychological testing in areas such as intelligence, adjustment, personality, career counseling and worker, and how questionnaires and projective tests are used.

**PSIC 3018**

Physiological Psychology

3 credits, 3 hours of lecture

Requirements: PSIC 3001 and CIBI 3002, Semester: first

It includes the study of the physiological basis of human behavior. The structure and functioning of the nervous system; cortical and autonomic functions; related body systems; coinciding with psychological phenomena such as sensation, perception, learning, thinking, motivation and emotion; psychosomatic disorders and others.

**PSIC 3019**

Clinical and Community Psychology

3 credits, 3 hours of lecture

Requirement: PSIC 3001, Semester: first

An introduction to the history, current status and future prospects in the field of Clinical Psychology. Aspects of diagnosis, psychotherapy, research and discipline's problems. The new aspects of community psychology will be examined.

**PSIC 3025**

Human development

3 credits, 3 hours of lecture

Requirements: PSIC 3001, Semester: second

Study the human development 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 its interpretation.

**PSIC 3118**

Laboratory of Physiological Psychology

1 credit, 3 hours of lecture

Requirements: CIBI 3002 Co-requirement: PSIC 3018, Semester: first

Through demonstrations, experiments and practical exercises students will apply the knowledge acquired in the course of Physiological Psychology. The student will use the editorial style of the American Psychological Association (APA) 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 acquired knowledge will be applied to different areas of psychology.

**PSIC 3127**

Language Development

3 credits, 3 hours of lecture

Requirements: PSIC-3001

Development models, basic neurolinguistics, social aspects of language, and the stages of language development are discussed. The course integrates the different perspectives that affect the study of language development, emphasizing the methods and classical studies in the area.

**PSIC 3128**

Theories of Human Learning

3 credits, 3 hours of lecture

Requirements: PSIC 3001

Course where the classical theories of human learning are presented and analyzed, as well as contemporary models. E.L. Thorndike's theories, 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 of lecture

Requirement: PSIC 3001

Discussion of theories and approaches in the study of human motivation. Adaptation issues, 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 of lecture

Requirements: PSIC 3001, Enrolled in the Psychology and Community Mental Health program.

Semester: First

Principles, philosophy management, and of the Mental Health Program in Puerto Rico. Emphasis is placed on the study of the services offered by mental health centers in the community, including: 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 of lecture

Requirements: PSIC 3001y CISO 3155

Study of non-experimental methods in psychology. Research terminology, the main paradigms, ethical principles applicable to psychological research and review techniques of the scientific literature are examined. 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 observations, surveys and questionnaires, correlational research, field study, quasi-experimental studies of few subjects, development methods, focus groups and interpretive frames of reference.

**PSIC-3145**

Psychology of Women

3 credits, 3 hours of lecture

Requirements: CISO 3122

Examine ways in which the category of woman has been shaped by some psychological theories. The historical conditions that have formed the basis for the production and reproduction of subordinate forms of the genre, and the many strengths that emerge will be addressed.

**PSIC 3166**

Psychology Research Practicum

1 credit, 3 hours of lecture

Requirements: PSIC 3001, PSIC 3137, CISO 3155

Course designed for the psychology students to practice and apply research skills required in the use and application of non-experimental research methods in psychology. Apply ethical principles of research, writing format of the American Psychological Association (APA), techniques for gathering references, interview techniques, techniques for analyzing speech and content. Through simulations, the principles of administering standardized tests, their use, development and administration of questionnaires and protocols for data collection are practiced. The principles of construction and validation of questionnaires are performed by various techniques, including the use of databases and statistical programs.

**PSIC-4003**

Experimental Psychology

3 credits, 3 hours of lecture

Requirements: PSIC 3001, CISO 3155 and PSIC 3137 or SOCI 3265

Co-requirement: PSIC 4004, Semester: first

Course of Experimental Psychology which 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. Two independent groups designs, paired and repeated measures; functional, factorials, VI x VS, few subjects, others are discussed. Control techniques are highlighted, as well as data interpretation skills.

#### **PSIC-4004**

Experimental Psychology Lab

1 credit, 3 hours of lecture

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 (PSIC 4003) course. Through laboratory practice, the student will gain greater understanding of the concepts taught in class, apply the techniques of experimentation and analysis. Independent designs, repeated measures analysis, simple variance analysis and two factors variance analysis are highlighted.

#### **PSIC 4008**

Mental Retardation

3 credits, 3 hours of lecture

Requirements: PSIC 3001 or EDFU 3001 / Semester: first

Comprehensive study of mental retardation. The scope and nature of the problem, the etiology of retardation, assessment, diagnosis and education or retarded training, her/his personality and conflicts, and the role of parents and the community are considered.

#### **PSIC 4009**

Industrial psychology

3 credits, 3 hours of lecture

Requirements: PSIC 3001 or PSIC 3005

Study of psychological techniques and their application to the field of industry and business. It includes among other topics: procedures for promotion, advancement and selection of employees, study of psychological factors contributing to the effectiveness of a trade organization.

#### **PSIC 4015**

Practicum in Social Psychology

3 credits, 6 to 10 hours

Requirement: PSIC 3006 / Semester: second

The application of knowledge acquired in the field of social psychology. The practicum will take place in a particular community. The student will identify a problem, develop a plan of action for the solution thereof and evaluate the results. The practicum will be channeled towards the development of primary prevention programs. Among the issues that deserve more attention include: violence and aggression, discrimination, tension between groups, drug addiction and other social problems.

