

CARIBBEAN UNIVERSITY
Bayamón, Puerto Rico

UNDERGRADUATE CATALOG



2013-2018

Non-Discrimination Policies

Caribbean University admission policy of students regardless of race, color, sex, age, nationality, ethnic origin, limitations or status; with all rights, privileges, programs, and activities generally accorded or made available to students at the Institution. It does not discriminate in the administration of its educational policies, admission policies, and financial assistance programs.

Title IX of the Education Amendments of 1972 (Non-Discrimination on the Basis of Sex)

Caribbean University enforces the policy of non-discrimination on the basis of sex in compliance with Title IX of the Education Amendments of 1972. Title IX requires that the University does not discriminate on the basis of sex in the educational programs and activities. This requirement covers employment therein, and admission there to. Inquiries or alleged injustice regarding the University.

Rehabilitation Act of 1973-Section 504 (Non-Discrimination on the Basis on Disability)

Caribbean University is committed to comply with the language and intent of Section 504 of the Rehabilitation Act of 1973 (and regulations issued pursuant hereto effective June 3, 1977) which prohibits discrimination on the basis of handicap in its educational programs and its activities. This policy and requirement of non-discrimination includes admission; access to, and employment at the University. In agreement with section 504 and standing regulations, the University has designated the Vice presidency of Administrative Affairs to coordinate efforts to comply with the requirements and regulations the Dean of Administrative under Section 504. The Vice presidency of Students Affairs is the unit responsible for providing direct service and assistance handicapped persons.



Dr. Ángel E. Juan Ortega Building

Central Administration

Road 167 Km 21.2
Bayamon PR 00960
PO BOX 493
Bayamon PR 00960
Tel. 787-780-0070
1-888-780-0070

Forest Hills
www.caribbean.edu

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GOVERNMENT OF CARIBBEAN UNIVERSITY

Board of Trustees

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Mr. Hector Horta, Member
Dr. Nelida Rivera, Member
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Standing Committees of the Board of Trustees

Executive Committee
Finance Committee
Development Committee
Grievance Appeal Committee

Standing Committees of the University

Admissions Committee
Academic Standing Committee
Curriculum Committee
Faculty Affairs Committee
Library Committee
Professional and Cultural Activities Committee
Student Affairs Committee
Complaints and Grievances Committee
Technology Committee
Institutional Assessment Committee

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Executive Director

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Vice President of Academic and Student Affairs

Dr. Maritza Del Valle Guzmán

Auxiliary Vice President of Financial and Administrative Affairs

Mr. Hector Gracia Gracia

Vice President of Planning and Institutional Development

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Dean of Student Affairs

Prof. Lillian Matos

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Mrs. Elena Garcia

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Human Resources Interim Director

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IT Director

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Bayamón Campus

Academic Dean

Dra. Mabel Hernandez

Dean of Graduate Programs

Dra. Zulma Peña

Dean of Distance Learning

Dr. Norma Ortiz

Admissions and Student Services Director

Mrs. Rosalie Morales

Bursar Technician

Mrs. Norma Rivera

Marketing Associate Director

Mrs. Gricelie Torres

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Mrs. Yanit Delgado

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Department of Liberal Arts Director

Prof. Lilliam Mercado

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Department of Engineering and Informatics Technology Director

Dr. Hermes Calderon

Department of Health Allied Sciences Director

Dr. Ricardo Melgarejo

Department of Human and Social Sciences Director

Prof. Alicia Cruz

Carolina Center

Director

Prof. Georgina Solivan

Librarian

Mrs. Yarilis Quiles

Admission Technician

Mrs. Walleska Davila

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Mrs. Nereida Molina

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Director

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Admission Technician

Mrs. Ana Rivera

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Mrs. Linette Caraballo

Financial Aid Technician

Mrs. Carmen Melendez

Registrar Technician

Mrs. Maritza Vega

Counselor

Mrs. Christine Jimenez

Ponce Center

Director

Prof. Sonia Pacheco

Librarian

Mrs. Liz Ramirez

Mr. Orlando Santiago

Admission Technician

Mrs. Damaris Rodriguez

Bursar Technician

Mrs. Jannette Pola

Financial Aid Technician

Mrs. Mayra Echevarria

Registrar Technician

Mrs. Damaris Montalvo

Counselor

Mrs. Virginia Martínez

ACADEMIC UNITS

Bayamón Campus

The 16 acre main campus of Caribbean University is conveniently located at Highway 167, km 21.2 in a residential-commercial sector. The physical facilities consist of two historic and Hostos buildings. The facilities houses the Library, Audiovisual Center, seven Science laboratories, Infirmary, eight (8) computer laboratories, eight (8) Engineering laboratories, Video conference room, Conservation laboratory, 37 classrooms, administrative offices, cafeteria, gymnasium, tennis and basketball courts, aerobics room and 525 parking spaces.



Carolina Center



The Carolina Center is located in a residential-commercial area in the metropolitan city of Carolina. Physical facilities consist of one story building, which houses twenty-eight (28) classrooms, a Video conference room, two (2) computer laboratories, two (2) Science laboratories and a Nursing laboratory; Library, administrative offices and support services to the student. The annex building houses the Student Center, game room, gymnasium and cafeteria. The buildings are equipped with 73 parking spaces. The central location of the Carolina Center offers accessibility to the population of Carolina and surrounding municipalities.

Vega Baja Center

The Vega Baja Center facilities consist of four (4) buildings, A, B, C and Annex C. The buildings houses twenty-three (23) classrooms, two (2) Science laboratories, Infirmary and three (3) computer laboratories. In addition, a Video conference room, nineteen (19) administrative offices, Student Center, cafeteria, Library, Faculty room, basketball and volleyball courts, sand volleyball court. The Center has 299 parking spaces.



Ponce Center



The Ponce Center located at La Ceiba Avenue #1015 within the central historical zone of this beautiful colonial city. The physical facilities consist of one (1) building that houses twenty-four (24) classrooms, Video conference center, three (3) Science laboratories, four (4) Engineering laboratories, Infirmary, basketball court, Student Center, administrative offices, support services to the student, Library and cafeteria. The Center has 402 parking spaces.

DIRECTORY

Main Campus – Bayamon

Urb. Forest Hills
Road 167, Km. 21.2,
Ext. Forest Hills,
Bayamon, PR 00961
PO BOX 493
Bayamon, PR 00960
Tel. 787-780-0070
1-888-780-0070

Carolina

Ignacio Arzuaga Street #106
Carolina, PR 00985
PO BOX 4760
Carolina PR 00984-4760
787-769-0007

Vega Baja

671 Road Km 5
Bo Algarrobo, Sector El Criollo
Vega Baja, PR 00693
PO BOX 4258
Vega Baja PR 00694
787-858-3668

Ponce

1015 La Ceiba Avenue
Ponce, PR
PO BOX 7733
Ponce PR 00732-7733
787-840-2955

GENERAL INFORMATION

History of the university

Caribbean University represents the evolution of Caribbean Junior College, established in 1969, in the city of Bayamon, Puerto Rico. It was founded as a private, not-for-profit, co-educational and non-sectarian educational institution. Currently, the University consists of a campus located in Bayamon and three centers located in Carolina, Vega Baja and Ponce. The campus and centers are located so that they can adequately serve the population of Puerto Rico.

Vision

Caribbean University has as a vision to promote social and economic change that aims to increase the personal and intellectual maturity of society by offering a service of education of excellence.

Mission

Caribbean University is committed to the principles of accessibility, comprehensibility and adaptability to meet the needs of the community. It accepts the responsibility to foster in their students respect for human dignity, the ethical and intellectual growth and personal commitment to improve the society.

Statement of Philosophy

Caribbean University visualizes the individual within a humanistic and holistic level, developed in an environment of responsible freedom. Under this philosophy, the institution operates with an open door policy for anyone wishing to continue their educational development at the university level without prejudice of any kind.

Caribbean University's fundamental belief is that education is a right of every individual, because through this they can develop intellectually acquiring the highest levels of human dignity, freedom, critical thinking, creativity and responsibility. On this basis, the institution provides technical academic programs, Associate, Bachelor and Master degrees to their students, providing the opportunity for them to develop their talents and skills according to their ability.

Institutional Culture and Values:

Caribbean University, faculty and administration values the following:

- We value an open and honest communication that facilitates accessibility, comprehensibility, adaptability and responsible social leadership.
- We value the protection and promotion of social and individual values, such as freedom, fraternity, equality, peace, social justice, pluralism, respect for ideas, as well as the search for truth, peaceful coexistence and the defense of human rights.

- We value the pursuit of excellence in education, in teaching, in the formation process, in competitive research, in the agile delivery of service and the institutional administrative managerial action.
- We value creative and reflexive thinking, innovation and decision making sustained in evidence.
- We value interdisciplinary collaboration and research as means to responsibly manage and balance our resources, solving problems and multiplying our comprehensions.
- We value academic freedom, education and learning, as a means for holistic development and the success of the human being.
- We value the active participation and sustained by the student in the teaching and learning process since their commencement in university life.
- We value the pursuit of self-sufficiency and the diversity of institutional sources of income in order to reduce dependency on tuition revenue.
- We value an open and universal character and the commitment of the Puerto Rican community with the human, cultural, social, economic and advanced global orientation.
- We value the anticipation and strategically respond to the needs and changing social, economic, educational, demographic and technological demands of the university, national and international community.
- We value the responsibility as a unit of various components of the university's community, as well as teamwork as a facilitator of the formative process, researcher, innovator and entrepreneurial management.
- We value the transfer and dissemination of knowledge to the intellectual, economic, technological and social advancement of our community.
- We value the integrity and the lucidity in all our actions.
- We value the sensitivity and commitment with the environment by promoting sustainable development.

Accreditation

Caribbean University is licensed by the Puerto Rico Council of Education (CEPR) and accredited by Middle States Commission on Higher Education (MSCHE).

U.S. Department of Veterans Affairs, Puerto Rico Vocational Rehabilitation Administration, and Workforce Investment Act have approved our degrees programs offered by the Institution Act. 15.

Electrical Engineering and Civil Engineering Programs are accredited by the Engineering Accreditation Commission of ABET.

Membership

Caribbean University is a member of the following organizations:

American Association for Higher Education
American Council of Education
Association of Caribbean Universities and Research Institute Libraries
Association of Presidents of Universities of PR
College Entrance Examination Board
Inter-American Organization for Higher Education
Middle States Commission on Higher Education
Puerto Rican Association of External Resources Officers
Puerto Rico Council of Education
National Association Student Financial Aid Administrators
American Association of Collegiate Registrar and Admissions Officer
Interuniversity Athletics League
Hispanic Educational Technology Services
Puerto Rico Museum Association

Agreements

Universidad Iberoamericana (UNIBE) de la República Dominicana
Pontificia Universidad Católica Madre y Maestra de la República Dominicana
University of Health Sciences Antigua
Fundación Universitaria
Iberoamericana Universidad de Alicante
Consejo Iberoamericano en Honor a la Calidad Educativa – Uruguay

ADMISSION

Candidate's students may apply for admission in any of the two academic semesters that start in August, and January; or for the summer session. Applications for full-time and part-time studies are processed throughout the year. Although applications may be filed at any time, candidates for admission to the freshman class should submit their applications early during their final high school year.

Any student who has submitted an admissions application to Caribbean University, and does not attend the academic term, must complete a new application form if the student is considering to study at a different academic term.

It is the student's responsibility to comply with the admissions requirement, process established by the Institution prior registration. The notification of admission is conditioned upon completion of the admission process and requirements.

In considering an application, the Admissions Office personnel will evaluate all the requirements in order to determine qualification for admission. The University reserves the right to require further testing of any applicant with placement, psychological, achievement, and aptitude tests.

Any person with disabilities may voluntarily take advantage of the benefits of the "Postsecondary Passport of Reasonable Accommodation" as defined by Law No. 250 of 2012 and an extension to the admission process. This process identifies potential academic postsecondary students with disabilities for their admission. For more information, please refer to the Procedure to Attend Students with Disabilities.

Caribbean University offers an open-door admission policy. This policy provides an opportunity to any high school graduate or individual who has approved the State High School Equivalency Examination and has a grade point average of less than 2.00 to enroll in any associate degree.

Prospective students which request admission at Caribbean University should comply with the specific requirements of the program in which are interested to be admitted. (See Department Section). The Academic Program Director/Coordinator or Academic Advisor will consider the admission requirements in addition to a personal interview. These criteria are considered in relation to the ability of the student to meet the demands of Caribbean University programs.

Prospective students are invited to visit the University and discuss their educational plans with an academic advisor or counselor. Application form, catalog or other university information can be located at www.caribbean.edu.

ADMISSION DOCUMENTS AND REQUIREMENTS

The Institution reserves the right not to accept any of the required admission documents, if it understands that they are not valid or they were not obtained from a legitimate entity of secondary education. In addition, the Institution reserves the right to admit, readmit or enroll a student in each academic term.

The Good Standing Certificate is not an admission requirement to any of the undergraduate academic programs. However, it may be required in some practice centers for Bachelor degree programs in Criminal Justice, Nursing and others.

Admission for New Students - Students who initiate their post-secondary experience as a regular student in a program leading to a degree.

New Students Requirements

Associate Degrees

- Complete an application for admission and pay a non-refundable admission fee.
- Applicants must have a high school diploma or its equivalent.
- High school academic transcript, certification of graduation that includes graduation average or copy of the original high school diploma.
 - **Homeschooling** - Students of homeschooling interested in applying for admission to the University must present a certificate of equivalence issued by the Puerto Rico Department of Education.
 - **Schools from other countries** - Students from educational systems outside of Puerto Rico that have completed high school "twelfth grade" must apply the equivalence of the degree with the Puerto Rico Department of Education.
- Original Certificate of Immunization (Form P-VAC 3), for students under the age of 21.

Bachelor Degrees

- Complete an application for admission and pay a non-refundable admission fee.
- Applicants must have a high school diploma or its equivalent.
- High school academic transcript, certification of graduation that includes graduation average or copy of the original high school diploma.
 - **Homeschooling** - Students of homeschooling interested in applying for admission to the University must present a certificate of equivalence issued by the Puerto Rico Department of Education.
 - **Schools from other countries** - Students from educational systems outside of Puerto Rico that have completed high school "twelfth grade" must apply the equivalence of the degree with the Puerto Rico Department of Education.
- Original Certificate of Immunization (Form P-VAC 3), for students under the age of 21.
- Present evidence of postal address (Energy or Water Bill).

- Comply with the grade point average required by the program of studies, which the student is requesting admission.
- Results of the Evaluation Test for Admission to University (PEAU), which offer the College Board or the equivalent, if less than 22 years. (Applies only to engineering programs).

Expresso Caribbean

This division is aimed at the professional adult who seeks to start or finish their professional career in a fast and fit style of life.

- Complete an application for admission and pay a non-refundable admission fee.
- To be 21 years at the moment of request admission.
- Comply with the grade point average required by the program of studies, which the student is requesting admission.
- Present evidence of postal address (Energy or Water Bill).
- Official transcript from the postsecondary university previously studied- If interested in transfer credit must submit the official transcript from the university previously studied. (See Transfer Credit Policy).
- Participate in the Induction Seminar.

Placement Tests

Placement tests are part of the Caribbean University admission process. Placement Tests are designed to measure the student's domain in the areas of Mathematics, English and Spanish. The aim with this initiative is to support the students so they can improve their academic achievement and retain them in the university until graduation.

Requirements

- All new students who have a high school GPA or equivalency of 2.00 or higher are required to take the placement test. If the score obtained is higher than or equal to 70 the students will be enrolled in basic courses of the 101 level. Otherwise if the score obtained is less than 70, the students will be placed in remedial courses of 100 levels to help them develop the skills and knowledge required for the basic courses.
- In the case of students admitted to the Engineering program, they will only take the English and Spanish tests.
- All transfer student from a Post-secondary Non University Institution that doesn't present an official transcript with basic courses approved (English, Mathematics and Spanish), should take placement test.

Exceptions

- New students whose GPA is below 2.00 are exempted from taking the Placement Test. These students will be placed in the 100 courses in accordance with the institutions Open Door Policy.
- For students who have approved and present evidence of taking the Advanced Level tests in English, Spanish or Mathematics, with a score of 3 or higher will not have to take the placement test. These students go through the Transfer Credit Policy.
- Students enrolled in the Expresso Caribbean are exempt to take the Placement Test.

All new students enrolled in the undergraduate programs will be required to take the UNIV 100 course.

Admission of Transfer Students - A student who has approved one or more courses in other postsecondary or university duly accredited or authorized by the State.

Admission Requirements for Transfer Students

- Complete an application for admission and pay a non-refundable admission fee.
- Original Certificate of Immunization (Form P-VAC 3), for students under the age of 21.
- Official transcript from the postsecondary university previously studied. If the student comes from a Post-secondary Non University Institution, a high school transcript or its equivalent must be submitted.
- Comply with the Grade Point Average and requisites of the program to which the student is requesting admission. If there is no General Point Average accumulated, the overall high school average will be taken into consideration.
- Dean Recommendation Letter.

Note: For information regarding transfer credit, refer to Caribbean University's Credit Transfer Policy.

Admission for Special Students - All applicants interested in taking courses, but not in receiving a degree or certificate from Caribbean University may be admitted upon meeting admission requirements.

Admission for Auditing Students - The student requesting permission and is admitted to attend a specific course, and will not receive credits or a grade.

Admission Requirements for Special and Auditing Students

- Complete the Application for Admission and pay the fee (non-refundable) admission. Declare on the application the reason for admission as a Special or Auditing student.