#### **PSIC 4016**

Psychology of Learning

4 credits, 4 hours of lecture

Requirements: PSIC 3001, PSIC 3137 or SOCI 3265, CISO 3155

Study of learning theories in their empirical framework and its application to therapy. Parenting and teaching. In the experimental part, emphasis will be placed on modern experimental trends and designing original experiments, plus replicas.

**PSIC 4055**

Behavior modification

3 credits, 3 hours of lecture

Requirements: PSIC 3001

Course that outlines the basics of behavior modification encompassing the philosophical conceptions from which it emerges, its origin and development, its five modalities, and the multiple psychologically derived techniques and their applicability. This course emphasizes the diversity within behavior modification, the effectiveness of each of the techniques in relation to particular problems and biological components that are responsible for behavior problems, as well as its solution.

**PSIC 4065**

Psychology Seminar

3 credits, 3 hours of lecture

Requirements: PSIC 3001, PSIC 3137 or SOCI 3265 and professor's authorization / Semester: second Seminar for students majoring in this discipline. Research projects in selected areas of psychology are conducted.

**PSIC 4067**

Goals Therapy

3 credits, 3 hours of lecture

Requirement: PSIC 3019

It is a theoretical course designed to train future therapists in their counseling job. Familiarize with the general principles of goals therapy and develop the skills necessary to solve psychological problems. The course is developed by simulation workshops and teaching hours.

**PSIC 4069**

Psychology of Aging

3 credits, 3 hours of lecture

Requirement: PSIC 3001

Biological, social and psychological theories of aging. Study of behavior associated with developmental changes, with personality; personal and social adjustments; Psychopathology of aging. Observation visits at senior centers are required.

**PSIC 4095**

Counseling and Short Therapies

3 credits, 3 hours

Requirement: PSIC 3016 / Semester: first

Geared towards the knowledge and development of skills in counseling and therapeutic techniques of short duration aimed at patients seeking prompt relief from their symptoms, immediate solution to the problems that provoke crises, not requiring basic personality changes, nor the resolution of unconscious conflicts. Students are trained to discriminate between patients who can benefit from short-term therapies, make psycho-diagnostic and develop an action plan. The training is carried out by way of the dynamics group model. The following therapies are studied: rational-emotional, reality therapy, crisis intervention, short hospitalization and other behavioral therapies.

**PSIC 4097**

Practicum in Clinical Psychology and Mental Health.

3 credits, 10 hours of practice a week.

Requirements: PSIC 3016 and PSIC 4095 / Semester: second

Requires the student's placement in a Mental Health Center in the Community or in a psychiatric hospital. The objectives of the practice are: know the performance of various specialists in their interpersonal relationships with clients and their families; practice and demonstrate progressively due

competence in interviews, counseling and group and individual therapy; and learn to solve a clinical problem, from initial contact to evaluation of results.

### **PSIC 4106**

Systems and Theories of Psychology

3 credits, 3 hours of lecture

Requirement: PSIC 3001

Systems and theories of classical psychology from a historical-critical perspective are presented. Study areas such as: sensation, perception, learning, cognitive processes, thought, emotion, personality, quantitative and physiological psychology are examined. The impact of classical as they are integrated into contemporary psychology by synthesizing their fundamental contributions are discussed.

### **PSIC 4145**

Experimental Design and Inferential Statistics Applied to Psychology

3 credits, 3 hours of lecture

Requirement: CISO 3155

Course designed for Psychology students who are required a second semester of statistics for purposes of admission to graduate school. The following topics are discussed: experimental design and statistical inferences about averages (z, t) inferences about variance (Chi 2, 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 of lecture

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 of lecture

Requirements: Quim 3122, QUIM 3124, QUIM 3025

Through this course students will develop the skills for handling scientific information and bibliographic resources on issues of chemistry. Through various activities the student will: identify their need for information, locate, access, analyze, evaluate, synthesize primary sources and produce new knowledge for the preparation and presentation of an oral and written Review Paper. Will also incorporate new information technologies such as databases, Internet, Moodle and presentation software (PowerPoint) and text.

### **QUIM 3015**

Compendium of Organic Chemistry

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

Requirements: QUIM 3132, 3134 QUIM

Brief study of the chemistry of carbon compounds in which the study of structures, stereochemistry, nomenclature, functional groups, reactions and synthesis of organic compounds is emphasized. Theory and practice of the basic techniques used in the Organic Chemistry laboratory.

### **QUIM 3025**

Analytic Chemistry

4 credits, 3 hours of lecture and 6 hours of laboratory.

Requirements: QUIM 3132, 3134 QUIM

A review of the fundamental concepts of General Chemistry and Analytical Chemistry related to an introduction to the problems associated with the evaluation of the experimental data is made. General

issues of gravimetric analysis of volumetric analysis are discussed. The electroanalytical and optical methods and basic methods of chromatography are considered. The importance of laboratory methods is emphasized and sufficient experiments for the semester are considered. Volumetric, gravimetric, optical and electrochemical methods of analysis are included. Also they some chromatographic methods are considered.