- Submit original Certificate of Immunization (Form P-VAC 3), for students under the age of 21.
- The student may request courses only of the same or lower academic level that possess. For this you must submit a copy of the diploma, certification of degree or transcription of credits with the degree awarded.
- The student may take a maximum of 21 credits.
- Enrollment is subject to the availability of the courses.
- This type of admission does not guarantee eligibility for admission as a regular student.
- The student interested in being admitted as a regular student must comply with the admission requirements of the program.
- This type of admission is not eligible for Federal Title IV or State financial aid.

Academic and Student Support Services Orientation

Students who have been admitted to the University are expected to attend the orientation about academic and student support services held prior to the beginning of the academic term. This orientation is conducted each semester and provides an introduction to college life program, University's policies and regulations, academic counseling, and the opportunity to meet college officials, faculty advisors, and student orientation leaders. Academic orientation is also strongly recommended for readmitted, transfer, transient students.

Reactivation of an Admission Application

Any student, who has submitted an admissions application to Caribbean University but has never attended, may do so by reactivating the original application for one full academic year. Deadline dates for reactivation are the same as for new applications (see Academic Calendar). Students should contact the Admissions Office for reactivation of their applications.

Validity of Documents

The Office of Admissions could deny any applicant who presents a false or fraudulent statement or a deliberate omission on his/her application, immunization certificate, residency papers, or complementary document of statement. Should the student be enrolled when such fraud is discovered, he/she could be immediately withdrawn (non-refundable), further enrollment denied, and credit earned or degree bases upon such credit invalidated. Actions for this type of offense are handled administratively by the Students Affairs Grievances Committee after notifying to the alleged violator, and a hearing committee.

FINANCIAL AID OFFICE

The Financial Aid Office provides the student the necessary information related to the financial aid available to afford the costs of education. It is also committed to helping students reach their academic and professional goals by providing financial aid, depending upon the availability of funds, to those students who apply and qualify. Funding for these types of aids may come from federal, state, or private sources.

As established by the Federal Department of Education, it is assumed that the parents or legal guardians of dependent students, and independent students, have the primary responsibility to pay for their education. The Financial Aid will complement the family's contribution in assisting the student to achieve their academic goals.

Basic Eligibility Requirements

1. To complete annually the Free Application for Federal Student Aid (FAFSA). The Institutional code is 01252500.
2. Been admitted or be enrolled at Caribbean University in an eligible degree or certificate program.
3. Be an American citizen or permanent resident.
4. Be registered with the Selective Service of the Armed Forces of the United States, if you are male, between 18 and 25 years of age.
5. Demonstrate financial need, as established in the United States Department of Education and the Council of Education of Puerto Rico regulations.
6. Meet the requirements of the financial aid requested.
7. Comply with the Satisfactory Academic Progress established by Caribbean University.
8. Must not be in default on any federal student loan (Federal Perkins, Federal Family Educational, Ford Direct Student Loan, Plus) received for study in any post-secondary institution.
9. Should not owe some refund, to any financial aid program (Federal Pell Grant, SEOG, or another program).
10. Submit all required documents at deadlines.

Process to request financial aid

Student must complete annually the following documents in order to be evaluated for financial aid:

1. Complete the Free Application for Federal Student Aid (FAFSA) and submit the answer to Financial Aid Office.
2. Submit all the required documents by Financial Aid Office in the established deadlines.
3. To apply for Student Loans the student must answer 'Yes' in the question related to loans in the FAFSA by entering www.fafsa.ed.gov or visiting the Financial Aid Office. In addition, the student must submit and complete all required documents.

4. Transfer student must submit evidence of the approval of the FAFSA from the institution previously attended.

The granting and distribution of Financial Aid are made in a consistent manner considering the financial need of the students and the specific requirements of the different financial aids. The economic need of the students is the basis for the possible granting of financial aid. The allocation of financial aid is subject to the availability of funds that have Caribbean University in the current academic year.

Early applicants have the best opportunity to be considered for all funds. The Free Application for Federal Student Aid (FAFSA) results are used to determine the eligibility for additional financial aid. It is recommended that all students apply for financial aid early each year. It must be noted that an application for financial aid does not guarantee the payment of University bills. It is the student's responsibility to ensure that debts are paid by the deadlines established by the university. The economic aids to those students who meet all eligibility requirements the funds will be credited directly to the account to their respective accounts.

Cost of Attendance and Financial Need

The Office of Financial Aid uses the following information to calculate the cost of attendance. When calculating the cost of education, the Office of Financial Aid includes more than just the cost of tuition, fees, room and board. They include an estimate for books, travel and personal expenses as well.

The Federal Department of Education requires that all educational institutions receiving federal Title IV funds use the federal formula to determine which financial aid to offer the students, according to their financial need. The student's family to subsidize educational expenses defines this as the difference between the estimated costs of studies (Cost of Education) and the total of the expected family contribution (EFC).

If the cost of education is greater than the expected family contribution, this means that the student is eligible because of financial need and can participate in the financial aid programs. On the contrary, if the cost of education is less than the expected family contribution, this means the student is not eligible because of financial need to participate in the financial aid programs. There will be circumstances that the estimated educational budget that was assigned originally could be modified according to certain elements such as for example: the student is enrolled in a semester or that the budget will have to include the summer session.

Description of the Financial Aid

Federal Funds

1. **Federal Pell Grant** - the United States Government as the basis for student financial aid programs instituted this program. Such financial aid is intended to subsidize educational expenses of the student to complete their degree at the undergraduate level. The amount of financial assistance and the determination of eligibility are processed by the Federal Department of Education Processing Center. The determination is based on the information submitted by the

student's financial aid application in terms of income, assets, and family, among others.

2. **Federal SEOG Grant** - This program is constituted for students enrolled at the undergraduate level (that have not yet completed the requirements of a bachelor degree). To be eligible for this grant the student must demonstrate financial need. Educational institutions, in compliance with federal regulations, must give priority to eligible Federal Pell Grant students and with an expected family contribution of zero.
3. **The Teacher Education Assistance for College and Higher Education Grant (TEACH)** - This grant program offers up to a maximum of up to \$8,000 per year to students who intend to teach in private or public schools, whether primary or secondary, serving students from low-income families. These payments can be distributed according to the academic load in the phases of the current year. Students must maintain a minimum overall cumulative average of 3.25. The academic programs that qualify are Mathematics, Science, International Languages (not Spanish), Special Education and Reading Specialist. Those students interested in participating in this financial assistance, will be required to sign a contract, which must be fulfilled within a period of eight years from the date of graduation. Any student not fulfilling this commitment during the established time, the amount paid will be converted to a Federal Direct Loan not sub-subsidiary, with interest accrued from the date on which the first payment of the Grant was disbursed.
4. **Federal Work Study Program (FWSP)** - The Federal Work Study Program provides the opportunity to participating students to perform tasks for which they receive a salary to help pay education expenses. The student has the opportunity to work in various departments of the university and public agencies. The salary is made monthly at the beginning of the following month, according to the hours worked. Wages under this program is the federal minimum wage that is in effect. The student must comply with the requirements and responsibilities stipulated in the contract signed to become a participant of the program.
5. **Federal Direct Loans** – The Federal Direct Loan Program offers subsidized and unsubsidized loans. The subsidized loan is awarded considering the students financial need. In this loan, the Federal Government pays the interest accrued while the student is officially enrolled with a course load not less than six (6) credits. The unsubsidized loan is not awarded based on the student's financial need and the interest will accrue from the time the loan is disbursed until it is paid in full. For both loans, the student must be enrolled in an academic course load not less than six (6) credits. Student loans are payable six (6) months after the students fulfilled all the graduation requirements, lower their academic course load to less than six (6) credits or abandon their studies.

State Funds

1. **Program for Students with High Honors (PROGRESAH):** This program is directed for students with an accumulative average of 3.75 or more that are pursuing their third or fourth year of study.
2. **Scholarship Programs for Specific Academic Areas:** This scholarship program is directed for students with an academic average of 3.50 or more enrolled in any post-secondary academic level in the areas identified by the Puerto Rico Council of Education.
3. **Scholarship Program for Academic Talented Students:** This program has the purpose of granting supplementary economic aid to eligible students, with cumulative academic average of 3:00 or more, with economic necessity and are enrolled full time.

Institutional Funds

1. **Athletic Scholarships:** Each year the institution offers athletic scholarships to eligible students based on the following criteria:
 - Be a full-time student
 - Excel in any sport, as determined by the Athletic Department
 - Demonstrate financial need, as established by the Office of Financial Aid
 - Maintain a satisfactory academic progress
2. **Dr. Angel E. Juan Scholarship:** The Dr. Angel E. Juan Foundation aims to create a scholarship fund that provides individuals an accessible education of the highest possible level of dignity, freedom, creativity, critical thinking and responsibility, within an optimum environment. The priority of the Foundation is to develop the scholarship fund for undergraduate students continue graduate studies.

Federal Refund Policy (Return of Title IV Funds)

The Higher Education Amendments' of 1998, Public Law 105-244 federal regulation advises educational institutions participating in Title IV funds, the process of calculating financial aid, when a student totally withdraws or abandons their studies. The University must process the recalculation of funds to determine the amount to which the student is entitled and the amount that must be returned to the Federal Department of Education. The student is entitled to receive a percentage of the eligible financial aid, based on the days the student attended classes (days assisted-7 - days in the academic term). If, when processing the recalculation of financial aid and the percentage in class attendance are greater than 60%, the student is eligible to receive the total amount of financial aid. The university and the student are responsible to return funds not theirs to the Federal Department of Education. The student should visit the Office of Financial Aid for

orientation regarding the amount of financial aid he/she is entitled to and the amount that will be needed to return or repay to the Federal Department of Education. The programs administered by the Puerto Rico Council of Education, among others, are governed by this policy.

Once the process of calculating the reimbursement is complete, due to the students total withdrawal from the university, the Office of Financial Aid sends an official communication to the student, informing them of the adjustments made and the effect their withdrawal has on their financial aid. The sequence for returning the funds is the following:

1. Unsubsidized Federal Direct Loan
2. Subsidized Federal Direct Loan
3. Perkins Loan
4. Direct Plus Loan
5. Federal Pell
6. Federal Supplemental Educational Opportunity Grant (FSEOG)
7. TEACH Grants
8. Iraq and Afghanistan Service Grant

SATISFACTORY ACADEMIC PROGRESS

Caribbean University has established the Satisfactory Academic Progress Standard as evaluation criteria to determine the student's academic achievement. This standard is part of the eligibility requirements to participate in federal, state and institutional financial aid.

EVALUATION CRITERIA

Criteria A - Qualitative Criteria - The student must achieve the required Grade Point Average (GPA) according to the total cumulative credits completed.

Criteria B - Quantitative Criteria (PACE) – This criterion measures the amount of attempted credits (see definition of term) versus the amount of approved credits (see definition of term). The student must pass the percentage of required approvals. (See examples for the Criteria application)

*The preparatory courses are considered for calculating the qualitative and quantitative criteria.

Vocational Technical

	Criteria A	Criteria B
Accumulated Complete Credits	Required GPA	% of required approved credits
1-20	1.50	60%
21-33	1.80	66.67%
34-48	2.00	66.67%

Example - Criteria A

Student does not comply with SAP

Cosmetology Program Student
Has 18 accumulated credits
Obtained a GPA of 1.40

Standard Application

Credits to enroll in next term: 12
Accumulated complete credits: 18 +12 = 30
Required percent: 1.80 (According to table)

Example – Criteria B

Student does not comply with SAP

Cosmetology Program Student
Has 18 attempted credits
Has 9 approved credits
% of approved credits: $9/18 = 50\%$

Standard Application

Credits to enroll: 12
Attempted credits: 18+12=30
Approved credits at the end: 9+12= 21
% of approved credits: $21/30 = 70\%$
Required percent: 66.67% (According to table)

Associate Degree

	Criteria A	Criteria B
Accumulated Credits	Required GPA	% of required approved credits
3-24	1.50	60%
25-48	1.65	66.67%
49-60	1.85	66.67%
61+	2.00	66.67%

Example Criteria A:

Student does not comply with SAP

Student belongs to the Associate Degree
 Has accumulated 24 credits
 Earned a GPA of 1.40

Standard Application

Credits to enroll in the next term: 12
 Accumulated complete credits: 24 + 12 = 36
 Required percent: 1.65(According to table)

Bachelor's Degree

	Criteria A	Criteria B
Accumulated Credits	Required GPA	% of required approved credits
3-30	1.50	60%
31-60	1.65	66.67%
61-99	1.80	66.67%
100+	2.00	66.67%

Example – Criteria B

Student does not comply with SAP

Student belongs to Bachelor's Degree
 Has 24 attempted credits
 Has 12 approved credits
 % of approved credits: 12/24 = 50%

Standard Application

Credits to enroll: 12
 Attempted credits: 24+12=36
 Approved credits at the end: 12+12= 24
 % of approved credits: 24/36 = 66.67
 Required percent: 66.67% (According to table)

Master's Degree

Accumulated Credits	Required GPA	% of required approved credits
3-18	2.70	60%
19-31	2.90	66.67%
32-42	3.00	66.67%

Example – Criteria A

Student does not comply with SAP

Student belongs to Master's Degree
 Has 18 approved credits
 Earned a GPA of 2.50

Standard Application

Credits to enroll in the next term: 3
 Accumulated complete credits: 18+3 = 21
 Required percent: 2.90

Criteria C - Maximum Timeframe

The student must complete the requirements of their study program within a maximum equivalent to 1.5 times (150%) credit hours to be eligible for Title IV funds.

Any course attempted by the student, regardless of whether or not part of the credits required for their degree, count against the maximum of 150%. Preparatory courses, although they are considered in calculating the grade point average, will not be considered in assessing the maximum timeframe. For this criterion all validated courses will be considered by other institutions. As the annual assessment is done and the student exceeds 150%, will not be able to continue participating in Title IV funds.

Example - Criteria C:

Criminal Justice Student

The Criminal Justice Program requires 123 credits to complete the degree.

Maximum timeframe: $(123 \times 150\%) = 184.5$ credit hours

DEFINITION OF TERMS

- Incomplete courses - Courses with a grade of incomplete (I) are counted as attempted credits, but not approved.
- Repeated courses – A student may receive financial aid for which they are eligible to repeat courses not approved as long as they do not have exceeded 150% of credit hours. Repeated courses are considered attempted courses and not approved.
- Attempted credits - Attempted credits are those in which the student is enrolled in a regular program. Courses with a grade of F, W, I, AD, R and NP, are considered courses attempted but not approved.
- Approved credits – Are all the attempted credits in which grades of A, B, C, D, K, P, T are obtained.
- Probation – Student status after the Academic Progress Committee evaluates the case and recommends it favorable. The probation is one semester.
- Withdrawal – Courses withdraw within the period stipulated for changes in the academic calendar will not count towards the determination of quantitative criteria. Courses withdraw after the exchange period will be counted as attempted and not approved.

APPEAL PROCEDURE

1. The Satisfactory Academic Progress Standard evaluation is performed at the end of each academic year in May for Undergraduate, June for Graduate and September for Vocational Technical School. Students that fulfill the assessment and do not meet with one or more of the academic eligibility criteria will receive a letter from the Financial Aid Director

notifying the status of "Non Satisfactory Academic Progress" and the subsequent suspension of economic aids.

2. The student receiving the letter from "Non Satisfactory Academic Progress" is entitled to file an appeal to the Committee of Academic Progress.
3. The form for the appeal process is available in the webpage www.caribbean.edu in the Financial Aid Office area, in the area of Consumer Information and/or the “Centro Integral de Orientacion y Servicios al Estudiante” (CIOSE) of the Main Campus or Center.
 - a. In this form, the student should explain briefly why the reason of why it was difficult to maintain a satisfactory academic progress and if there was any change in their situation now that they can achieve a satisfactory academic progress at the next evaluation period. Extraordinary circumstances under which the student may appeal are:
 - i. His injury or illness
 - ii. The death of a relatives (mother, father, child, brothers or spouse)
 - iii. Special circumstances
4. To ensure that your case is evaluated before the beginning of classes, the student must have completed and submitted the appeal form with the relevant evidence to the “Centro Integral de Orientacion y Servicios al Estudiante” (CIOSE) from your Campus or Center before the date specified in the Academic Calendar.
5. The appeal process has a trial period of two weeks, so if you do not meet the deadline established in the Academic Calendar, the student is exposed to not being able to accomplish their enrollment on time.
6. If your appeal is approved favorably, the student will be on "Probation" for the next academic term, and may receive financial aid for that term. During the period of "Probation" the student must meet with the Academic Plan agreed to continue to benefit from the financial support of the term.
7. If on completion of the academic term under Probation the student meets the established Academic Plan, can maintain eligibility for financial aid under Title IV until the next evaluation period of the Satisfactory Academic Progress Standard. Failure to comply with the Academic Plan established, the Office of Financial Aid will notify the student that their financial aid will be suspended the next time they enroll. The student may appeal their status again following the process described here.
8. If not favorable, the student may enroll, however, will not be eligible for federal, state and institutional financial aid until it exceeds the standard.
9. A student who does not meet the SAP under Criteria C may be eligible to receive federal aid for up to one year if the appeals process is favorable for it.

REIMBURSEMENT OF THE COST OF TUITION, FEES AND PAYMENT PLAN

Reimbursement of Tuition Charges

Students who canceling a registration or withdraws totally from an academic term, may be entitled to a full or partial fund, depending on the date.