### **QUIM 3121**

Organic Chemistry I

3 credits, 3 hours of lecture

Requirements: QUIM 3132, QUIM 3134 Co-requirement: QUIM 3123

Introduction to the Chemistry of carbon compounds in the structure, stereochemistry, nomenclature and functional groups of organic compounds. Emphasis on the relationship between structure and reactivity, the study of functional group reaction mechanisms and the thermodynamic and kinetic aspects affecting each type of reaction are studied.

### **QUIM 3122**

Organic Chemistry II

3 credits, 3 hours of lecture

Requirements: QUIM 3121, QUIM 3123 Co-requirement: QUIM 3124

Study of the most used spectroscopy techniques in determining the structure of organic compounds. Study of reactions, mechanisms and synthesis of carbonyl compounds, nitriles and aromatic compounds. Application of the knowledge of functional groups and lipids chemistry.

### **QUIM 3123**

Organic Chemistry Laboratory I

1 credit, 4 hours of lecture

Co-requirement: QUIM 3121

Practice and Theory of the main techniques of purification, separation and isolation of solid and organic liquids. Qualitative analysis using chromatographic methods.

### **QUIM 3124**

Organic Chemistry Laboratory II

1 credit, 4 hours of lecture

Co-requirement: QUIM 3122

Multistep synthesis, separation, purification and identification of organic compounds studied in class applied to the development of projects with a research approach. Spectroscopic data analysis (IR, RMN-1H, 13C and, MS) for determining structure of organic compounds.

### **QUIM 3131**

General Chemistry I

3 credits, 3 hours of lecture

Co-requirements: MATE 3171 and QUIM 3133

Introduction to the fundamental principles of chemistry. Significant figures, dimensional analysis, atomic theory, and chemical properties. Stoichiometry, nomenclature, properties of gases, thermochemistry, quantum theory, atomic structure, and periodicity. Ionic and covalent bonds, molecular structure, molecular geometry, polarity and hybridization.

### **QUIM 3132**

General Chemistry II

3 credits, 3 hours of lecture

Requirements: QUIM 3131, QUIM 3133, MATE 3171

Co-requirements: MATE 3172, 3134 QUIM

Intermolecular forces of liquid and solid state changes, the physical properties of solutions, kinetics and chemical equilibrium, acid-base balance of acid-base and solubility, oxidation-reduction reactions, electrochemistry and thermodynamics are studied.

### **QUIM 3133**

General Chemistry Laboratory I

1 credit, 3 laboratory hours

Co-requirement: QUIM 3131

Development of techniques and basic General Chemistry laboratory skills 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 of laboratory

Co-requirement: QUIM 3132

Development of basic laboratory skills and application of the principles studied in the QUIM 3132 course.

### **QUIM 4000**

Inorganic Chemistry

3 credits, 3 hours of lecture

Requirements: QUIM 3025, QUIM 3122-3124

Discussion of modern inorganic chemistry: covalent bond theory, solid state study, chemistry of solutions. Emphasis is made on the study of coordination compounds, their structures, links, and stability and reaction mechanisms.

### **QUIM 4015**

Instrumental Analytical Chemistry

4 credits, 3 hours of lecture and 6 hours of laboratory a week.

Requirements: QUIM 3006, QUIM 4041

In this course students apply the methods and instrumental techniques to qualitative and quantitative chemical analysis. The experiments emphasize the practical applications of various instrumental methods and criteria used to choose these methods. The similarities and differences between the analyses conducted in academic laboratories and quality control and research laboratories and are highlighted. In the laboratory, experiments using analytical techniques discussed in class are developed. Laboratory experiments allow students to apply the methods learned in the development of a research project. This research project includes: research proposal, selection method, validation method, sampling, data collection and analysis and the writing of a scientific article where they will present the results of their research.

### **QUIM 4017**

Industry Practicum

2 credits, 120 hours (100 in industry)

3 credits, 180 hours (150 in industry)

Requirements: Chemistry student (major) with at least 2.00 average in chemistry courses and have passed Analytical (CHEM 3025) and Instrumental (CHEM 4015) chemistry. The student must have a minimum of one full available workday a week.

The course consists of a supervised practicum of the procedures that are carried out in an industrial chemical laboratory applying the theory involved in them.

**QUIM 4019**

Preparation for Industrial Practicum

3 credits, 3 hours

Requirements: QUIM 3122, QUIM 3124, QUIM 3025, be Department of Chemistry student

Co-requirement: QUIM 4015

Study regulations and fundamental practices of analytical laboratories in the chemical industry. In this course topics will be presented through seminars, workshops and conferences. Available industry resources with the training and experience necessary to meet the objectives of the course will be used.

**QUIM 4025**

Methods of Organic Chemistry

3 credits, 3 hours of lecture

Requirements: QUIM 3122, QUIM 3124, QUIM 3025

Study of spectroscopic methods: infrared (IR), nuclear magnetic resonance (<sup>1</sup>H NMR, <sup>13</sup>C NMR and two-dimensional NMR), ultraviolet-visible (UV-VIS) and mass spectrometry (MS). Identification and determination of chemical structures of these compounds using spectroscopic techniques.

**QUIM 4041**

Physical Chemistry I

3 credits, 3 hours of lecture

Requirements: QUIM 3025, QUIM 3122-3124, FISI 3012-3014, MATE 3054 or MATE 3054 together. It is offered once a year, first semester.

In this course the Laws of Thermodynamics, applications and the behavior of matter are studied. The study of thermodynamic functions, chemical equilibrium, phase equilibrium, ideal and real solutions and phase diagrams of pure substances and mixtures is emphasized.

**QUIM 4042**

Physical Chemistry II

3 credits, 3 hours of lecture

Requirement: QUIM 4041, MATE 3054 is offered once a year, second semester.

The areas of quantum mechanics, molecular kinetic theory of gases and Chemical Kinetics are studied. In quantum mechanics emphasis is made in its principles, the Schrödinger equation and the following models are discussed: particle in the box, harmonic oscillator, rigid rotor, hydrogen, helium atom. Vibro-rotational and rotational spectroscopy of diatomic molecules is covered and introduces electronic molecular structure. In Chemical Kinetics the integration of the law of speed, the methods for determining the law of speed, the derivation of the law of speed from the reaction mechanism, the Transition State Theory and Collision Theory are emphasized.

**QUIM 4065**

Biochemistry

3 credits, 3 hours of lecture

Requirements: BIOL 3103, QUIM 3122-3124

Introduction to the chemistry and biochemistry of carbohydrates, lipids, proteins and related compounds. The molecular basis of the structure and metabolism of plants, animals and microorganisms, with special emphasis on metabolic pathways involved in cellular functions, their interrelationships and control mechanisms are studied.

**QUIM 4066**

Biochemistry Laboratory

1 credit, 4 hours

Co-requirement: QUIM 4065

Experimental study in qualitative and quantitative terms of the composition of living matter, its molecular organization and the metabolic pathways involved in cellular functions with emphasis on the human being.

**QUIM 4101**

Physics-Chemistry Laboratory I

1 credit, 4 hours

Requirements: CHEM 4041 or QUIM concurrently. It is offered once a year, first semester.

A practical application of chemical and physical principles discussed in the conference (Chemistry 4041) is performed. The use of the techniques, skills and instrumentation for the determination of thermodynamic and physical properties of matter is emphasized. Thermodynamic and physical properties are determined using instruments of the thermodynamics discipline.

**QUIM 4102**

Physics-Chemistry Laboratory II

1 credit, 4 hours of

Requirements: QUIM 4101, QUIM 4042 or QUIM 4042 concurrently. It is offered once a year, second semester.

A practical application of chemical and physical principles discussed in the conference (Chemistry 4042) is performed. Techniques and instrumentation used in the determination of kinetic parameters and quantum matter are studied.

**QUIM 4170**

Environmental Chemistry

3 credits, 3 hours of lecture

Requirements: QUIM 3122, QUIM 3124, QUIM 3025

Study of the sources, reactions, transport, effects and fate of the chemical species in water, soil and air. Specific problems of Puerto Rico stand out, paying special attention to water and air pollution. It also discusses the laws regulating the quality of water and air as well as the disposal of solid waste and hazardous waste in Puerto Rico. The contribution of chemistry in the conservation of our natural resources water, air and soil: will be discussed.

**QUIM 4999**

Undergraduate Research

2 or 3 credits, 6 or 9 hours

Each credit is equivalent to a minimum of three hours per week of research. The number of credits is decided by the student, professor and the Department's Chair.

Requirements: QUIM 3025, QUIM 3122, QUIM 3124. Be a third or fourth year Chemistry student, 2.50 average in Chemistry and professor's permission.

Theoretical and / or experimental supervised research in the area of chemistry, where the student is provided experience and training in scientific research. The students will make an oral presentation or a poster of their research work in departmental seminars, in the sciences area or conferences. In addition, they will deliver a written report of the investigation. If the investigation does not proceed beyond the search for bibliographic data, no credit will be given for the course.

**RECR 3705**

Community Recreation

3 credits, 3 hours of lecture

Study and discussion of recreational programs for the community. It includes planning and organizing recreational programs according to existing facilities, studies and characteristics of leadership in charge of these programs.

**REHU 4405**

Human Resources Management

3 credits, 3 hours of lecture

Requirement: ADMI 4005

Analysis of the principles and techniques applied by companies to attract and retain human resources. It includes the study of legislation and government regulation of labor, and the functions of recruitment, selection, staff development, employee relations and compensation management.

**REHU 4406**

Labor-Management Relations

3 credits, 3 hours of lecture

Requirement: REHU 4405

Analysis of the interaction between companies and organizations representing their employees. The historical development of organized labor is studied, unions, labor laws (both in Puerto Rico and federal), and the collective bargaining process.

**REHU 4407**

Administration of Wages and salaries

3 credits, 3 hours of lecture

Requirement: REHU 4405

Detailed study of the processes and techniques that make up the administration of employee compensation. The various compensation systems and functions of job analysis, job and employee evaluation, construction of the salary scale and benefit plans and incentives are analyzed.

**REHU 4408**

Organizational Behavior

3 credits, 3 hours of lecture

Requirement: ADMI 4005

Study of human behavior in the context of trade organizations. It includes analysis of the various theories, techniques, and motivation systems used in modern business: Two Factor Theory, Theory X and Y, Grill Management, job 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 relationships in the industry. Deals with: the influence of individual personality, formal and informal organization, organizational communication, leadership and supervision, group dynamics and employee involvement in existing climate of interpersonal relations in the organization. Some of the most common problems of human behavior in organizations and how a manager should try to solve them, are analyzed, through case discussions and group work experiences.