The reimbursements of tuition fees are as follows:

1. Cancellation of courses before the start of classes 100% refund
2. Official withdrawal from the University during the high and low period (first two weeks of classes)..... 80% refund of the total credits
3. Official withdrawal from the University after the high and low period before mid-term..... 50% refund of the total credits
4. Official withdrawal from the University after mid-term..... 0% refund
5. Official withdrawal from the University due to call of active Military Service.....100% refund
6. Cancellation of the course by the University.....100% refund

No reimbursements will be given to students that:

1. Submit a false or fraudulent statement or deliberately commit omissions in their admission documents or in the documents and declarations that accompany admission documents.
2. Have been admitted as temporary students with incomplete records and have not completed them during the first trimester
3. Have not officially withdrawn from the University
4. Suspended for disciplinary reasons
5. Leaves the University pending a disciplinary action
6. Expelled for any other reason
7. Fail to attend classes without notice
8. Have been found guilty of possession, use or sale of prohibited drugs or accused of aggravated assault.

A student who totally withdraws from an authorized program must return their identification cards and permits to the University.

Any student that fails to pay their account on the expiration date may be excluded from all classes, lectures, laboratories, exams, curricular activities and graduation until payment is made or has a satisfactory arrangement. The University may withhold grades, transcripts, degrees and Certificate of Good Standing to any student owing a debt.

Tuition, Fees and Other Charges

TUITION AND FEES	
Undergraduate Admissions Application	\$ 30.00 (with application) non-refundable
Undergraduate Readmissions Application	\$ 15.00 (with application) non-refundable
Undergraduate Tuition Fees	\$186.00 per credit
Tuition Fees Engineering Program	\$198.00 per credit
Construction Fee	\$ 65.00 per term
General fees full-time (12 credits or more)	\$335.00
General fees, third quarter (9,10 and 11 credits)	\$251.00
General fees, part-time (under 9 credits)	\$168.00
Change of Class during late registration	\$ 6.00
Change in concentration for the first time	\$ 10.00
Change in concentration for the second time	\$ 15.00
Health Services	Included in the general fees
Student Council	Included in the general fees
Technology and Communications Services	Included in the general fees
Parking	Included in the general fees
Sports	Included in the general fees

OTHER CHARGES	
Graduation fees, undergraduate*	\$190.00
Academic Transcript	\$ 6.00 each
Academic Transcript (Electronic)	\$ 7.75 each
Removal of an Incomplete (per course)	\$ 20.00
Graduation Certificate	\$ 6.00
Certificate of Cost of Studies	\$ 3.00
Identification card	\$ 5.00
Duplicate of Identification Card	\$ 7.00
Duplicate of Class Program	\$ 2.00
Integral Seminars Professional Competition – BA in Education	\$ 75.00
Integral Seminars Basic Competition – BA in Education	\$ 75.00
Cost of audit students will be 50% of the tuition fee	
Late Enrollment	\$ 25.00
Credit by Examination	\$ 60.00
Charge of account referred to debt-collecting agency	\$ 25.00
Returned check fee	\$ 25.00
Duplicate Diploma	\$ 50.00
*The graduation fee includes the cost of the gowns, diploma holder, graduation ceremony and others. The fee is non-refundable and must be used in the academic year requesting graduation.	

The University reserves the right to charge a fee for the institutional property used in the course and impose fines for improper use.

Payment of Fees

All fees of the academic semester are paid in full. In some cases, with authorization, fees are deferred at the time of registration prior to the first day of classes. The registration is not complete until the student pays all overdue fees.

The payment of fees may be paid in cash, money orders, manager's check or certified checks, ATM or credit cards at the Bursar's Office or by Internet. Failure to pay past due fees, will result in an administrative drop and/or retention of academic records.

Any student that fails to pay their account on the expiration date may be excluded from all classes, lectures, laboratories, exams, curricular activities and graduation until payment is made or has a satisfactory arrangement. The University may withhold grades, transcripts, degrees and Certificate of Good Standing to any student owing a debt.

All accounts referred by Caribbean University to a collection agency, will have \$20.00 fee. If the account is referred for legal action, an extra charge of 30% of the debt. If the case is taken to court, the additional charge is 33%.

Personal checks returned to Caribbean University by the bank, will be charged \$25.00.

Payment Plan

The University gives students the privilege to defer payments up to seventy-five percent (75%) of the total tuition and fees if they are not entitled to financial aid, by signing a Payment Plan. If the student is less than 21 years of age, the parent or legal guardian will have to sign the payment plan in conjunction with the student. This means that the student is responsible for paying twenty-five percent (25%) of the total costs the moment the registration process is completed at the Bursar's Office.

1. The student will be granted four (4) installments during the academic term to allow students to comply and finish the payment plan.
2. During summer sessions, the students will have the opportunity of two (2) installments to comply with their payment plan.
3. The active students, the amount due (balance) will be subject to a monthly interest of 1%.
4. The inactive students in academic term (semester, trimester or quarter) the amount due (balance) will be subject to a monthly interest of 2%.
5. Students who do not fulfill their financial commitments established in their registration or payment plan within the specified dates, may be withdrawn from classes and do not have the right to receive services or official university documents until they settle their debt in accordance with Federal Regulations and under the laws of the Commonwealth of Puerto Rico.

REGISTRAR'S OFFICE

The Registrar's Office is responsible for guarding and protecting the academic records of students. In addition, it monitors to ensure compliance with policies and academic standards established by the Institution. The Registrar's Office is located in the Central Administration building and one in each academic unit (Bayamon, Carolina, Vega Baja and Ponce). The Office is aligned under the Vice-presidency of Academic and Student Affairs.

Academic Sessions

The Institution provides the following academic sessions:

Regular sessions: Classes meet from Monday through Friday from 7:30 a.m. to 10:30 p.m.

Saturday sessions: Classes meet Saturdays from 8:00 a.m. to 5:00 p.m.

Summer Sessions: The summer sessions are in June. Classes meet from Monday through Friday from 8:00 a.m. to 5:00 p.m.

Academic Calendar

The Academic Calendar published by the Registrar's Office indicates the enrollment dates, beginning of classes, deadlines of Never Attendance, deadlines of withdrawals with "W" and "AD" (Administrative Drop), deadlines of removal incomplete, commencement date, end of classes, and final exam schedule.

Class Standing

Students are classified on the basis of earned academic credit hours as follows:

Freshman: a student who has earned 32 or less credit hours.

Sophomore: a student who has earned 33 to 64 or less credit hours.

Junior: a student who has earned 65 to 96 or less credit hours.

Senior: a student who has earned 97 or more credit hours.

Academic Load

According to their academic load, students are classified as follows:

Full time student – A student enrolled for 12 or more semester credits

Part time student – A student enrolled for either less than 12 semester credits

Part-time students are subdivided as follows:

- Three quarter students enrolled on 9 to 11 credit hour program.
- Half time part-time students enrolled on a 6 to 8 credit hour program.
- Less than half part-time students enrolled for five or less credit hour program.

Academic Credit Hour

The credit hour is often referred to higher education as the unit by which academic work is measured. A credit hour represents a minimum of fifty minutes of supervised or directed instruction in a sixty minute period. One unit of credit hour is usually equivalent to one hour of classroom studies and outside preparation.

Registration

Registration for all students is held at the beginning of each semester as stated in the academic calendar. A student is considered officially enrolled when the completion of the selection of courses and sections are made in the Web Advisor tool.

Registration process

The enrollment process begins with academic advising. The Academic Adviser will authorize the course in the E-advising tool. Students will register sections for their courses through the web advisor. A student is considered officially enrolled when the completion of the selection of courses and sections are made in the Web Advisor tool.

Late Registration

The student, who has not completed their registration process during the regular registration period, may register in the late registration period that begins on the first day of class by the date specified in the Academic Calendar. The student must pay a late enrollment fee.

Class Schedule

A Class Schedule is published each semester. It presents all courses, offerings, and time tables. Class schedules are posted on bulletins at each campus and webadvisor tool prior to registration periods. The Institution reserves the right to change or eliminate courses, course sections, appointed classrooms, and professors when it is considered necessary due to insufficient student enrollment or other reasons.

Readmission

It is the process in which a student interrupted studies for one or more semesters and wishes to enroll again to continue studying. Applications for readmission must be filed at the Registrar's Office before the beginning of the term for which readmission is desired. Students in leave of absence who exceeded the time granted and failed to request an extension will be processed as a readmission student. The readmission form shall be evaluated by the Academics in order to determine if the student complies with the established requirements. The Registrar's Office will notify the student about the outcome of the application.

Student previously registered at Caribbean University who are presently under disciplinary dismissal must be removed from the status by the Students Affairs Grievances Committee, in order

to be considered by the Registrar's Office for readmission. Students who have been suspended from Caribbean University for academic reasons, at least one academic term must elapse before they can be considered for readmission, (after the approval of the Academic Standing Committee).

An applicant who is denied readmission may appeal to the Grievances Appeals Committee for a hearing. All elements of procedural due process, as required by the University regulations, will be available.

An applicant whose record or account is in delinquency with the University may be readmitted with the condition that all debts with the institution will be paid in full.

Readmission requirements:

- Complete the Readmission form and pay a non-refundable readmission fee. Declare on the application the reason for readmission.
- Comply with the required average and current requirements of the curriculum to which the student is requesting readmission.
- At the moment of readmission, the applicant's record must be complete, according to the current requirements by the Institution.
- Readmitted students will maintain the last academic status applied during the last attended academic term under the Satisfactory Academic Progress (SAP).
- All readmitted students will be governed by the curricular sequence and the current catalog at the time of readmission.

Change in Class Schedule (Add-Drop)

Students can make changes to their class schedule during the drop period that is listed (established/mentioned) in the academic calendar. The student must be officially enrolled in order for the student to make changes in schedule during the drop period. During the drop period, students can add or remove courses and change class sections completing the Add/Drop form, which must be signed and authorized by the Academic Director or Program Coordinator. The form is received and processed at the Registrar's Office. Students can request a new copy of the modified class schedule at the Bursar's Office.

Change of Address

All students must report postal address changes at the Registrar's Office. All Institutional notifications are sent to the address provided by the student on their application form; therefore, all changes should be reported as soon as possible. The Institution will not be responsible for undelivered correspondence if the student has not notified the change of address.

Identification Cards

Identification cards are issued to students during the registration period in the first semester of residence, and validated thereafter at every registration period of the academic year. ID cards permit students to use the University facilities and services, and attend all activities open to the student body at no cost or at special rates. The name and student number is printed on the ID card.

Attendance

Attendance is compulsory at Caribbean University. Students must not be absent from classes, announced examinations, quizzes, laboratory periods, final examinations or other class activities, unless the reason for the absence is valid and acceptable by the instructor. If for some reason the student has to be absent from scheduled classes or laboratories, it is his/her responsibility to make up the material covered. All matters related to the student's absences, including making up for work missed, are to be arranged with the instructor's authorization.

The instructor is responsible for the guidance and referral of students for counseling regarding possible academic loss due to absences.

Withdrawal Policy

The University encourages student's retention on courses and in the Institution. Advisors should be notified by the student to discuss possible alternatives before the withdrawal of a course. Students desiring to withdraw from a course must submit the "Withdrawal Form" at the Registrar's Office within the academic calendar period established. Withdrawal forms must be filled out completely, approved by the deadline for withdrawal is the last day of classes for the session. After this date, no withdrawals will be processed.

Withdrawal forms must be completed by the student, and processed by the Registrar Office.

NA (Never attended)

A student incurs in "never assisted" status or NA once the courses are officially enrolled and he or she does not assist virtually or presently to class during the established Institutional period.

AD (Administrative Drop)

Administrative drop certified by the professor once the student fails to attend a course six (6) times consecutively in courses that meet twice a week; or absent three (3) consecutive times in courses that meets one (1) once a week.

Leave of Absence

Student currently attending Caribbean University who needs a leave of absence must complete a "Leave of Absence" form one month prior to the effective date. This form is available at the Registrar's Office.

A student granted a leave of absence is not required to comply with the readmission procedures provided when he/she returns to the University on the date agreed. Failure to return as agreed cancels the leave of absence unless an extension is requested and granted by the Registrar's Office. The request for an extension of leave should be submitted to the Registrar's Office at least one month prior to the ending of the semester agreed upon when the leave was approved.

Special students do not qualify for this permission. All students who apply for the permission within one period less than the stipulated time due to a medical condition, the student must bring evidence to process the application. A student who registers at another institution while on a leave of absence from Caribbean University will not be granted credit for any course taken unless previously approved by the Registrar.

Declaration of Concentration

The student declares concentration to one of the programs offered by the Institution when filling the admission form.

Change of Concentration

Any student that wishes to change his or her current concentration will have to complete the Change of Concentration form, which has a fee. The deadline for the concentration change is specified on the Academic Calendar. The student must comply with the requirements established for each academic program. (*See to the Change of Program, Concentration, or Specialty policy located at www.caribbean.edu*)

Transfer from Academic Unit

Any student, that wishes to transfer from one academic unit to another within Caribbean University's Centers, must request and complete the Transfer Form at the Registrar's Office. The student must go to their Program Coordinator/Director to receive an academic orientation. Then the student will submit the document to the Registrar's Office.

Final Exams

The Final exams period will be programmed at the Registrar's Office and published on the academic calendar. The established time for final exams will be 2 hours.

Grading System

The University uses the following system of letter grades and grade honor point for evaluating course:

Letter Grade	Percent	Honor points
A	100-90	4
B	89-80	3
C	79-70	2
D	69-60	1
F	59-0	0

Annotation System

The following grade symbols are not given grade honor points:

Annotation	Definition
P	Passed
NP	No pass
W	Withdrawal
WM	Military Service Withdrawal
AD	Administrative Drop
I	Incomplete
AU	Auditing
K	Credit by Examination

The following symbols are used as indicated, but will not be included in the determination of the cumulative grade point average (CGPA).

P - Pass: This symbol indicates that credit has been given for satisfactory completion of a course required for the degree.

NP - No Pass: This symbol indicates unsatisfactory performance in academic course work necessary for completion of degree requirements. No credit will be given.

W - Withdrawal: This symbol indicates that a student was permitted to withdraw from a course without penalty.

WM – Military Withdrawal: This symbol indicates that a student is active in the U.S. Armed Forces or the Puerto Rico National Guard.

AD - Administrative Drop: This symbol indicates that a student quit attending to one of his/her courses and did not officially withdraw for the course.

I - Incomplete-Grade: This symbol may represent an "I-B", "I-C", "I-D", "I-F", indicating that a student was unable to meet the full requirements of the course for non-academic reasons. Non-academic reasons cover situations such as: serious illness, or an event which makes it impossible for a student to complete the required work. An incomplete will be given to the student only in

those cases that owes the final assignment or the final exam of the course. The student must request in writing the desire to be given an incomplete.

In these cases the instructor will grade the student's achievement with an "F" in the final examination for which he/she has been absent and averages the total number of grades earned by the student in the course. The final grade will be reported to the Registrar as an incomplete followed by a grade (e.g., "I-B", "I-C", "I-D", "I-F"). The student will have until the eighth week of the next semester term to remove the "I" (see Academic Calendar). If the "I" is not removed during the above indicated period, the grade indicated in the incomplete will automatically be recorded by the Registrar on the student's transcript.

AU - Auditing: The auditing category is available for freshman students, regularly enrolled students, and for individuals from the community. Students may not transfer from auditing to credit status or vice versa.

K - Credit by Examination: This symbol indicates that a student is given credit for the course based on successful performance on an examination for this purpose. Credit earned by examination is recorded as "K" if successfully passed (70% or over).

Course Coding System

The Course Coding System is composed by a four alphabetic code that identifies the course material and also has a numeric component of three digits that identifies course level.

100-299 Lower division courses (Freshman/Sophomore Level)

300-499 Upper division courses (Junior/Senior Level)

Grade Report

At the end of each semester or academic session, the Registrar's Office will send the email, notify the grades posted in the academic record. The student can access to Webadvisor and get your grade report that includes the student's semester index and general cumulative index. The University will consider as official all information sent to the student's address as it appears on his/her record.

Credit by Examination

Caribbean University offers students the opportunity to obtain credits for General Education Courses by credit examination. The list of courses is presented in the description of the Liberal Arts Department. Interested students must seek an interview with the Department Head or Coordinator in order to request the test. Students must score over 70% for validation. No point average is given for validated credit.

Repeated Courses

Students will be allowed to repeat any courses if any of these conditions occurs: a failed course, withdrawal, administrative drop, dissatisfied or if the student does not accomplish the grade point

average of the academic program required in which he/she is enrolled. Repeat course does not guarantee the eligibility of Title IV financial aid. Although both grades will be recorded on the student's official transcript, only the higher grade will be used in the Grade Point Average (GPA) computation.

Course reactivation

In such cases in which the students have been given an administrative drop he/she could request a course reactivation after the submission of the evidence to the professor. The student must fill out the form given by the Registrar Office in the time established by the Academic Calendar. The professor and the Academic Dean must evaluate the evidence and authorize the reactivation.

Grade Claim

If a student is not satisfied with his/her grade, he or she will have the opportunity to file a claim objecting the grade. The student will fill the Grade Claim form at the Registrar's Office in the date established in the academic calendar. The professor will receive the claim, verify all the class requirements, and submit his/her decision to Registrar's Office. The student will receive the result of the claim.

Change in Grades

A course grade which has been reported by the instructor and recorded by the Registrar's Office cannot be changed except under the following circumstances:

1. **Error in grade** - Any incorrect grade will be changed upon provision of statement written by the instructor indicating that the reported grade was an error. Evidence is required by the Registrar to justify a grade change.