**REHU 4415**

Collective Bargaining

3 credits, 3 hours of lecture

Requirement: REHU 4406

Study of the labor movement in Puerto Rico and the collective bargaining process. It includes analysis of existing labor legislation, especially the Taft-Hartley Act and the Labour Relations Act of Puerto Rico, and discussion of cases where such legislation has been applied.

**SICI 3006**

Principles of Computerization

3 credits, 3 hours of lecture

It provides an introduction to the field of computers: historical development, types, operation, architecture, programming language design, applications and social impact. The student will learn to use at least three packages of general application: word processing, spreadsheet and a database program. The course has an interdisciplinary approach.

**SICI 3007**

Basic programming

3 credits, 3 hours of lecture

Co-requirement: MATE 3172 or MATE 3212

Troubleshooting natural sciences, mathematics and business administration by using the computer using the algorithmic method and a high level computer programming language.

**SICI 3055**

Computers in Education

2 credits, 3 hours of lecture

It provides basic knowledge of computer use in education and general knowledge in the field of computers.

**SICI 4035**

Informational Structures

3 credits, 3 hours of lecture

Requirement: SICI 3007 or SICI 4027 or SICI 4026

It provides the basic concepts of information structures, classification, forms for processing them, applications and programming applications, sorting and searching techniques.

**SICI 4045**

Numerical analysis

3 credits, 3 hours of lecture

Requirements: SICI 3007 and MATE 3053

Train students of Natural Sciences in using the computer to apply numerical methods. Approach problems, interpolation, differentiation, integration, linear equations and curves adjustments are resolved.

**SICI 4047**

Mathematical Models in the Social Sciences

3 credits, 3 hours of lecture

Requirement: SICI 3006 and CISO 3122

Mathematical models that use computers to analyze social phenomena are studied. The student will be in contact with different computer programs and their application in the formulation of models.

**SICI 4995**

Special Topics in Computer Sciences

1 to 3 credits, 1 to 3 hours

Requirements: Professor's or Department's Chair permission

Discussion of various topics in computing, incorporating recent literature for it. The topics may vary from semester to semester.

**SOCI 3005**

Criminology

3 credits, 3 hours of lecture

Requirement: SOCI 3261

Using as criteria for analyzing social structures and / or personality, forms, causes and effects of crime are analyzed. Social resources to solve the problems of crime are considered.

**SOCI 3006**

Sociology of Science

3 credits, 3 hours

Requirement: CISO 3121-22

Sociological analysis of the generation, development and consequences of Science as a social institution, and the dynamic interdependence between science and society.

**SOCI 3015**

Industrial Sociology

3 credits, 3 hours of lecture

Requirement: SOCI 3261

The industrialization process as social change and social institutions and forms of communication. Effects of industrialization: social mobility and migration phenomenon. The industrialized society and its dissemination in the non-industrialized areas. Social conflicts between the process of industrialization and the developing society.

**SOCI 3025**

Sociology of Violence

3 credits, 3 hours of lecture

Requirement: SOCI 3261

The concept of reform, social change, obedience and revolution, between victim and victimizer interaction. 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 of lecture

Requirement: SOCI 3261

Reflections on the religious - experience concept. Its expansion ideas regarding the circumstances surrounding the historical and modern life. Manifestations of Enlightenment rationalism in the attitude towards magic, tradition and willingness to innovation. Analysis of prophecy and asceticism. Religion in modern society.

**SOCI 3055**

Juvenile delinquency

3 credits, 3 hours of lecture

Requirement: SOCI 3261

Juvenile delinquency as a social phenomenon, its incidence. Analysis of factors influencing crime. The role of the police, courts, prevention and control agencies; system of probation and parole; influence

of individual groups and the community in the prevention and treatment of juvenile offenders. Case discussions, visits to institutions for minors and lectures by authorities on the subject.

**SOCI 3185**

Penology

3 credits, 3 hours of lecture

Requirement: SOCI 3261

After completing the course the student will have a thorough knowledge of penological science, know the historical development of this institution, understand the structure and functions of this institution, knowing the prison experience in different social settings and the prison experience of Puerto Rico.

**SOCI 3261**

Introduction to Sociology

3 credits, 3 hours of lecture

Requirement: CISO 3121-3122

Once the Sociology field is delimited, social interaction is studied: its organization, maintenance and change, emphasizing the analysis of culture, the process of socialization and personality. Social stratification, social control and deviance, racial and ethnic minorities are studied.

**SOCI 3265**

Social Research Techniques

3 credits, 3 hours of lecture and practice.

Critical analysis of the fundamentals and techniques of research in various fields of social sciences; discussion of its historical development to the present, application of basic research methods in the field; tabulation, analysis and reporting.

**SOCI 3266**

Sociology of Drug Addiction and Alcohol

3 credits, 3 hours of lecture

Requirements: SOCI 3261

The course of Sociology of Drug Addiction and Alcoholism treats these phenomena from the economic, physiological, psychological and social perspectives. It relates to the study of basic concepts, processes and explanations of individual and collective behavior of the drug addict and alcoholic. The course gives particular emphasis to the Puerto Rican society.

**SOCI 3270**

Social institutions

3 credits, 3 hours of lecture

Requirement: SOCI 3261

In this course the concept of social institution in Sociology is defined. Functions, organization and development of the fundamental institutions is analyzed. Using the comparative approach between the traditional and the contemporary: the family, education, economics, religion and politics as social institutions are studied. In addition, medicine, bureaucracy and recreation are considered.