If a student is not satisfied with his grade, he or she will have the opportunity to file a claim objecting the grade at the Registrar's Office. The professor will receive the claim, verify all the class requirements and certifies if there was an error on the final grade. In these cases, the professor will submit the form to the Registrar's Office. The change will be updated on the system once is confirmed and certified.

2. **Removal of an Incomplete** - Grade ("I"). A student receiving an "I" is expected to consult the instructor and complete all necessary work within the eighth week of the following semester. If the "I" is satisfactorily removed by the student during time limit, the instructor is required to file the grade change to the Registrar's Office. Grade change must be informed during the time limit, otherwise, the symbol "I" changed to the grade indicated in the incomplete (see Grading System).
3. **Grade Claim** – When the professor accepts the error in grade based on the claim of the student.

Authorization to study in another Institution of Higher Education

Students at Caribbean University (CU) seeking an Undergraduate Degree may request the Academic Dean and Registrar authorization to take courses leading towards his/her degree at another institution of higher education. The Academic Dean will evaluate the description of the courses in order to guarantee the equivalency in Caribbean University. The authorization will be given only if:

- The course(s) to be taken have not been offered in the last two semesters prior to the request
- The student has a minimum GPA (Grade Point Average) of 2.00
- The student is considered a "senior", having 97+ credits earned

A student can take a maximum of 9 credits towards a Bachelor Degree or 6 credits towards an Associate Degree in such manner.

The course (s) must be approved with a grade of “C” or better in order to be threat as a transfer course (T). Students are responsible of requesting official transcripts to be sent to CU from the other institution.

Caribbean University will not be responsible for the courses taken without the prior authorization of the Academic Dean.

Transfer Credit Policy

Transfer students must request an evaluation at the Admission Office. The Program Coordinator/Director will evaluate and compare the prior credit to the Institution’s courses.

Only the courses that have equivalency in its contents, which have equal or higher credit hours and were approved with “C” or higher will be validated in accordance to the Academic Program in which the student were enrolled.

Only the maximum of 60% of prior credit will be approved and 50% of the maximum of credits to be approved could be concentration courses. Once evaluated, the student will receive a letter by the Registrar’s Office notifying which courses were approved.

- **Advanced Placement**

Course equivalency allows students to receive university credits based upon their scores in the Advanced Placement Exam submitted by the College Board. Through this option, Caribbean University recognizes the academic achievement of these students and is allowing them to take higher-level courses based on their academic abilities.

Course Substitution

Caribbean University allows under certain conditions, the substitution of course. The course substitution will be subject to the table of equivalence provided by the Vice-presidency of Academic Affairs.

Credit Transcripts and Certificates

Students can request a copy of their transcript copies. Official transcript copies are sent directly to the agency or institution as requested by the student.

In order to request a transcript, the student must complete and submit a form in the Registrar's Office or through National Student Clearinghouse web portal located on the Institution's official web page. The student has the opportunity to request and receive transcript electronically through E-transcript service. No transcripts will be issued without written authorization by the student. Official transcripts are not given to student under any circumstance. Transcripts are not issued to students that have a financial debt with the institution.

The certificate of degree indicates that the student has successfully completed the graduation requirements.

Academic standing

Caribbean University requires that all students demonstrate a good academic standing. The academic standing is use to determine the eligibility of a student to continue their study. At the end of each academic year, the registrar office will determine if the student satisfied the accumulated grade point average as described in the following tables:

Associate degree	
Completed Credits	GPA
3-24	1.65
25-48	1.85
49 +	2.00

Bachelor degree	
Completed Credits	GPA
3-30	1.65
31-60	1.80
61 +	2.00

Academic Warning

Students are placed on academic warning if their cumulative grade point average drops below the standards of academic progress established for their class standing. Academic warning is a preventive measure intended to inform the student making unsatisfactory progress of the need to improve study habits and seek additional counseling. Early recognition of a problem warns the students about possible jeopardy to their academic goals. It also provides an opportunity for the students to demonstrate acceptable academic performance. The subsequent action is academic probation.

Probation

The student is placed on academic probation by the recommendation of the Academic Standing Committee if at the end of the academic year after being in Academic Warning the students do not satisfied the GPA required. At the end of the first year on probation the Academic Standing Committee could recommend second year probation. Academic probation places the student in jeopardy of academic suspension if he/she doesn't satisfied the require GPA after the second year on probation

Academic Suspension

A student is placed on academic suspension for one semester if he/she fails to maintain the minimum GPA established after the second year in probation. A student who is suspended may petition the Academic Standing Committee, to review his/her record and consider the reason for poor achievement. If the Committee makes a favorable recommendation, the student is placed on academic probation for the next semester after receiving an academic suspension notice. Conversely, if the Committee sustains the former decision or if no petition is made by the student after receiving the academic suspension notice, the student is not permitted to enroll at the university for one semester following academic suspension, nor participate in any other activity sponsored by the Institution. Readmission after the mandatory one semester suspension is not automatic.

Removal of Academic Suspension

A student may apply for readmission to Caribbean University at the end of the academic suspension period. The student will be readmitted under academic probation during suspension. After a semester on probation if the student does not satisfy the GPA required the student will be placed on academic dismissal.

Been in Good Standing does not imply eligibility to receive Financial Aid.

Dean's List

The Dean's List is compiled at the end of each academic year and posted on the campuses bulletin boards. This scholastic recognition includes those full-time degree-seeking students who achieve a cumulative GPA of a 3.50 or higher. Part-time degree-seeking students and non-degree students, regardless of academic load, and academic achievement are not entitled to nomination for the Dean's List.

Graduation Requirements

1. Completion of the academic requirements of the enrolled program.
2. Transfer students must approve in residence work 40% of the required program credits and 50% of the required concentration credits.
3. Students will graduate under the program curriculum in which they were admitted. However, if the curriculum was modified after the student's admission, he /she could

request to change his/her curriculum and be evaluated for the change. Curriculums may not be combined.

4. Students must complete and submit graduation form at Registrar's Office.
5. Graduation request have a non-refundable fee.

Graduation Grade Point Average

The student must approve all required credits under the program enrolled with a general academic index of 2.00, with the exception of some programs, that require an index of 2.50 Engineering and Speech Therapy program and 3.00 for Education programs (From 2016 hereafter)

Concentration Grade Point Average

The Concentration GPA required is 2.30, except for programs that require 2.50 Engineering, Social Work and Speech Therapy programs and 3.00 for Education programs (From 2016 hereafter).

Graduation with Honors

The Institution grants honors to students under associate and bachelor academic programs with an excellent level of academic standing. In order for a student to achieve honorable mention, he or she must have obtained a general GPA of:

- 3.50 -3.70 – Cum Laude
- 3.71-3.89 - Magna Cum Laude
- 3.90 - 4.00 - Summa Cum Laude

Posthumous Degree

In case the student has passed away, the Institution could grant a posthumous degree under the following circumstances:

- Was enrolled at the Institution in his/her last academic term.
- Must be recommended by the Registrar and approved by Vice-presidency of Academic Affairs and Accreditation.

Conferral of Degrees

Degrees are issued in May and December. Formal ceremonies are conducted at the Annual Commencement Exercise in June. All students completing degree requirements are invited to participate in the commencement exercises.

Student Records

Caribbean University in compliance with the Family Educational Rights and Privacy Act (FERPA), also known as the Buckley Act, protects student's privacy, academic record and acknowledges student's rights to verify their academic record. The Institution also enforces privacy thru its Policy of Confidentiality of Academic Records, which is provided at the web at www.caribbean.edu and at the Registrar's Office.

Student rights under the FERPA Act for Post-secondary Institutions

The Family Educational Rights and Privacy Act (FERPA) also known as the Buckley Act was approved by the United States Congress in 1974. FERPA has certain rights with respect to their academic records.

Student Rights:

1. The student has the right to inspect and review their academic record within 45 days of the day the University receives a request for access. The student should submit to Registrar's Office a written request that identify the record (s) they wish to inspect. The Registrar will make arrangements for access and notify students the time and place where the records may be inspected.
2. The right to request an amendment of the academic records that students believe is inaccurate or misleading. Such amendment or correction shall be filed in writing and must specify the issues that need to be changed including student understand the reasons. Failure to do such amendments or corrections, the student will be notified in writing with the right to a formal hearing.
3. The right to consent to disclosure of personally identifiable information contained in the academic record, except to the extent that FERPA authorizes disclosure without consent. One exception which permits disclosure without consent is disclosure to school officials with "legitimate educational interests". A school official has a legitimate educational interest if the official needs to review an academic record in order to fulfill his or her official responsibilities. The Institution may provide student record information without consent to other educational institutions in which the student interested in enrolling
4. The right to file a complaint with the U.S. Department of Education concerning alleged the University incompliance with the requirements of FERPA. This should be addressed to:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202-4605

Directory of Information

Caribbean University under the provisions of the "Family Educational Rights and Privacy Act of 1974" also known as FERPA, established the following data as Directory Information:

The student will choose between these three categories:

- Category I – name, address, telephone number, dates of attendance and class level
- Category II – name, Concentration, previous institution (s) attended, degree conferred, honor, date and place of birth, participation in sports and activities , height , weight of athletes
- Category III – Not authorize to disclose information

If this form is not received in the Registrar’s Office, Caribbean University will assume that the information mentioned in category 1 of this letter may be released. If the student desires changes, after submitting the form, the student should pass by the Registrar’s Office and complete another form.

The Solomon Amendment and FERPA

The Solomon Amendment requires that institutions to provide directory-type information of students 17 years or older upon request from representative of the Department of Defense for military recruiting purposes. This information, referred to as “student recruiting information, includes : student name, home address, student telephone number, date and place of birth, level of education or degrees received, academic Concentration, and the most recent previous educational institution in which the student was enrolled.

The request for student recruiting information under Solomon must be honored unless there is an exception in the law which precludes the institution from providing the requested information. Any one of these exceptions must be applicable to schools seeking not to comply whit Solomon:

- Certification that the institution has maintained a long -standing policy of pacifism based on historical religious traditions.
- Certification that such the information is not collected by the institution
- Certification that each student concerned has formally requested to withhold “directory information” under FERPA to third parties.

Student with Veteran’s Benefit

Caribbean University has all the programs authorized by the Veterans Administration. All veterans and eligible dependents are encouraged to take advantage of the information and referral service of the Office of Veterans Affairs located at the Registrar’s Office. The Office assists veterans in solving problems that might hinder them from pursuing or completing their educational objectives; while also delivering the most up to date information on the education assistance benefits provided by the Department of Veterans (Including Post 9/11 GI Bill, Montgomery GI Bill Selected Service, Montgomery GI Bill Active Duty, REAP, Dependent’s Educational Assistance (DEA), and Vocational Rehabilitation) ***. The office opens Monday through Friday, 8:00 a.m. to 5:00 p.m.

In order to comply with those regulation it is expected of those students to achieve their degree by the time they approve the “minimum” number of credit hours required for graduation in his/her specific degree. After they achieve the mentioned “minimum” they can be certified no longer for the veteran’s affair benefits.

Reserve Officer Training Corps (ROTC)

Caribbean University students who wish to participate in the Army Reserve Officer Training Corps program may do so in conjunction with the Department of Military Science at the nearby Bayamon campus of the University of Puerto Rico and Ponce campus. Specific objectives of the Army ROTC program are to attract, select, and identify qualified students to serve as commissioned officers in the active Army or the U.S. Army Reserve; to provide cadets with the understanding in the fundamental concepts and the principles of the National Security and Military Sciences; to develop leadership and managerial potential, and to install a strong sense of personal integrity, honor, and individual responsibility. Further information on career opportunities through the Army-ROTC may be obtained by writing or calling the Department of Military Science at the UPR-Bayamon and Ponce campuses.

Social Security Number Policy

In accordance with Act No. 186 of 2006, Caribbean University establishes that it will not show or display the Social Security number of any student in a visible place or object, nor will be used as student identification.

The Institution will only use the social security number for internal purposes to verify the identity of the students in their admissions application, for financial aid purposes or other reports required by law, and the same will be for legitimate official use.

Caribbean University's administrative offices and the faculty will not publish the social security number in grade lists, list of students enrolled in courses, student directory, or any list, or make it accessible to any person who does not have the need or authority of the data. In addition, the Institution will notify the student, father, mother or legal guardian; under what circumstances the information will be used.

STUDENT LIFE AND SERVICES

General Information

Caribbean University is committed to the ideal that total education involves more than an academic degree. The moral, social, and physical aspects of student life should develop in accordance with the academic achievement. The Students Affairs' Office or the Campus Director's Office is responsible for the coordination and direction of all services and activities that support the students' academic program. These services and activities are designed to maximize the moral, social, and physical development that will enhance the student's educational experience and personal growth.

Student Orientation and Guidance Center

Guidance and counseling services are available to all students having academic, vocational, occupational, educational, and personal concerns. The role of the advisor is to help the student clarify values, attitudes, interest and aptitudes; explore career opportunities, formulate educational and vocational plans, and assist students who need academic information. The student is guided to identify academic study difficulties, personal problems, and to find possible alternatives in coping with them. For students who require special services, the Guidance and Counseling Office arranges appropriate referrals to the University's Student Support Services or other off-campus professional agency. Student counseling records are confidential; no information is released to anyone (including family or members of University faculty) without the student's written consent or approval. Caribbean University students may use all guidance and counseling services at any time during their college years.

Students Council

The Students Council exists as the representative body of the students of Caribbean University. The purpose of the Students Council is to voice students' opinion; advance the students causes, both socially and academically; promote communication, cooperation, and understanding among students, faculty, and administration; and suggest the necessary improvement for the welfare of the students, and the improvement of the University in general.

The Students Council of Caribbean University represents the interest of students through its standing committees. It is formed by representatives of every academic department. By active participation in the Students Council, or by voicing opinions and ideas through representative students, a student may gain valuable experience in democratic processes, including rights, and duties. Students interested in working with the Council may obtain information from any of its members or from the Students Affairs Office.

Food Services

The University Cafeteria, operated by a concessionaire, provides food services for the University community in its Main Campus and Centers.

Museum of Art Caribbean University (MACU)

The Museum of Art Caribbean University (MACU) began as a center of university education and the appreciation of art and cultural heritage. Its mission is to investigate, expose and educate through the exhibition of works of art, promoting a direct encounter between the artist, the work exhibited and the audience. MACU is also a practice center of interdisciplinary studies where students integrate their knowledge of art, humanities, science, technology and pedagogy. MACU's goal is to transform the university's education and promote multidisciplinary and critical thinking.

Students Organizations

Caribbean University students will have full freedom to associate and form a bona fide student organization, within the framework of respect and tolerance to help maintain a climate of solidarity and suitable relationships between all the University community members, in accordance with institutional regulations.

Code of Behavior

Caribbean University is firmly committed to the concept of a university as a setting for educational processes, designed to empower students to develop their potential. To assure the availability and continuance of these educational processes, all members of the University community are engaged in avoiding any attempt to impede or interfere with the normal function of the University's programs and services. Students are admitted to the University with the understanding that they accept the University's basic principles and codes of behavior. Violators of University regulations, which are contained in the student general handbook are exposed to penalties, including suspension or dismissal. Student general handbook is available at www.caribbean.edu.

Academic Dishonesty

Intellectual honesty is the basis of all academic and scholarship work. The University views any form of academic dishonesty as a serious offense. The Students Affairs Grievances Committee is in charge of establishing policy on how to deal with academic dishonesty; and sets guidelines for proceeding with each particular case.

Complaints and Academic Grievances Committee

The Complaints and Academic Grievances Committee considers complaints of arbitrary, capricious, malicious, or otherwise improper actions related to grading, evaluations, and other requirements for credits, or any other academic matter. The Committee cannot intervene in matters covered by the procedures set forth in the Policies of the Board of Trustees and the rules for the maintenance of public order.

The Committee considers only charges of clearly improper academic practices. It will not intervene in disagreements about an instructor's intellectual judgment. Grievances should be brought to the Committee only after previous discussion with the Instructor, Department's Chairperson and Office for Academic Affairs have proven unsuccessful. Grievances must be in

writing, including names, dates and other pertinent details, and submitted to the Committee at the Dean of Student Affairs office. Further information about committee procedures may be obtained from that office.

Safety on Campus

Caribbean University has as a policy to protect the rights of all individuals and ensuring a safe environment for all students, student prospects, employees, employee's prospects and visitors to the University. The institutional policy concerning campus security responds to the specifications included in the "Code of Federal Regulations" 34 CFR 668.46 (Institutional Security Policies and Crime Statistics) of the U.S. Department of Education and the parameters that have the Jeanne Clery Act (known as the Clery Act).

Each member of the University community and its visitors has the right to be protected from acts of violence and threats. It also has the responsibility to comply with all local, state and federal laws and all rules and regulations of the University aimed at protecting its integrity and safety and that of others. Every individual who has been victim of any criminal violation or other emergency should report such violation immediately to the University authorities in charge of Campus Security and the University guards. Furthermore, they can visit the Chancellor's Office or the corresponding Campus/Center Director. Also, they can communicate immediately call 911, Municipal or State police, or to the University's direct toll free number 1-888-780-0070.