**SOCI 3285**

Group Dynamic

3 credits, 3 hours of lecture

Requirements: SOCI 3261, CISO 3121-22

Philosophy and basic operant concepts in the groups of our democratic system of life. Group dynamics, cohesion, structure, emotional factors, leadership, communication and its effects. The class will be a laboratory for the study of these issues.

**SOCI 3305**

Demography

3 credits, 3 hours of lecture

Requirement: SOCI 3261

Analysis of changes, structure, composition and dynamics of the population, its characteristics and demographic factors such as: fertility, mortality, migration, population policies and others. Emphasis on economic, political, cultural and environmental factors and effects on the population.

**SOCI 3315**

Family Sociology

3 credits, 3 hours of lecture

Requirement: SOCI 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. Include issues such as: dating, marriage, divorce, and others are treated.

**SOCI 3325**

Urban Sociology

3 credits, 3 hours of lecture

Requirement: SOCI 3270, CISO 3122, PSIC 3002

A theoretical and practical formulation of the phenomenon of the city and urban life is presented stressing the process of urbanization in the development of industrial areas. Issues such as: social structure and function of modern cities, social stratification, customs and patterns of urban life, and cultural integration between the city and countryside are discussed. Comparative studies of the metropolitan areas of various cultures will be made.

**SOCI 3335**

Social problems

3 credits, 3 hours of lecture

Requirements: None

The course starts with a sociological guidance on the conceptualization of what a social problem is. The various aspects of the concept especially for those who and why they are considered social problems are analyzed. The different factors that explain the causes of social problems such as: social disorganization, deviant behavior and conflicts of values are studied.

**SOCI 3386**

Love, Power and Dating Violence

3 credits, 3 hours of lecture

Requirements: Any of the introductory courses in the social sciences (sociology, psychology, social psychology, anthropology, economics, politics, etc.)

This course examines the relationship between love, power and dating violence in contemporary societies. Love as a relational code that performs the function of fixing identities and securing the bodies to the various routes of power is examined. The ways that power is structured in couples' relations, and how it, in its articulation with modern scholars (from the 16<sup>th</sup> century) about love, is one of the sources that lead to violence in engagement is studied. Forms of courtship and dating violence in Puerto Rican society are examined.

**SOCI 4005**

Contemporary Sociological Theory

3 credits, 3 hours of lecture

Requirement: SOCI 3261 / Semester: Second

The study of the origin, nature and origin of the types of sociological theory since mid-19<sup>th</sup> century to the present. Basic sociological schools and their exponents are analyzed.

**SOCI 4155**

Social and Cultural Change  
3 credits, 3 hours of lecture

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 provided by several branches of social sciences. Transcultural 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**

Stenography in Spanish  
5 credits, 5 hours of lecture

Requirements: ESPA 3101 (Baccalaureate Students)

Learning the principles of stenography in Spanish. Development and mastery of dictation taking skills and transcription by hand. Review and application of the grammatical rules of the Spanish language.

**TAOF 3006**

Teaching Keyboard and Computer Applications for Personal Use  
4 credits, 4 hours

Requirements: None

This course is for students who have no knowledge of handling computer keyboard. Therefore, it is expected that at the end of it, students have developed the correct techniques and basic skills necessary for managing the keyboard. In addition, they will master the basic functions of the computer using updated programs. The student will be introduced to the writing of documents and simple communications such as: personal letters, business, resumes, reports and tables. Elective course for students from other departments.

**TAOF 3007**

Stenography in English  
5 credits, 5 hours of lecture

Requirements: ENGL 3101

Learning the principles of stenography in English. Development and mastery of dictation taking skills and transcription by hand. Review and application of the grammatical rules of the English language.

**TAOF 3008**

Office Systems concepts and Technology  
3 credits, 3 hours of lecture

Requirements: None

In this course the theory and evolution of information processing as a system, the cycle of it and the human aspect in the use of this technology is studied. It includes the study of the subsystems of information processing and telecommunications concept.

**TAOF 3009**

Management, Document Management and Conservation.

3 credits, 3 hours of lecture

Requirement: None

Teaching the importance of documents in companies and public and private institutions. Learning the different systems of receipt, sorting, processing, control, archiving and disposal 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 of lecture

Requirements: None

Learning, development and application of basic concepts of personality, personal appearance, image and behavior as vital and important aspects in the performance of all office employees.

**TAOF 3016**

Learning the keyboard and Its Applications

4 credits, 4 hours of lecture

Requirements: None

Learning and mastering the alphabetic, numeric keyboard, symbols and functions. Learning basic computer functions. Development of the skill of writing to the touch for professional and personal use; and the skill of the speed and accuracy with an emphasis on modern typing techniques. Learning theoretical aspects related to the application of the skill. Programs (-softwares) of frequent application and current use in the contemporary office are examined.

**TAOF 3017**

Formats and Production of Documents

4 credits, 4 hours of lecture

Requirements: TAOF 3016

Strengthening and development of the techniques, skills, abilities and knowledge acquired in the course TAOF 3016. Development of the speed and accuracy at higher levels. Application of typing skills in production, comparison and evaluation of commercial documents. Programs (-softwares) often used in contemporary office are examined.