Crime Statistics Institutional Security and Prevention Policy

The Student Right to Know and Campus Security Act Law 101-542 or the Jeanne Clery Act requires that the University collect and disclose the crime statistics and in addition, be kept informed throughout the University community, students and employees prospects and visitors about the criminal incidents that occurred in the institution during the past three calendar years. These statistics include events, if any, of a criminal nature that occur within or outside of the university campus and public property, as defined by the Clery Act. Such information is disclosed annually through a statistical report known as the Campus Crime and Security Survey, required by the Federal Department of Education and is available at www.caribbean.edu

Together to that report, Caribbean University promotes and disseminates its Institutional Prevention and Security Policy which include important aspects such as:

- Prevention of Crimes and assaults
- Domestic Violence Prevention
- Suicide Prevention
- Prevention of the use and abuse of alcoholic beverages and controlled substances.

This information is also available in writing at the Office of Guidance and Counseling in each academic unit.

Convicted Sexual and/or Child Abuse Offenders Registry

Information related to the Sex Offenders Registry in Puerto Rico, is available in the register of the Criminal Justice Information Systems (SIJC) Law No. 266 (2004) Registration of Persons

convicted of sexual offenses and child abuse. Its virtual page <http://prcjisweb.gobierno.pr/CjisServices/Forms/Registries/Registry266TermsConditions.aspx> contains information of the Public Register of persons convicted of sex crimes or abuse of minors to help citizens understand the possible presence of such offenders in their community. In the Puerto Rico Police Unit there are Coordinators of Unit Offenders and Domestic Violence. Federal law requires that individuals registered as sex offenders, notify the authorities of the State if they are employed by are students of an institution of higher education.

Caribbean University is committed in promoting and maintaining a secure environment and free from any form of sexual harassment or intimation. Each member of the university community must be alert and know that this conduct is prohibited by law and by the University's institutional policies. Caribbean University does not tolerate any conduct of sexual assault or rape of known or unknown individuals, and will take the necessary measures to prevent and correct such acts.

Alert or Emergency Releases

As a preventive measure or notification of emergency, the staff in charge of security on campus, shall deliver to the university community the necessary alert and emergency releases (Timely warnings notifications or timely emergency notifications), in cases that warranted in a reasonable time and according to the geographic area defined by the Clery Act.

Health Services

The Office of Health Services is in charge of a nursing professional licensed by the State to exercise their profession. The nursing professional contributes health services to the entire university community in the institution through the services of primary emergency medical aid and guidance of individual and collective health. In the Office of Health Services external services are coordinated, during emergency events such as calls to 911, ambulances, firefighters and police. On the other hand, the staff of this office is responsible for coordinating educational campaigns and coordinate blood donations with the pertinent organizations.

Campus Parking

Students may park on the campus parking lot available at the University on a first come, first served basis. In order to use the parking facilities on campus, students must furnish the vehicle registration, and the validated student's academic program. One permit per student is allowed. Decals must be displayed on all vehicles parked on campus.

Library Services

The System of Libraries, Educational Resources and Learning at Caribbean University, consist of five units. These are: the main administration offices and four libraries (Bayamon, Carolina, Vega Baja and Ponce) engaged in direct service to the public. All of them are committed to achieving the institutional vision, mission, goals and objectives as leaders in the management of study, teaching, research and services.

In keeping with the institutional mission, the Libraries will contribute to the education of their students, fostering in them the social and cultural values of our people. Furthermore, they will facilitate quality information through the immediate availability of library resources inherent to the academic development of our community.

The libraries hours' service are: Monday to Friday from 7:30 a.m. to 10:30 p.m., Saturday from 8:00 a.m. to 5:00 p.m. Access to the databases is always available through the online library located at the website <http://www.caribbean.edu/index.html>.

The libraries provide many services for its users at all four campuses. These are:

- **Reference Consultation** – Libraries offer orientations, by telephone and e-mail about the services that the libraries provide to students, professors, administrative personnel and the community.
- **Reserve** – This section of the libraries provides the bibliographical resources that are identified in the course syllabus and any other material that the faculty identifies as necessary for either additional consultation or that support the courses taught in the different academic programs. Loans for these resources are controlled as they are in high demand.
- **Access to data bases** – The University community can have access to the databases at the libraries, laboratories and offices at all four campuses. This service is also available 24/7 through the webpage of the university http://www.caribbean.edu/E2_Multidisciplinarias.html.
- **Virtual Reference** – This service can be accessed from the Online Library section of http://www.caribbean.edu/Referencia_virtua3.html. Users can ask questions by filling out the provided form in Internet. Questions should be answered within a period not exceeding three days.
- **Research** – Library personnel provides orientation and/or support to the community in different topics of interest or specific academic research. Users will be able to access or recover information through electronic, printed and/or audiovisual material.
- **Faculty Support** – Library personnel provides orientation, workshop and/or support to the faculty in the different topics of interest or in specific academic research using electronic, printed and/or audiovisual material and equipment. In addition, the librarians evaluate and accept the recommendations made by the professors when they identify educational resources for the development or the actualization of the library collections.
- **SDI (Selective Dissemination of Information)** – The libraries continuously disseminate booklets and leaflets about the services offered. Also, the link to the website of Caribbean University provides access to online library information services, databases, catalog, and links to the lists of the new acquisitions and the staff directory.
- **Formation of Users** – The libraries provide information literacy on different topics of identified by professors and students. These subjects are: the use of Databases, use of the Online Catalogue, and the development of writing skills: term papers, essays, monographic, bibliographies, among other.
- **Inter Library Loan** – Caribbean University maintains an ongoing collaboration with the loan service of resources as part of the Library System. The request will be processed and the user can have the resource, subject to availability.

- **Wireless Network for Internet Access** – The institution provides free wireless internet access in its facilities in Bayamon, Carolina, Vega Baja and Ponce for students, professors and community groups who own laptops, tablets or cellphones.
- **Audiovisual Unit** – This area specializes in the loan and control of equipment and audiovisual resources like cameras, videos, video cameras, DVDs, CD-ROMs, digital projectors, laptop computers and similar items, providing equipment that the academic community requires to enhance instruction. The loans are for professors and students. Due to high demand is recommended to request the equipment in advance.
- **Prints Area** – All the libraries of the Caribbean University have self-service photocopy and printing services for use of the community. This service requires the creation of an account.
- **Collections** – The Collection of printed, audiovisual and electronic media consists of an inventory of nearly 200,000 volumes. Among these, are printed and digital resources like books, journals, magazines, documents, and local and international newspapers. The audiovisual collection is composed of films, videos, CD-ROMs, DVDs, among others. Electronic journals contained in the databases are not included in the inventory of collections.

These library resources are classified according to the rules of the Dewey Decimal Classification (DDC) System and are incorporated to the online catalog for libraries (Mandarin M3). This tool allows students, faculty and administration to browse, search and identify resources that are available in the library. Searches can be performed by author, title of the resource, and subject or keyword. To use the printed and audiovisual materials, academic community should visit one of the Libraries.

Subscriptions to databases and electronic books keep collections up-dated and dynamic. The availability of remote access through the Online Library allows our academic community to evaluate and use library resources 24/7 from home, office or university campus. This alternative has been a great support for courses offered online, orientations, workshops and sharing resources through collaborative arrangements. To benefit from this service, authentication (username & password) is required.

Athletic Activities

Caribbean University is a member of the Inter-University League of Puerto Rico (LAI), participating in the following disciplines: athleticism, dance, basketball, baseball, football, weightlifting, judo, wrestling, cheerleading, table tennis and volleyball.

Students Activities

Caribbean University regards students' activities as part of the total academic program, supplemental to the individual students' programs. The University desires to contribute to the students' personal growth by encouraging participation in campus-wide activities. The University, with the students' cooperation and the assistance of student organizations, sponsors a variety of cultural, educational, social, and recreational activities that contribute in broadening the educational experience.

Services for Disabled Students

Caribbean University provides services, including federal and state services accommodations for eligible student with verified disabilities. Services for student are individually deigned, and are based on students' individual needs as identified by a specialist. The Students Affairs Office is responsible for providing assistance and for coordinating services for students with disabilities. It also collaborates with and empowers students who have disabilities in order to coordinate support services and programs that enable equal access to an education and university life. **For additional information regarding services and how to apply for reasonable accommodation, refer to Procedure for Addressing Students with Disabilities located www.caribbean.edu.**

Students Housing

Housing facilities are not available at the University. The Guidance and Counseling Office maintains a list of housing accommodations at available nearby areas to students upon request. Students in need of these services must make arrangements for housing.

Students Rights and Responsibilities

Rights

- Educate themselves and the duty to behave in a way that their behavior does not hinder the other members of the university community in exercising their rights or the performance of their duties.
- Request and receive information regarding the Vision, Mission, Goals, Objectives and accreditation of the University, the academic programs and the professor's credentials.
- Actively participate in the course of study and related activities, exchange concepts and ideas with their professors, express opinions and beliefs, doubts and differences in criteria and be informed of their failures and achievements in academic work. In addition, the student has the right to participate in the activities that are developed in the Institution that promote their personal and professional development.
- Meet with the professor at times specifically agreed, in order to request orientation and clarify aspects of his/her academic work or academic program and receive academic counseling.
- Know the exam results, tests and special work required within a reasonable period of time, preferably not more than two (2) weeks after taken or assigned.
- In the imposition of sanctions for violations of the disciplinary rules identified in Part VIII, Article I on disciplinary rules and procedures, the student will be notified of the nature of the charges, of the evidence based on the same and that they will be given the opportunity to present his/her version of the facts.
- Express in an orderly manner their opinions, beliefs, doubts and differences of criteria, as well as make recommendations through the established mechanisms.
- That their academic records be maintained in compliance with the applicable regulations under the Family Educational Rights and Privacy Acts of 1974, as amended (FERPA). With regard to the academic and disciplinary records, these will be confidential and shall be maintained separately. It may only be made available to persons outside the institution,

provided that the request is in writing, the consent of the student, or in accordance with the law.

- Request information relating to the provisions of the Federal Department of Education about the Student Right to Know and Campus Security Act.
- Receive from their professors, at the beginning of each course, an adequate orientation, in oral or written form. This includes: an explanation of the purposes and objectives of the course, study themes, readings and other work requirements; information on textbooks and other didactic means; the evaluation methods and other relevant aspects.
- Access and enjoyment of all the physical facilities, according to the rules of use.
- Request and receive information regarding available financial aid, the costs and the reimbursement policy that applies when withdrawing from class, payment plans, as well as the information regarding their duties and rights in the financial aspect.
- Participate in the Student Council election under the criteria established in this regulation and to be members of duly certified professional and student associations.

Responsibilities

- It is the responsibility of each student to familiarize themselves, to know and comply with all provisions of this regulation and all the academic and administrative policies of the University. Students are required to read the official announcements and newsletters that are published. In addition, they must observe all regulations or standard to be issued or published through circular letters, formal memoranda or other available to the institution.
- The student must show at all times the due respect and consideration for the members of the university community, so that they can fulfill their functions in an effective manner and in an atmosphere of understanding and harmony.
- The student commits to comply with the academic standards and regulations to conserve and make use of their rights.
- The student will be responsible to comply with the requirements of the course of studies and of the material explained and assigned in his absence.
- The student will be responsible for compliance with all the financial commitments that he/she has contracted with the institution.
- It is the responsibility of all students to cooperate to maintain the cleanliness in the premises of the institution.

Notification of Changes in Catalog

Caribbean University will publish addenda to the catalog each year, as needed. These addenda updates any change in the catalog such as: admission requirements, tuition and fees, programs of study, fields of study, courses, graduation requirements, rules of students conduct, and University policy. Changes will be posted on bulletin boards in all Campuses.

ACADEMIC PROGRAMS

The academic program, together with the philosophy of Caribbean University, agrees that every individual has the right to develop to his/her fullest potential, to respect human dignity and foster the desire for intellectual commitment. It is the Institution's main goal to assist and encourage students in their quest for self-realization through auto-discipline, to develop their ability to think critically, and to exercise their creative potentials.

The curriculum of each academic program is designed to provide students with the knowledge and the skills related to each specific academic discipline. The curriculum is divided into five concentration areas: general courses, core courses, concentration courses, electives, and practice for the academic program that requires it. The credit hours required for graduation vary among degrees and concentrations.

ACADEMIC DEPARTMENTS AND PROGRAM

DEPARTMENT OF LIBERAL ARTS

The Department of Liberal Arts is committed to the intellectual, academic, and social development of the student. The courses are designed to provide the student skills of scientific reasoning, logical mathematician as well as the powers to formulate, analyze, integrate, and apply knowledge.

The Department of Liberal Arts offers preparatory courses in the areas of Spanish, Mathematics and English (100) for students who were admitted under the Open Door Policy and students who earned a score less than 70% on the placement tests. Students are required to approve the preparatory courses with at least a C grade.

In addition, as part of the benefits for students newly enrolled the Department offers the course, Introduction and adjustment to university life, which is designed to assist the student in the process of acquiring the skills necessary to succeed in your role as a student. The course also seeks to develop a sense of belonging through various strategies of teaching learning and activities of University work.

DEPARTMENT OF BUSINESS ADMINISTRATION

The development and administration of business have transcended to a global level. All types of business have to create and cultivate a competitive advantage and ensure that puts in effect the basic functions of administration: plan, organize, direct and control. Our Business Administration curriculum is designed to provide the student with the intellectual, social and ethical skills and abilities needed to effectively perform any managerial and leadership position. The student is prepared to face and successfully dominate the basic and advance functional knowledge of the fundamental elements of administration as well the academic and practical expertise required of specific business careers. Our business work experience program offer the opportunity to our students to put in practice the knowledge, skills and proficiencies to manage increasingly intricate and diverse situations in both domestic and international setting. They are prepared to successfully perform in profit-oriented enterprises and not for profit organizations, both public and private.

The Department of Business Administration offers the following academic programs:

- Associate of Sciences Degree in Accounting Administration
- Associate of Sciences Degree in Management Administration
- Bachelor Degree in Business Administration
 Concentration: Accounting
 Management
 Marketing
- Bachelor Degree in Office Systems

Caribbean University has the following Admission Grade Point Average, Graduation and Concentration Grade Point Average of all the programs under this Department.

Academic Programs	Admission GPA	Graduation GPA	Concentration GPA
Associate of Sciences Degree in Accounting Administration Associate of Sciences Degree in Management Administration	Open Doors Policy (less than 2.00 GPA)	2.00	n/a
Bachelor Degree in Business Administration Concentration: Accounting Management Marketing Bachelor Degree in Office Systems	2.00	2.00	2.30

ASSOCIATE OF SCIENCES DEGREE IN ACCOUNTING ADMINISTRATION

Minimum Requirements:

33 credit hours in General Courses
 29 credit hours in Core Courses
12 credit hours Concentration Courses
 74

General Studies	Credit Hours
SPAN 101-102 Basic Course in Spanish I-II	3-3
ENGL 101-102 Basic Course in English I-II	3-3
HUMA 101-102 Study of Western Culture and Civilization I-II	3-3
SOSC 101-102 Introduction to Social Sciences I-II	3-3
MATH 101-102 Introduction to College Mathematics I-II	3-3
COSC 101 Introduction to Computer Sciences	3
 Core Courses	
ACCO 101 Mathematics of Accounting	3
ACCO 111-112 Elementary Accounting I-II	4-4
STAT 115 Elements of Statistics I	3
MANA 181 Principles of Management	3
ECON 121 Principles and Problems in Economics	3
MARK 133 Fundamentals of Marketing	3
SPAN 201 Business Communication in Spanish I	3
ENGL 201 Business Communication in English I	3
 Concentration Courses	
ACCO 201 Intermediate Accounting I	4
ACCO 202 Intermediate Accounting II	4
ACCO 203 Cost Accounting I	4

*All new students will be required to take the UNIV 100 course.

ASSOCIATE OF SCIENCES DEGREE IN MANAGEMENT ADMINISTRATION

Minimum Requirements:

33 credit hours in General Courses
 29 credit hours in Core Courses
12 credit hours in Concentration Courses
 74

General Courses	Credit Hours
SPAN 101-102 Basic Course in Spanish I-II	3-3
ENGL 101-102 Basic Course in English I-II	3-3
HUMA 101-102 Study of Western Culture and Civilization I-II	3-3
SOSC 101-102 Introduction to Social Sciences I-II	3-3
MATH 101-102 Introduction to College Mathematics I-II	3-3
COSC 101 Introduction to Computer Sciences	3
Core Courses	
ACCO 101 Mathematics of Accounting	3
ACCO 111-112 Elementary Accounting I-II	4-4
STAT 115 Elements of Statistics I	3
MANA 181 Principles of Management	3
ECON 121 Principles and Problems in Economics	3
MARK 133 Fundamentals of Marketing	3
SPAN 201 Business Communication in Spanish I	3
ENGL 201 Business Communication in English I	3
Concentration Courses	
MANA 131 Human Relations in Business	3
MANA 266 Small Business Management	3
MANA 303 Fundamentals of Production Management	3
MANA 306 Personnel Administration	3

*All new students will be required to take the UNIV 100 course.