**TAOF 3018**

Production of Documents

4 credits, 4 hours of lecture

Requirements: TAOF 3017

Increase and integration of the knowledge of typing rules and style applicable in the preparation of complex business documents. Developing the capacity to produce these documents quickly, efficiently and correctly. Development of the speed and accuracy skill at higher levels. Computer application in the preparation of simulated work so that students develop effective criteria for the preparation, comparison, evaluation and disposition of documents. Programs (-softwares) application often used and updated in contemporary office are examined.

**TAOF 3019**

Integration of Programs for the Design and Electronic Processing of Information

4 credits, 4 hours of lecture

Requirement: TAOF 3018

Advanced training in electronic information processing, using the integration of several updated programs and often used in the contemporary office, such as: electronic data sheets, database,

graphics, electronic publishing, calendar and email. Production of reports and other business documents is emphasized.

### **TAOF 3025**

Spanish and English Transcript by Magnetic Media.

4 credits, 4 hours of lecture

Requirements: TAOF 3018, ESPA 3102, 3102 or INGL 3104

Learning, development and mastery of the skill of transcribing documents in Spanish and English, recorded on machines dictation and transcription dictation, using the computer. Review, development and integration of knowledge of typing, computer, language and grammar required for transcription of acceptable documents. Development to higher levels of the skill of comparison.

### **TAOF 3026**

Web pages, Internet and Telecommunications

4 credits, 4 hours of lecture

Requirement: None

The creation of web pages and websites with the elements and tools needed to establish a business is studied. The course prepares students in skills such as handling an electronic calendar. Develop the skills and elements necessary for the effective management of the use of Internet and electronic mail. Principles, fundamentals and integration of telecommunications in the search and management of information are presented. Ethical, social, political, and security principles in the handling of these technologies are studied.

### **TAOF 4005**

Spanish Transcription

4 credits, 4 hours of lecture

Requirements: TAOF 3005 and TAOF 3018

Learning, development and mastery of the art and skill of taking dictation using stenography in Spanish and transcribed using the computer. Learning, development and mastery of the skill of direct transcript and using the dictation and transcription machine. Review, development and integration of the knowledge of Spanish stenography, typing, computer and language necessary for the correct transcription of business documents in Spanish.

### **TAOF 4007**

English Transcription

4 credits, 4 hours of lecture

Requirements: TAOF 3007, TAOF 3016

Co-requirement: TAOF 3018

Learning, development and mastery of the art and skill of taking dictation using stenography in English and transcribed using the computer. Learning, development and mastery of the skill of direct transcript and using the dictation and transcription machine. Review, development and integration of knowledge of English stenography, typing, computer and language necessary for the correct transcription of business documents in English.

### **TAOF 4008**

Integrated Transcript in English and Spanish.

3 credits, 3 hours of lecture

Requirements: TAOF 4005 and TAOF 4007

Development to higher levels of the skill of taking dictation using stenography in English and Spanish and transcribe using the computer, transcribing of transcription recorded in Spanish and English by using the dictation and transcription machine. Review and integration of typing skills, computer, stenography and language, necessary for the proper and acceptable transcription of documents in English and Spanish.

**TAOF 4015**

Administrative Systems and Office Procedures

3 credits, 3 hours

Requirements: SOFI major: TAOF 3018, 4005, 4007

AOFI major: TAOF 3018, 3025

Learning and development of knowledge and problem solving skills, decision making, case analysis and teamwork. It also offers knowledge of office equipment and data processors often used in contemporary office. To prepare students to develop formats and establish procedures for carrying out administrative tasks in the modern office.

**TAOF 4016**

Office Supervision and Administration

3 credits, 3 hours of lecture

Requirements: TAOF 4015 and ADMI 4005

Skills development in the area of office management and supervision of employees. Application of functional management approach to the establishment, coordination, implementation and evaluation of systems and office procedures. Case studies, literature review and preparation of research projects related to office administration will be included.

**TAOF 4018**

Systems and Procedures in the Legal Office

3 credits, 3 hours of lecture

Requirements: TAOF 3019 or in progress

This course will emphasize the responsibilities and duties of administrative staff in the legal office. Teaching and application of terminology, functions and procedures in the production of legal documents. The course requires visits to courts and legal offices. Development of human relations exercise effective, 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 of lecture

Requirements: TAOF 3019 or in progress

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 services. The course requires visits to medical offices. Development of human relations exercise effective, good judgment, positive attitudes and professional ethics.

**TAOF 4024**

Office Systems Integration

3 credits, 3 hours of lecture

Requirements: TAOF 3019, TAOF 3008, ADMI 4005

Synthesis, implementation and evaluation of concepts related to the role of the office as a support system to the company. Emphasis on the integration of subsystems, strategic short- and long-term planning, solving problems related to the process of change and the efficient use of human and technological resources in the modern office.

**TAOF 4025**

Office Management Seminar and Internship

5 credits, 5 hours of lecture

Requirements: All specialty courses and student Interview with Program Coordinator (TAOF 3009, 4007, 4005, 4015, 4020)

Supervised practicum in offices of the community selected as Practice Center. The period of internship and seminar will be 15 hours per week for practice and 2 hours per week for the seminar. At the seminar (the) students will participate in activities that complement their transition from college to the office.

### **TEAT 3011**

Acting I

2 credits, 3 hours of lecture

Training an actor, body and voice to develop the basic techniques of dramatic art to create a character credible and worthy of representing.

### **TEAT 3012**

Acting II

2 credits, 3 hours of lecture

Requirement: TEAT 3011

This course continues the actor's training, developing their dramatic creativity to the fullest, through the theatrical, psychophysical scientific method, reinforcing with analytical techniques for the characterization of a character.

### **TEAT 3030**

Diction

3 credits, 3 hours of lecture

Fundamental aspects of the theory and techniques of diction in the theater.

### **TEAT 3041**

Theater Workshop I

1 credit

Requirement: Permission from the Professor

The workshop aims to make four productions integrating students and professional actors. To structure the experience and make the most of it students will enter into the category of learners so that they do their work either acting, directorial or production under the guidance and supervision of the Director under the same conditions of professional in production. Those interested in direction will be assigned as assistant to the director for his lab and actors will be trained in movement, character study, projection and interpretation from a more personal perspective.

### **TEAT 3042**

Theater Workshop II

1 credit

Requirement: Permission from the Professor

The workshop aims to make four productions integrating students and professional actors. To structure the experience and make the most of it students will enter into the category of learners so that they perform their work either acting, direction or production under the guidance and supervision of the Director under the same conditions of professional within the production. Those interested in direction will be assigned as assistant to the director for his lab and actors will be trained in movement, character study, projection and interpretation from a more personal perspective.

### **TEAT 3101**

Theater History I

3 credits, 3 hours of lecture

Introduction to the development of theater history from its origins to the seventeenth century French theater. The course follows a positivist treatment which suggests that history can be logically explained and objectively narrated logically. Related performance styles will be studied in a meaningful way.

**TEAT 3102**

Theater History II

3 credits, 3 hours of lecture

Requirement: TEAT 3101

Introduction to the development of the history of theater from the Restoration to the North American and Latin American Contemporary Theater. The course follows a positivist treatment which suggests that history can be logically explained and objectively narrated. Related performance styles will be studied in a meaningful way.

**TEAT 3125**

Theatrical Make-up

3 credits, 3 hours of lecture

Theory and practice of the fundamentals of theatrical make-up. Basic principles in the technique of using makeup, special emphasis on the application and use for the characterization.

**TEAT 3141**

Pantomime I

3 credits, 3 hours of lecture

The disciplined preparation of intellect, imagination and body of the mime (actor, histrionic) for improvisation on stage or spoiled dramas. Students will appreciate the various traditions of this ancient art while exercising in it.

**TEAT 3142**

Pantomime II

3 credits, 3 hours of lecture

Requirement: TEAT 3141

Study and practice of spoiled drama in the theatrical performance, taking into account the possibilities of the given space or scenic elements. The precise combination of gestures and rhythms are coordinated with the spoken word to develop themes in stylized forms.

**TEAT 3185**

Experimental Theater

3 credits, 3 hours of lecture

Study and practice of Experimental Theater in the dramatic arts that takes into account the variety of styles and treatments that the history presents of it since the late nineteenth century to the present. Character study of Latin American experimental theater. Development and practice of new forms.

**TEAT 3191**

Theater Production I

3 credits, 5 hours of lecture

The production of a theatrical performance involving the collective work of an artistic concept. From the staging process, all the elements of theater production: selection of the work, directing, acting, set design, sound, make-up, costumes, lights, advertising and finance will be considered.

**TEAT 3192**

Theater Production II

3 credits, 5 hours of lecture

Requirement: TEAT 3191

The production of a theatrical performance involving the collective work of an artistic concept. From the staging process, all the elements of theater production: selection of the work, directing, acting, set design, sound, make-up, costumes, lights, advertising and finance will be considered.

**TEAT 3301-02**

Basic Spanish Dance (Danza) for the Theater

3 credits, 3 hours of lecture

Requirements: consultation with the teacher / a

This course aims to develop the student's individual and collective capacity for knowledge and body control in space. Turn prepares the student for availing improvisation techniques as a starting point for creating movement and self-expression.

**TEAT 4063**

Theatre as 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 Theater

3 credits, 3 hours of lecture

Requirements: HUMA 3101 and HUMA 3102

Introduction to theatrical theories that collect and encode the theatrical activities in the western world.

**TEAT 4111**

Drama Activities for the Primary School Teacher

3 credits, 3 hours per week

Requirements: none

Develop the creative abilities of students so that in turn stimulate others. The theater as a pedagogical resource.

**TEAT 4213**

Stage Directing I

3 credits, 3 hours of lecture

Requirements: TEAT 3101, TEAT 3102, TEAT 3191, TEAT 3192

Theory and practice of the fundamentals of stage direction.

**TEAT 4260**

Playwriting Workshop I

3 credits, 3 hours per week

Introduction to the study of Playwriting: A search of materials and forms appropriate to the art and technique of Playwriting highlighting writing.

**TEAT 4261**

Playwriting Workshop II

3 credits, 3 hours per week.

Introduction to the study of Playwriting: A search of materials and forms appropriate to the art and technique of Playwriting highlighting writing.

**TEED 3008**

Introduction to Educational Technology

3 credits, 3 hours of lecture

Analyzes the role of educational technology in contemporary education. Relates the student with the concept of instructional systems, various materials and technological equipment, its characteristics, potential and limitations. Discusses the role they play in the processes of learning and communication.