**BACHELOR DEGREE IN BUSINESS ADMINISTRATION (BBA)
CONCENTRATION: ACCOUNTING**

Minimum Requirements:

43 credit hours in General Courses
 50 credit hours in Core Courses
 29 credit hours in Concentration Courses
 6 credit hours in Electives
 6 credit hours in Practice
 134

General Courses		Credit Hours
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SPAN 101-102	Basic Course in Spanish I-II	3-3
ENGL 101-102	Basic Course in English I-II	3-3
HUMA 101-102	Study of Western Culture and Civilization I-II	3-3
SOSC 101-102	Introduction to Social Sciences I-II	3-3
GESC 101	Fundamentals of General Sciences	4
MATH 101-102	Introduction to College Mathematics I -II	3-3
HUMA 209-210	History of Puerto Rico I-II	3-3
COSC 101	Introduction to Computer Sciences	3

Core Courses

ACCO 101	Mathematics of Accounting	3
ACCO 111-112	Elementary Accounting I-II	4-4
STAT 115-116	Elements of Statistics I-II	3-3
MANA 181	Principles of Management	3
ECON 121-122	Principles and Problems of Economics	3-3
SPAN 201-202	Business Communication in Spanish I-II	3-3
ENGL 201-202	Business Communication in English I-II	3-3
MARK 133	Fundamentals of Marketing	3
BANK 231	Money and Banking	3
MANA 131	Human Relations in Business	3
BULA 204	Business Law	3

Concentration Courses

ACCO 201-202	Intermediate Accounting I-II	4-4
ACCO 203	Cost Accounting I	4
ACCO 205	Income Tax Procedures (Puerto Rico Taxes)	3
ACCO 304	Principles of Auditing	3
ACCO 305	Federal Taxes I (U.S. Taxes)	3
ACCO 310	Advanced Accounting I	3
ACCO 381	Computer Applications in Accounting	4

Elective Courses

6

Elective courses may be taken from the other Concentrations of the Business Administration Department, if the student has already approved the prerequisites. Courses from other Departments may qualify as electives if requirements are met: (1) the course is related to the Business Administration field, (2) the prerequisites of the course has been approved, and (3) an authorization from the Business Department Head is furnished.

Practice

MANA 383 Business Work Experience 6

Total Credit Hours Required for Graduation 134

Those students interested in obtaining the certified public accountant license must have 16 additional credits for a total of 150 credits. The students must approve the following courses.

- ACCO 306 Federal Income Tax II 3
- ACCO 309 Managerial Accounting 3
- ACCO 412 Business, Ethics and Professional Responsibility
for candidate to CPA 3
- ACCO 413 Audited Financial Statements Reports 3
- ACCO 414 Accounting for non Profit Institutions 4

*All new students will be required to take the UNIV 100 course.

**BACHELOR DEGREE IN BUSINESS ADMINISTRATION (BBA)
CONCENTRATION: MANAGEMENT**

Minimum Requirements:

43 credit hours in General Courses
 50 credit hours in Core Courses
 28 credit hours in Concentration Courses
 6 credit hours in Electives
 6 credit hours in Practice
 133

General Courses		Credit Hours
SPAN 101-102	Basic Course in Spanish I-II	3-3
ENGL 101-102	Basic Course in English I-II	3-3
HUMA 101-102	Study of Western Culture and Civilization I-II	3-3
SOSC 101-102	Introduction to Social Sciences I-II	3-3
GESC 101	Fundamentals of General Sciences	4
MATH 101-102	Introduction to College Mathematics I-II	3-3
HUMA 209-210	History of Puerto Rico I-II	3-3
COSC 101	Introduction to Computer Sciences	3
Core Courses		
ACCO 101	Mathematics of Accounting	3
ACCO 111-112	Elementary Accounting I-II	4-4
STAT 115-116	Elements of Statistics I-II	3-3
MANA 181	Principles of Management	3
MARK 133	Fundamentals of Marketing	3
ECON 121-122	Principles and Problems in Economics	3-3
SPAN 201-202	Business Communication in Spanish I-II	3-3
ENGL 201-202	Business Communication in English I-II	3-3
MANA 131	Human Relations in Business	3
BULA 204	Business Law	3
BANK 231	Money and Banking	3
Concentration Courses		
MANA 266	Small Business Management	3
MANA 303	Production Management	3
MANA 306	Personnel Administration	3
MANA 308	Wages and Salary Administration	3
MANA 310	Administration in Business and Society	3
MANA 312	Labor Law and Legislation	3
MANA 324	Managerial Decision Making	3
MANA 381	Computer Application in Management	4

ACCO 309	Managerial Accounting	3
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Elective Courses		6
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Elective courses may be taken from the other Concentrations of the Business Administration Department, if the student has already approved the prerequisites. Courses from other Departments may qualify as electives if requirements are met: (1) the course is related to the Business Administration field, (2) the prerequisites of the course have been approved, and (3) an authorization from the Business Department Head is furnished.

Practice

MANA 383	Business Work Experience	6
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*All new students will be required to take the UNIV 100 course.

**BACHELOR DEGREE IN BUSINESS ADMINISTRATION (BBA)
CONCENTRATION: MARKETING**

Minimum Requirements:

43 credit hours in General Courses
 50 credit hours in Core Courses
 27 credit hours in Concentration Courses
 6 credit hours in Practice
 6 credit hours in Elective Courses
 132

General Courses		Credit Hours
SPAN 101-102	Basic Course in Spanish I - II	3-3
ENGL 101-102	Basic Course in English I - II	3-3
HUMA 101-102	Study of Western Culture and Civilization I-II	3-3
SOSC 101-102	Introduction to Social Sciences I-II	3-3
GESC 101	Fundamentals of General Sciences	4
MATH 101-102	Introduction to College Mathematics I-II	3-3
HUMA 209-210	History of Puerto Rico I-II	3-3
COSC 101	Introduction to Computer Sciences	3
Core Courses		
ACCO 101	Mathematics of Accounting	3
ACCO 111-112	Elementary Accounting I-II	4-4
STAT 115-116	Elements of Statistics I-II	3-3
MANA 181	Principles of Management	3
MARK 133	Fundamentals of Marketing	3
ECON 121-122	Principles and Problems in Economics I - II	3-3
BANK 231	Money and Banking	3
SPAN 201-202	Business Communication in Spanish I-II	3-3
ENGL 201-202	Business Communication in English I-II	3-3
MANA 131	Human Relations in Business	3
BULA 204	Business Law	3
Concentration Courses		
MARK 135	Fundamentals of Retailing	3
MARK 201	Fundamentals of Communication	3
MARK 233	Consumer Behavior	3
MARK 235	Fundamentals of Advertising	3
MARK 303	Salesmanship	3
MARK 306	Marketing Management	3

MARK 308	International Marketing	3
MARK 309	Sales Management	3
MARK 310	Marketing Research	3

Practice

MANA 383	Business Work Experience	6
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Elective Courses 6

Elective courses may be taken from the other Concentrations of the Business Administration Department, if the student has already approved the prerequisites. Courses from other Departments may qualify as electives if requirements are met: (1) the course is related to the Business Administration field, (2) the prerequisites of the course have been approved, and (3) an authorization from the Business Department Head is furnished.

*All new students will be required to take the UNIV 100 course.

BACHELOR DEGREE IN OFFICE SYSTEMS (BOS)

Minimum Requirements:

3 credit hours in Introduction and Adjustment to University Life
 40 credit hours in General Courses
 33 credit hours in Core Courses
 36 credit hours in Concentration Courses
 6 credit hours in Internship
12 credit hours in Suggested Elective Courses
 130

General Courses

Credit Hours

SPAN 101-102	Basic Course in Spanish I-II	3-3
ENGL 101-102	Basic Course in English I-II	3-3
HUMA 101-102	Study of Western Culture and Civilization I-II	3-3
SOSC 101	Introduction to Social Sciences I	3
GESC 101	Fundamentals of General Sciences	4
MATH 101-102	Introduction to College Mathematics I-II	3-3
HUMA 215	History of Puerto Rico	3
ENGL 217	Oral and Written Communication in English	3
COSC 101	Introduction to Computer Sciences	3

Core Courses

ENGL 201-202	Business Communication in English I-II	3-3
SPAN 201-202	Business Communication in Spanish I-II	3-3
OSAD 125	Elementary Keyboarding	3
ACCO 111	Elementary Accounting I	4
ACCO 101	Mathematics of Accounting	3
ECON 121	Principles and Problems in Economics	3
OSAD 113	Spanish Speedwriting Systems	4
OSAD 104	English Speedwriting-Transcription	4

Concentration Courses

OSAD 126	Documents Production I	3
OSAD 214	Spanish Transcription	3
OSAD 225	Documents Production II	3
OSAD 280	Records Management	3
OSAD 325	Office Information Systems	3
OSAD 326	Spreadsheets & Electronic Presentations	3
OSAD 380	Office Procedures and Administration	3
OSAD 424	Database & Office Publishing	3
OSAD 425	High Technology Office	3

MANA 131	Human Relations in Business	3
MANA 181	Principles of Management	3
MANA 306	Personnel Administration	3

Internship

OSAD 383	Internship in Office Administration	6
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Suggested Elective Courses

OSAD 287	Law Office Management	3
OSAD 289	Medical Office Management	3
OSAD 290	Ethics and Etiquette for Professional	3
COSC 130	Web Page Design and Implementation	3

DEPARTMENT OF ALLIED HEALTH SCIENCES

The Department of Allied Health Sciences provides the opportunity to graduate professionals in health related areas, in order to meet local needs and overall needs of the society. The Department of Allied Health Sciences has with a faculty highly qualified and selected to ensure academic excellence and the development of ethical values in their undergraduate students in General Sciences, Speech-Language Therapy and Nursing.

Students who graduate from a Bachelor's degree in General Sciences, can work in any area that involves knowledge of Sciences and also allows them to pursue doctoral studies in areas related to health, such as medicine, dentistry, optometry, pharmacy, public health, among others.

The students of Bachelor's degree in Speech - Language Therapy can work as a therapist in special populations especially with communication problems, under the coordination of a speech pathologist.

Students associated with a concentration in Nursing may complete their studies in 2 and a half years, and can work in health institutions or continue their studies leading to bachelor degree, who in turn after completing their studies are holistically trained to serve the society.

The Department of Sciences to the Allied Health offers the following academic programs:

- Associate Degree of Science in Nursing
- Bachelor Degree of Science in Nursing
- Bachelor Degree in Sciences
Concentration: General Sciences
- Bachelor Degree in Sciences
Concentration: Speech-Language Therapy

Caribbean University has the following Admission Grade Point Average, Graduation and Concentration Grade Point Average of all the programs under this Department.

Academic Programs	Admission GPA	Graduation GPA	Concentration GPA
Associate Degree of Science in Nursing	Open Doors Policy (less than 2.00 GPA)	2.00	n/a
Bachelor Degree of Science in Nursing	2.50	2.00	2.30
Bachelor Degree in Sciences Concentration: General Sciences	2.00	2.00	2.30
Bachelor Degree in Sciences Concentration: Speech-Language Therapy	2.50	2.50	2.50

ASSOCIATE DEGREE OF SCIENCE IN NURSING (ASN)

Minimum Requirements:

3 credit in Introduction and Adjustment to University Life
21 credit hours in General Courses
16 credit hours in Core Courses
36 credit hours in Concentration Courses
76

General Courses		Credit Hours
SPAN 101-102	Basic Courses in Spanish I-II	3-3
ENGL 101-102	Basic Course in English I-II	3-3
MATH 101	Introduction to College Mathematics I	3
PSYC 101	Introduction to Psychology I	3
COSC 101	Introduction to Computer Sciences	3
Core Courses		
BISC 101	Introduction to the Study of Biological Sciences I	4
BIOL 301	General Microbiology	4
CHEM 101	General Chemistry	4
BIOL 304	Human Anatomy	4
Concentration Courses		
NURS 101	Introduction to Nursing	3
NURS 102	Basic Skills in Nursing	5
NURS 103	Pharmacology in Nursing	3
NURS 205	Nursing Process within the Conception Birth and Neonatal Care	5
NURS 207	Process with Children and Adolescent	5
NURS 309	Process with Adults and the Elderly I	5
NURS 310	Mental Health and Psychiatry Nursing	5
NURS 311	Process with Adults and the Elderly II	5

Student must approve courses in Mathematics, Sciences and Concentration Courses
with a minimum grade of "C".

BACHELOR DEGREE OF SCIENCE IN NURSING (BSN)

Minimum Requirements:

3 credit in Introduction and Adjustment to University Life
36 credit hours in General Courses
27 credit hours in Core Courses
54 credit hours in Concentration Courses
9 credit hours in Practice
6 credit hours in Suggested Elective Courses
135

General Courses		Credit Hours
SPAN 101-102	Basic Course in Spanish I-II	3-3
ENGL 101-102	Basic Course in English I-II	3-3
HUMA 101-102	Study of Western Culture and Civilization I-11	3-3
PSYC 101	Introduction to Psychology I	3
COSC 101	Introduction to Computer Sciences	3
SOSC 103	Introduction to Sociology	3
SPAN 213	Oral and Written Communication in Spanish	3
MATH 101-102	Introduction to College Mathematics I-II	3-3
Core Courses		
BISC 101	Introduction to Biological Sciences I	4
BIOL 301	General Microbiology	4
CHEM 101-102	General Chemistry I-II	4-4
BIOL 304	Human Anatomy	4
BIOL 305	Human Physiology	4
STAT 117	Basic Elements of Bio-Statistics	3
Concentration Courses		
NURS 101	Introduction to Nursing	3
NURS 102	Basic Skills in Nursing	5
NURS 103	Pharmacology in Nursing	3
NURS 205	Nursing Process with Conception, Birth and Neonatal Care	5
NURS 206	Health Physical Assessment in Nursing	3
NURS 207	Process with Children and Adolescent	5
NURS 208	Principles in Research and Evaluation	3
NURS 309	Process with Adults and the Elderly I	5
NURS 310	Mental Health and Psychiatry Nursing	5
NURS 311	Process with Adults and the Elderly II	5
NURS 412	Family and Community Health	5

NURS 413	Process with Patient of Critical, Chronic and Terminal Diseases	5
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Practice

NURS 414	Practicum	9
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Suggested Elective Courses

NURS 235	Principles of Moral and Ethics in Nursing	3
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NURS 111	Communications and Leadership in Nursing	3
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Student must approve courses in Mathematics, Sciences and Concentration Courses with a minimum grade of "C".

**BACHELOR DEGREE IN SCIENCE (BS)
CONCENTRATION: GENERAL SCIENCES**

Minimum Requirements:

3 credits in Introduction and Adjustment to University Life
 36 credits hours in General Courses
 54 credits hours in Core Courses
 26 credits hours in Concentration Courses
 8 credits hours in Suggested Elective Courses
 6 credits hours in Free Elective Courses
 133

General Courses

Credit Hours

ENGL 101-102	Basic Course in English I-II	3-3
SPAN 101-102	Basic Course in Spanish I-II	3-3
HUMA 101-102	Study of Western Culture and Civilization I-II	3-3
HUMA 215	History of Puerto Rico	3
SOSC 101-102	Introduction to the Social Sciences I-II	3-3
MATH 101-102	Introduction to College Mathematics I-II	3-3
COSC 101	Introduction to Computer Sciences	3

Core Courses

ENGL 215-216	Introduction to Literature I-II	3-3
SPAN 215-216	Introduction to the Literary Genres I-II	3-3
BISC 101-102	Introduction to the Study of Biological Sciences I-II	4-4
MATH 133-134	Pre-Calculus I-II	3-3
MATH 230	Calculus I	4
CHEM 101-102	General Chemistry I-II	4-4
CHEM 201-202	Organic Chemistry I-II	4-4
PHYS 201-202	General College Physics	4-4

Concentration Course

BIOL 201	General Zoology	4
BIOL 203	Ecology	4
BIOL 301	General Microbiology	4
BIOL 304	Human Anatomy	4
BIOL 305	Human Physiology	4
BIOL 403	Genetics	4
BIOL 407	Seminar	2

Suggested Elective Courses

CHEM 301	Biochemistry	4
CHEM 317	Quantitative Chemical Analysis	4
BIOL 202	General Botany	4
BIOL 212	Cytology	4
BIOL 302	Bacteriology	4
BIOL 306	Evolution	3
BIOL 401	Embryology	4
BIOL 405	Parasitology	4
BIOL 318	Immunology	4
PHYS 301	Modern Physics	3
Free Electives		6

**BACHELOR DEGREE IN SCIENCE (BS)
CONCENTRATION: SPEECH – LANGUAGE THERAPY**

Minimum Requirements:

3 credits in Introduction and Adjustment to University Life
 45 credits hours in General Courses
 28 credits hours in Core Courses
 34 credits hours in Concentration Courses
 9 credits hours in pre practice and clinical practicum
 6 credits hours in Suggested Elective Courses
3 credits hours in free elective courses
 128

General Courses

Credit Hours

ENGL 101-102	Basic Course in English I-II	3-3
SPAN 101-102	Basic Course in Spanish I-II	3-3
HUMA 101-102	Study of Western Culture and Civilization I-II	3-3
SOSC 101-102	Introduction to the Social Sciences I-II	3-3
MATH 101-102	Introduction to College Mathematics I-II	3-3
COSC 101	Introduction to Computer Sciences	3
ENGL 217	Oral and written Communication in English	3
SPAN 213	Oral and Written Communication in Spanish	3
PSYC 101-102	Introduction to Psychology I-II	3-3

Core Courses

BISC 101-102	Introduction to the Study of Biological Sciences I-II	4-4
SPAN 215	Introduction to Literary Genres I	3
STAT 117	Basic Elements of Bio-statistics	3
EDUC 200	Human Growths, Development and Learning	3
EDUC 462	Nature and Needs of the Exceptional Child	4
SPLAT 305	Correction of Reading and writing deficiencies	3
SOWO 310	Methods and Techniques of Scientific Social Research	4

Concentration Course

SPLAT 202	Speech and Language Development	3
SPLAT 204	Anatomy and Physiology of the Speech and Hearing Mechanics	3
SPLAT 206	Speech and Language Disorders	3
SPLAT 300	Applications of Computers to Speech and Language Therapy	3
SPLAT 302	Articulation Disorders	3
SPLAT 304	Fluency Disorders	2
SPLAT 306	Hearing Disorders	3

SPLAT 308	Voice Disorders	2
SPLAT 310	Sing Language	3
SPLAT 312	Aural Rehabilitation	3
SPLAT 315	Oral Anomalies, Cranium-Facial & Neuromotor Difficulties	3
SPLAT 316	Professional Issues in Speech- Language Therapist	3

Pre Practice and Clinical Practice

SPLAT 390	Clinical Observation in Speech and Language Disorders (Pre-Practice)	3
SPLAT 489-490	Clinical Practicum in Speech and Language Disorders I-II	3-3

Suggested Electives

SPLAT 350	Early Interventions in Children & Family	3
SPLAT 351	Technological Assistance and the Speech & Language Therapist	3
SPLAT 352	Autism Spectrum Disorders	3
SPLAT 301	General Linguistic	3

Free Electives		3
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DEPARTMENT OF SOCIAL AND HUMAN SCIENCES

The Department of Social and Human Sciences offers various branches of knowledge of human behavior and social research. We have as commitment to train professionals with skills, attitudes, and values which enables them to exercise as agents of change to contribute and strengthen the development of the society.

Our mission; that the student take the responsibility of promoting respect for human dignity, ethical, intellectual development and commitment to facilitate social change.

The Department of Social and Human Sciences offers the following academic programs:

- Associate Degree of Arts in Human Services
- Associate Degree of Arts in Police Sciences
- Bachelor Degree of Arts in Social Work
- Bachelor Degree of Arts in Criminal Justice

The students will have the ability to complete studies in four components related to human behavior. The first is the Associate Degree in Human Services which aims to prepare student for two years in order to continue their studies in the Bachelor level in the area of human behavior. The Associate Degree in Police Science is aimed to train professionals who can exercise in agencies of social control.

The Bachelor of Social Work offers the theoretical frameworks, knowledge and strategies for intervention with individuals, groups, and community in the social welfare system, and human behavior. A Bachelor Degree in Criminal Justice plans to develop a specialist in the areas of prevention, rehabilitation, projection of the crime and juvenile delinquency. The latter, promotes that the student continue graduate studies through our Master's Degree in Criminal Justice.

Caribbean University has the following Admission Grade Point Average, Graduation and Concentration Grade Point Average of all the programs under this Department.

Academic Programs	Admission GPA	Graduation GPA	Concentration GPA
Associate Degree of Arts in Human Services	Open Doors Policy (less than 2.00 GPA)	2.00	n/a
Associate Degree of Arts in Police Sciences	Open Doors Policy (less than 2.00 GPA)	2.00	n/a
Bachelor Degree of Arts in Social Work	2.00	2.00	2.50
Bachelor Degree of Arts in Criminal Justice	2.00	2.00	2.30

ASSOCIATE DEGREE OF ARTS IN HUMAN SERVICES (AA)

Minimum Requirement:

3 credit in Introduction and Adjustment to University Life
39 credit hours in General Courses
12 credit hours in Core Courses
18 credit hours in Concentration Courses
72

General Courses		Credit Hours
ENGL 101-102	Basic Course in English I-II	3-3
SPAN 101-102	Basic Course in Spanish I-II	3-3
HUMA 101-102	Study of Western Culture and Civilization I-II	3-3
SOSC 101-102	Introduction to Social Sciences I-II	3-3
MATH 101	Introduction to College Mathematics I	3
COSC 101	Introduction to Computer Sciences	3
SPAN 213	Oral and Written Communication in Spanish	3
PSYC 101-102	Introduction to Psychology I -II	3-3
Core Courses		
SOSC 103	Introduction to Sociology	3
SOSC 215	Statistical Methods in Social Sciences	3
PSYC 204	Social Psychology	3
SOWO 268	Introduction to Social Work	3
Concentration Courses		
SOWO 212	Introduction to the Study of Child Abuse	3
SOWO 217	Introduction to the Study of Gerontology	3
SOWO 274	Social and Economic Problems of PR	3
SOWO 306	Social Policy and Social Welfare System	3
SOWO 350	Human Behavior in the Social Environment	3
SOWO 382	Ethics, Professional Relation and Intervention in Social Work	3

Student must approve Concentration Courses with a minimum grade of "C".

ASSOCIATE DEGREE OF ARTS IN POLICE SCIENCES (AA)

Minimum Requirements:

3 credit in Introduction and Adjustment to University Life
39 credit hours in General Courses
27 credit hours in Concentration Courses
69

General Courses		Credit Hours
ENGL 101-102	Basic Course in English I-II	3-3
SPAN 101-102	Basic Course in Spanish I-II	3-3
SOSC 101-102	Introduction to Social Sciences I-II	3-3
MATH 101	Introduction to College Mathematics I	3
COSC 101	Introduction to Computer Sciences	3
HUMA 101-102	Study of Western Culture and Civilization I-II	3-3
PSYC 101-102	Introduction to Psychology I-II	3-3
HUMA 215	History of Puerto Rico	3
Concentration Courses		
POSC 102	Introduction to the Criminal Justice System	3
POSC 109	Introduction to Criminal Investigation	3
POSC 204	Penal Law and Systems	3
POSC 207	Law of Evidence and Court Procedures	3
CRJU 216	Dealing with Alcohol and Drug Abuse	3
CRJU 301	Juvenile Delinquency and Law	3
CRJU 322	History and Interpretation of Dactiloscopia	3
CRJU 323	Classification and File of Fingerprints	3
CRJU 350	Criminal Procedure	3

BACHELOR DEGREE OF ARTS IN SOCIAL WORK (BA)

Minimum Requirements:

3 credit in Introduction and Adjustment to University Life
 52 credit hours in General Courses
 15 credit hours in Core Courses
 31 credit hours in Concentration Courses
 12 credit hours in Practice
9 credit hours in Suggested Elective Courses
 122

General Courses		Credit Hours
ENGL 101-102	Basic Course in English I-II	3-3
SPAN 101-102	Basic Course in Spanish I-II	3-3
HUMA 101-102	Study of Western Culture and Civilization I-II	3-3
SOSC 101-102	Introduction to Social Sciences I-II	3-3
GESC 101	Fundamentals General Sciences I	4
MATH 101	Introduction to College Mathematics I	3
HUMA 206	History of United States	3
HUMA 215	History of Puerto Rico	3
COSC 101	Introduction to Computer Sciences	3
ENGL 217	Oral and Written Communication in English	3
SPAN 213	Oral and Written Communication in Spanish	3
PSYC 101-102	Introduction to Psychology I-II	3-3
Core Courses		
SPAN 215	Introduction to Literary Genres I	3
SOSC 103	Introduction to Sociology	3
SOSC 215	Statistical Methods in Social Sciences	3
PSYC 204	Social Psychology	3
SOWO 268	Introduction to Social Work	3
Concentration Courses		
SOWO 274	Social and Economic Problems of Puerto Rico	3
SOWO 306	Social Policy and Social Welfare System	3
SOWO 310	Methods and Techniques of Scientific Social Research	4
SOWO 350	Human Behavior in the Social Environment	3
SOWO 352	Family as the Social System	3
SOWO 382	Ethics, Professional Relation and Intervention in Social Work	3
SOWO 490	Social Work and the Law	3

SOWO 492	Methodology in Social Work I	3
SOWO 494	Methodology in Social Work II	3
SOWO 495	Social Work with Communities and Small Groups	3

Practice

SOWO 496	Seminar and Social Work Practice I	6
SOWO 497	Social Work Practice II	6

Suggested Elective Courses

SOWO 210	Health and Human Ecology	3
SOWO 211	Introduction to the Study of Sexually Transmitted Diseases	3
SOWO 212	Introduction to the Study of Child Abuse	3
SOWO 213	Violence in the Contemporary Puerto Rican Society	3
SOWO 217	Introduction to the Study of Gerontology	3
SOWO 218	Supervision and Administration in Social Work	3
SOWO 219	Human Sexuality	3
SOWO 304	Comm. & Interv. in the Social Work	3
CRJU 301	Juvenile Delinquency and Law	3
EDUC 208	Psychological Foundations of Education	3
EDUC 200	Human Growth, Development and Learning	3
EDUC 324	Sociological Foundations of Education	3
EDUC 328	Philosophical Foundations of Education	3
POSC 102	Introduction to the Criminal Justice	3
PSYC 335	Child Psychology	3

Student must approve Concentration Courses with a minimum grade of “C”.

BACHELOR DEGREE OF ARTS IN CRIMINAL JUSTICE (BA)

Minimum Requirements:

3 credit in Introduction and Adjustment to University Life
 52 credit hours in General Courses
 9 credit hours in Core Courses
 41 credit hours in Concentration Course
 6 credit hours in Practice
12 credit hours in Suggested Elective Courses
 123

General Courses

Credit Hours

ENGL 101-102	Basic Course in English I-II	3-3
SPAN 101-102	Basic Course in Spanish I-II	3-3
HUMA 101-102	Study of Western Culture and Civilization I-II	3-3
SOSC 101-102	Introduction to Social Sciences I-II	3-3
GESC 101	Fundamentals General Sciences I	4
MATH 101	Introduction to College Mathematics I	3
HUMA 206	History of United States	3
HUMA 215	History of Puerto Rico	3
COSC 101	Introduction to Computer Sciences	3
PSYC 101-102	Introduction to Psychology I-II	3-3
ENGL 217	Oral and Written Communication in English	3
SPAN 213	Oral and Written Communication in Spanish	3

Core Courses

SPAN 215	Introduction to Literary Genres I	3
SOSC 103	Introduction to Sociology	3
SOSC 215	Statistical Methods in Social Sciences	3

Concentration Courses

POSC 102	Introduction to Criminal Justice System	3
POSC 109	Introduction to Criminal Investigation	3
POSC 204	Penal Law and System	3
POSC 207	Law of Evidence and Court Procedures	3
CRJU 216	Dealing with Alcohol and Drug Abuse	3
CRJU 301	Juvenile Delinquency and Law	3
CRJU 350	Criminal Procedure	3
CRJU 400	Civil Rights & Constitutional Law	3
CRJU 404	Criminology and the Rehabilitation Process	3
CRJU 407	Special Laws	3
CRJU 410	International Criminal Justice System	4

SOWO 310	Methods and Techniques of Scientific Social Research	4
PSYC 204	Social Psychology	3

Practice

CRJU 416	Criminal Justice Practice	6
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Suggested Elective Courses

CRJU 321	Logical and Legal Analysis	3
CRJU 322	History and Interpretation of Dactiloscropy	3
CRJU 323	Classification and File of Fingerprints	3
CRJU 327	Latent fingerprint development, classification and fingerprint file	3
CRJU 326	Forensic Photography	3
CRJU 335	Law and Society	3
CRJU 412	Controversial Issues in the Criminal Justice Systems	3
CRJU 414	The Criminal Justice System in the United States	3

DEPARTMENT OF EDUCATION

The study programs leading to a Bachelor of Arts Degree in Education have been designed to provide the students with a broad background in general education, including its philosophical, psychological, and sociological foundations and understanding of children, youngsters, and adults. It also emphasizes the necessary skills and methods, which govern the teaching-learning process.

The offerings are in charge of a faculty specializing in the disciplines mentioned above. Academic programs are directed to the formation of a quality professor that is able to effectively contribute to produce the changes that are deemed desirable in the students aware of the challenges facing education in Puerto Rico and able to cooperate in the process of change to improve the quality of life.

Practice Centers in public schools are provided for the students of the Department of Education. In these centers students develop awareness of the real experiences of the teacher in the classroom. They also have the opportunity to observe and work with the incorporation of the teaching technology.

The Department of Education offers the following academic programs:

- Bachelor of Arts in Education with concentration in Elementary Education
- Bachelor of Arts in Secondary Education with concentration:
 - Biology
 - English
 - Mathematics
- Bachelor of Arts in Education with concentration in Teaching Physical Education
- Bachelor of Arts in Education with concentration in Special Education

Under the specification of the Department of Education of Puerto Rico, Caribbean University has the following Admission Grade Point Average, Graduation and Concentration Grade Point Average of all the undergraduate education programs.

Academic Year	Admission GPA	Graduation GPA	Concentration GPA
2013-2014			
2014-2015	2.50	2.80	2.80
2015-2016			
2016-2017 hereafter	2.50	3.00	3.00

Student must approve the following Courses with a minimum grade of “B”.

- EDUC 208 - Psychological Foundations of Education
- EDUC 200 or EDUC 210 – Human Growth, Development and Learning
- EDUC 324 - Sociological Foundations of Education
- EDUC 328 - Philosophical Foundations of Education
- EDUC 336 - Evaluation and Measurement

**BACHELOR OF ARTS DEGREE IN EDUCATION (BAE)
CONCENTRATION: ELEMENTARY EDUCATION**

Minimum Requirements:

3 credits in Introduction and Adjustment to University Life
 46 credit hours in General Courses
 21 credit hours in Core Courses
 52 credit hours in Concentration Courses
6 credit hours in Free Elective Courses
 128

General Courses

Credit Hours

ENGL 101-102	Basic Course in English I-II	3-3
SPAN 101-102	Basic Course in Spanish I-II	3-3
HUMA 101-102	Western Culture and Civilization I	3-3
SOSC 101	Introduction to Social Sciences I	3
GESC 101	Fundamentals for General Sciences	4
MATH 101-102	Introduction to Colleges Mathematics I-II	3-3
HUMA 215	History of Puerto Rico	3
HUMA 206	History of United States	3
COSC 101	Introduction to Computer Sciences	3
ENGL 217	Oral and Written Communication in English	3
SPAN 213	Oral and Written Communication in Spanish	3

Core Courses

ENGL 215	Introduction to Literature I	3
SPAN 215	Introduction to Literary Genres I	3
EDUC 208	Psychological Foundations of Education	3
EDUC 200	Human Growth, Development and Learning	3
EDUC 324	Sociological Foundations of Education	3
EDUC 328	Philosophical Foundations of Education	3
COSC 221	Application of Computers in Education	3

Concentration Courses

EDUC 205	Teaching the Fine Arts	3
EDUC 225	Development of Critical Thinking Skills	3
EDUC 241	Health and Physical Education in Elementary School	3
EDUC 401	Methods and Techniques in the Teaching of English in Elementary School	3
EDUC 405	Methods in reading and Writing in the Elementary School	3

EDUC 402	Methods and Techniques in the Teaching of Social Studies in Elementary School	3
EDUC 306	Children Literature	3
EDUC 336	Evaluation and Measurement	3
EDUC 354	Diagnosis and Correction of Reading Deficiencies	3
EDUC 349	Grammar and Composition in Elementary School	3
EDUC 462	Nature and Needs of the Exceptional Children	4
EDUC 371	Workshop in Educational Technology	3
EDUC 403	Methods and Techniques in the Teaching Mathematics in the Elementary School	3
EDUC 404	Methods and Techniques in the Teaching of Sciences in Elementary School	3
EDUC 413	Pre-Teaching Practice Methods, Strategies and School Laws	3
EDUC 429	Teaching Practice in Elementary Education	6
Free Elective Courses		6

**BACHELOR OF ARTS DEGREE IN SECONDARY EDUCATION (BASE)
CONCENTRATION: BIOLOGY**

Minimum Requirements:

3 credits in Introduction and Adjustment to University Life
 50 credit hours in General Courses
 31 credit hours in Core Courses
 47 credit hours in Concentration Courses
6 credit hours in Free Elective Courses
 137

General Courses

Credit Hours

ENGL 101-102	Basic Course in English I-II	3-3
SPAN 101-102	Basic Course in Spanish I-II	3-3
HUMA 101-102	Study of Western Culture and Civilization I-II	3-3
SOSC 101	Introduction to Social Sciences I	3
BISC 101-102	Introduction to the Study of Biological Sciences I-II	4-4
MATH 101-102	Introduction to College Mathematics I-II	3-3
HUMA 215	History of Puerto Rico	3
HUMA 206	History of United States	3
COSC 101	Introduction to Computer Sciences	3
ENGL 217	Oral and Written Communication in English	3
SPAN 213	Oral and Written Communication in Spanish	3

Core Courses

ENGL 215	Introduction to Literature I	3
SPAN 215	Introduction to Literary Genres I	3
EDUC 208	Psychological Foundations of Education	3
EDUC 200	Human Growth, Development and Learning	3
EDUC 324	Sociological Foundation of Education	3
EDUC 328	Philosophical Foundations of Education	3
EDUC 462	Nature and Needs of Exceptional Children	4
COSC 221	Application of Computers in Education	3
MATH 133-134	Pre-Calculus I-II	3-3

Concentration Courses

BIOL 201	General Zoology	4
BIOL 202	General Botany	4
BIOL 301	General Microbiology	4
BIOL 306	Evolution	3
BIOL 403	Genetics	4

CHEM 101	General Chemistry I	4
PHYS 101	Introduction to the Study of Physical Sciences	3
EDUC 225	Development of Critical Thinking Skills	3
EDUC 336	Evaluation and Measurement	3
EDUC 371	Workshop in Educational Technology	3
EDUC 412	Methods in the Teaching of Biology in the Secondary School	3
EDUC 422	Pre-Teaching Practice in Methods and Techniques in the Secondary School	3
EDUC 433	Teaching Practice in Secondary School	6
Free Elective Courses		6

**BACHELOR OF ARTS DEGREE IN SECONDARY EDUCATION (BASE)
CONCENTRATION: ENGLISH**

Minimum Requirements:

3 credits in Introduction and Adjustment to University Life
 46 credit hours in General Courses
 24 credit hours in Core Courses
 49 credit hours in Concentration Courses
 6 credit hours in Free Elective Courses
 128

General Courses		Credit Hours
ENGL 101-102	Basic Course in English I-II	3-3
SPAN 101-102	Basic Course in Spanish I-II	3-3
HUMA 101-102	Study of Western Culture and Civilization I-II	3-3
SOSC 101	Introduction to Social Sciences I	3
GESC 101	Fundamentals of General Sciences	4
MATH 101-102	Introduction to College Mathematics I-II	3-3
HUMA 215	History of Puerto Rico	3
HUMA 206	History of United States	3
COSC 101	Introduction to Computer Sciences	3
SPAN 213	Oral and Written Communication in Spanish	3
ENGL 217	Oral and Written Communication in English	3
Core Courses		
ENGL 215-216	Introduction to Literature I-II	3-3
SPAN 215	Introduction to Literary Genres I	3
EDUC 208	History, Philosophy and Foundations in Education	3
EDUC 200	Human, Growth, Development and Learning	3
EDUC 324	Sociological Foundation of Education	3
EDUC 328	Philosophical Foundations of Education	3
COSC 221	Application of Computers in Education	3
Concentration Courses		
ENGL 220	Literature for Adolescents	3
ENGL 222	Comparative Analysis of English and Spanish	3
ENGL 301	Advanced Composition and Writing	3
ENGL 303	Phonetics	3
ENGL 319	Advanced Grammar	3
ENGL 309	The English Novel	3
ENGL 314	Analysis of Literary Genres	3

ENGL 315	Linguistics	3
EDUC 225	Development of Critical Thinking Skills	3
EDUC 336	Evaluation and Measurement	3
EDUC 371	Workshop in Educational Technology	3
EDUC 414	Curriculum and Methods for the Teaching of English in Secondary School	3
EDUC 422	Pre-Teaching Practice in Methods Techniques and School Laws in the Secondary School	3
EDUC 433	Teaching Practice in Secondary School	6
EDUC 462	Nature and Needs of Exceptional Children	4
Free Elective Courses		6

**BACHELOR OF ARTS DEGREE IN SECONDARY EDUCATION (BASE)
CONCENTRATION: MATHEMATICS**

Minimum Requirements:

3 credits in Introduction and Adjustment to University Life
 46 credit hours in General Courses
 21 credit hours in Core Courses
 54 credit hours in Concentration Courses
 6 credit hours in Free Elective Courses
 130

General Courses		Credit Hours
ENGL 101-102	Basic Course in English I-II	3-3
SPAN 101-102	Basic Course in Spanish I-II	3-3
HUMA 101-102	Study of Western Culture and Civilization I-I	3-3
SOSC 101	Introduction to Social Sciences I	3
GESC 101	Fundamentals of General Sciences	4
MATH 101-102	Introduction to College Mathematics I-II	3-3
HUMA 215	History of Puerto Rico	3
HUMA 206	History of United States	3
COSC 101	Introduction to Computer Sciences	3
ENGL 217	Oral and Written Communication in English	3
SPAN 213	Oral and Written Communication in Spanish	3
 Core Courses		
ENGL 215	Introduction to Literature I	3
SPAN 215	Introduction to Literary Genres I	3
EDUC 208	Psychological Foundations of Education	3
EDUC 200	Human, Growth, Development and Learning	3
EDUC 324	Sociological Foundation of Education	3
EDUC 328	Philosophical Foundations in Education	3
COSC 221	Application of Computers in Education	3
 Concentration Courses		
MATH 120	Geometry	3
MATH 133-134	Pre-Calculus I-II	3-3
MATH 230	Calculus I	4
MATH 232	Calculus II	4
MATH 303	Theory of Numbers	3
MATH 309	Lineal Algebra	3
MATH 340	Algebraic Structures	3
MATH 319	Introduction to Probability and --Statistics	3

EDUC 225	Development of Critical Thinking Skills	3
EDUC 336	Evaluation and Measurement	3
EDUC 371	Workshop in Educational Technology	3
EDUC 418	Curriculum and Methods in Teaching Mathematics in Secondary School	3
EDUC 422	Pre-Teaching Practice in Methods and Techniques in the Secondary School	3
EDUC 433	Teaching Practice in Secondary School	6
EDUC 462	Nature and Needs of Exceptional Children	4
Free Elective Courses		6

**BACHELOR OF ARTS IN EDUCATION
CONCENTRATION: TEACHING PHYSICAL EDUCATION
(LEVEL K-6)**

Minimum Requirements:

3 credits in Introduction and Adjustment to University Life
 37 credit hours in General Courses
 26 credit hours in Core Courses
 63 credit hours in Concentration Courses
 9 credit hours in Elective
138

General Courses

Credit Hours

BISC 101	Introduction to the Study of Biological Sciences	4
COSC 101	Introduction to Computer Sciences	3
SPAN 101-102	Basic Course in Spanish I-II	3
ENGL 101-102	Basic Course in English I-II	3-3
HUMA 101-102	Study of Western Culture and Civilization I-II	3-3
SOSC 101-102	Introduction to Social Sciences I-II	3-3
MATH 101	Introduction to College Mathematics I	3
HUMA 206	History of United States	3
HUMA 209	History of Puerto Rico	3

Core Courses

BIOL 103	Principles of Human Anatomy and Physiology	4
COSC 221	Application of Computers in Education	3
EDUC 208	Psychological Foundations of Education	3
EDUC 210	Human Growth, Development and Learning	3
EDUC 324	Sociological Foundations of Education	3
EDUC 328	Philosophical Foundations of Education	3
EDUC 336	Evaluation and Measurement	3
EDUC 462	Nature and Need for Exceptional Child with Technology Assistance	4

Concentration Courses

ERDEF 201	Vigorous Human Movement I – Fundamental Movements	3
ERDEF 202	Vigorous Human Movement II- Precision	3
ERDEF 203	Vigorous Human Movement II- Strike and Field	3
ERDEF 204	Vigorous Human Movement IV- Net or Wall	3
ERDEF 205	Vigorous Human Movement V – Invasion Groups	3
ERDEF 206	Vigorous Human Movement VI – Measurement & Marks	3
ERDEF 207	Vigorous Human Movement VII – Risk and Ecological Adventure	3
ERDEF 209	Physical Activity for the well-being and the physical benefit	3
ERDEF 211	Physical Developments and Motor Learning	3
ERDEF 216	Physical Education for Youths with Special Needs	3
ERDEF 312	Anatomy and Kinesiology Related to Vigorous Movement	3
ERDEF 313	Physiology of Human Movement	3
ERDEF 315	Socialization and Development of the Character In Experience of Movement	3
ERDEF 317	Evaluation, Investigation and Physical Education	3
ERDEF 318	Legal Management and Aspects in the Physical Education Recreation and Sports	3
ERDEF 320	Rate, Corporal Expression and Formative Gymnastics	3
ERDEF 329	Pre-Intern in Physical Education	3
ERDEF 410	Program Design of Physical Education K-6 Level	3
ERDEF 412	Methodology of K-6 Education	3
ERDEF 490	Educational Practice in the Education of the Physical Education K-6 Level	6

Elective Courses

9

Elective courses may be taken from the other Concentrations of the Physical Educational Department, if the student has already approved the prerequisites. Courses from other Departments may qualify as electives if requirements are met: (1) the course is related to the Educational field, (2) the prerequisites of the course have been approved, and (3) an authorization from the Educational Department Head.

**BACHELOR OF ARTS IN EDUCATION
CONCENTRATION: TEACHING PHYSICAL EDUCATION
(LEVEL 7-12)**

Minimum Requirements:

3 credits in Introduction and Adjustment to University Life
 37 credit hours in General Courses
 26 credit hours in Core Courses
 69 credit hours in Concentration Courses
3 credit hours in Elective
 138

General Courses		Credit Hours
BISC 101	Introduction to the Study of Biological Sciences	4
SPAN 101-102	Basic Course in Spanish I-II	3-3
ENGL 101-102	Basic Course in English I-II	3-3
HUMA 101-102	Study of Western Culture and Civilization I-II	3-3
SOSC 101-102	Introduction to Social Sciences I-II	3-3
HUMA 206	History of United States	3
HUMA 209	History of Puerto Rico I	3
COSC 101	Introduction to Computer Sciences	3
MATH 101	Introduction to College Mathematics I	3
 Core Courses		
BIOL 103	Principles of Human Anatomy and Physiology	4
COSC 221	Application of Computers in Education	3
EDUC 208	Psychological Foundations of Education	3
EDUC 210	Human Growth, Development and Learning	3
EDUC 324	Social Foundations of Education	3
EDUC 328	Philosophical Foundations of Education	3
EDUC 336	Evaluation and Measurement	3
EDUC 462	Nature and Need for Exceptional Child with Technology Assistance	4
 Concentration Courses		
ERDEF 201	Vigorous Human Movement I – Fundamental Movements	3
ERDEF 202	Vigorous Human Movement II- Precision	3
ERDEF 204	Vigorous Human Movement IV- Net or Wall	3
ERDEF 205	Vigorous Human Movement V – Invasion Groups	3
ERDEF 206	Vigorous Human Movement VI – Measurement	3

	& Marks	
ERDEF 207	Vigorous Human Movement VII – Risk and Ecological Adventure	3
ERDEF 209	Physical Activity for the well-being and the physical Benefit	3
ERDEF 210	Development of Programs Vigorous Movement	3
ERDEF 211	Physical Development and Motor Learning	3
ERDEF 216	Physical Education for Youths with Special Needs	3
ERDEF 312	Anatomy and Kinesiology Related to Vigorous Movement	3
ERDEF 313	Physiology of Human Movement	3
ERDEF 315	Socialization and Development of the Character in Experience of Movement	3
ERDEF 317	Evaluation, Investigation and Physical Education	3
ERDEF 318	Legal Management and Aspects in the Physical Education Recreation and Sports	3
ERDEF 319	Ludic Experience in the Child’s Educational Process	3
ERDEF 321	Principles of Arbitration	3
ERDEF 322	Sport Development Process	3
ERDEF 329	Pre-Intern in Physical Education	3
ERDEF 411	Design of Programs of Physical Education	3
ERDEF 413	Methodology of Education 7-12	3
ERDEF 491	Educational Practice in Physical Education Level 7-12	6

Elective Courses 3

Elective courses may be taken from the other Concentrations of the Physical Educational Department, if the student has already approved the prerequisites. Courses from other Departments may qualify as electives if requirements are met: (1) the course is related to the Educational field, (2) the prerequisites of the course have been approved, and (3) an authorization from the Educational Department Head.

**BACHELOR OF ARTS IN EDUCATION
CONCENTRATION: SPECIAL EDUCATION**

Minimum Requirements:

46 credit hours in General Courses
 27 credit hours in Core Courses
 52 credit hours in Concentration Courses
6 credit hours in Elective Courses
 131

General Courses

Credit Hours

ENGL 101-102	Basic Course in English I-II	3-3
SPAN 101-102	Basic Course in Spanish I-II	3-3
HUMA 101-102	Study of Western Culture and Civilization I-II	3-3
SOSC 101-102	Introduction to Social Sciences I-II	3-3
GESC 101	Fundamentals of General Sciences	4
MATH 101-102	Introduction to College Mathematics I-II	3-3
HUMA 209-210	History of Puerto Rico I-II	3-3
HUMA 206	History of United States	3
COSC 101	Introduction to Computer Sciences	3

Core Courses

ENGL 215-216	Introduction to Literature I-II	3-3
SPAN 215-216	Introduction to Literary Genres I-II	3-3
EDUC 208	Psychological Foundation of Education	3
EDUC 210	Human Growth, Development and Learning	3
EDUC 324	Sociological Foundation of Education	3
EDUC 328	Philosophical Foundation of Education	3
COSC 221	Application of Computers in Education	3

Concentration Courses

EDUC 205	Teaching the Fine Arts	3
EDUC 241	Teaching Health Physical Education in Elementary School	3
EDUC 400	Methods in reading and Writing in the Elementary School	3
EDUC 410	Methodology and in the Curriculum Teaching of Mildly Handicapped	3
EDUC 309	Special Education for Pre-School Children	3
EDUC 336	Evaluation and Measurement	3
EDUC 353	Nature and Needs of the Mildly -Handicapped Child	3

EDUC 359	Neurological and Sensorial Functions and its Implications in Education	3
EDUC 367	Physical Education and Recreation for Children with Impediments	3
EDUC 371	Workshop in Educational Technology	3
EDUC 375	Remedial Procedures for the Correction of Children with Specific Learning Disabilities	3
EDUC 376	Evaluation and Measurement Techniques in the Teaching of the Middy Handicapped Child	3
EDUC 390	Parents Involvement and Legal Aspect in Special Education	3
EDUC 415	Pre-internship in Methods and Techniques in Special Education	3
EDUC 431	Internship in Special Education	6
EDUC 462	Nature and Needs of Exceptional Children	4
Elective Courses		6
EDUC 225	Development of Critical Thinking Skills	3
EDUC 402	Social Studies in Elementary School	3
EDUC 403	Seminar on Mathematics in Elementary School	3
EDUC 404	Seminar on Curriculum and Methods in Teaching of Sciences in Elementary Schools	3

DEPARTMENT OF ENGINEERING AND INFORMATICS TECHNOLOGY

Philosophy and Objectives

The philosophy and goals of the Department of Engineering and Informatics Technology follows the philosophy of Caribbean University included in the General Information Chapter of this Catalog.

Goals

The Institution will develop new academic programs to serve traditional university expectations as well as comprehensively addressing new emerging demands of the community and society at large. The programs in the department contribute to the academic and scholastic excellence at all levels.

The department of engineering and informatics technology offers a two and a half years associate of Science Degree in Drafting and Engineering Technology ; a two years associate of science degree in computer programming; a five years bachelor of science degree in Civil Engineering; a five years bachelor of science degree in Electrical Engineering; a five years bachelor of science degree in Industrial Engineering; a four years bachelor of science degree in computer science Concentration on Computing Programming. The programs are offered in both, Bayamon and Ponce campuses, with exception of the Bachelor of Science degree in computer programming, which is offered only at Bayamon campus.

The department primary goal is to improved student learning and growth by providing all students with cost effective, high quality education and a meaningful growth experience while attending Caribbean University.

The Department of Engineering and Informatics Technology have the following primary objectives:

- To provide students with state-of-the-art engineering and computing study programs.
- To develop and maintain a highly qualified and motivated instructional staff.
- To deliver to the job market and society in general, a well-rounded and highly motivated professional, with the ability to function and assume leadership positions in an ever-changing society and workplace.
- To prepare highly competent professional personnel.

The Department of Engineering offers the following academic programs:

- Associate of Science Degree in Drafting and Engineering Technology
- Associate of Sciences Degree in Computer Programming
- Bachelor of Science Degree in Civil Engineering
- Bachelor of Science Degree in Electrical Engineering
- Bachelor of Science Degree in Industrial Engineering
- Bachelor of Science Degree in Computer
Concentration: Computer Programming

Caribbean University has the following Admission Grade Point Average, Graduation and Concentration Grade Point Average of all the programs under this Department.

Academic Programs	Admission GPA	Graduation GPA	Concentration GPA
Associate of Science Degree in Drafting and Engineering Technology	Open Doors Policy (less than 2.00 GPA)	2.00	n/a
Associate of Sciences Degree in Computer Programming	Open Doors Policy (less than 2.00 GPA)	2.00	n/a
Bachelor of Science Degree in Civil Engineering	2.50	2.50	2.50
Bachelor of Science Degree in Electrical Engineering	2.50	2.50	2.50
Bachelor of Science Degree in Industrial Engineering	2.50	2.50	2.50
Bachelor of Science Degree in Computer Concentration: Computer Programming	2.00	2.00	2.30

ASSOCIATE DEGREE PROGRAMS

Associate of Science Degree in Drafting and Engineering Technology

The Associate of Science Degree in Drafting and Engineering Technology has been designed to provide the students with the basic concepts and skills in the field of drafting and other Engineering Technology related areas. The courses include mathematics, technical and construction drawing, surveying and construction.

The Associate of Science in Engineering Technology has three areas of emphasis:

- Drafting
- Surveying
- Building Constructions

Objectives:

A few years after graduation, graduates of the Associate of sciences in Engineering Technology - Drafting from Caribbean University will:

1. Acquire the necessary mathematical concepts and skills in drafting and knowledge in basic surveying.
2. Acquaint the students with the various mathematical problems in technical drawing.
3. Develop the ability to work as a technician in engineering related fields.
4. Develop responsibility and awareness of the importance of their assistance to architects, engineers and surveyors.

**ASSOCIATE OF SCIENCES DEGREE
IN DRAFTING AND ENGINEERING TECHNOLOGY (AS)**

Minimum Requirements:

3 credit hours in Introduction and Adjustment to University Life
24 credit hours in General Courses
10 credit hours in Core Courses
43 credit hours in Concentration Courses
80

General Courses

Credit Hours

ENGL 101-102	Basic Course in English I-II	3-3
SPAN 101-102	Basic Courses in Spanish I-II	3-3
MATH 101-102	Introduction to College Mathematics I-II	3-3
COSC 101	Introduction to Computer Sciences	3
SOSC 101	Introduction to Social Sciences I	3

Core Courses

MATH 133-134	Pre-Calculus I-II	3-3
CHEM 101	General Chemistry I	4

Concentration Courses

GEEN 104	Engineering Drawing	3
GEEN 105	Engineering Graphics and Design	3
GEEN 106	Computer Graphics and Design I	3
GEEN 108	Computer Graphics and Design II	3
CIEN 311	Elementary Surveying	3
CIEN 312	Advanced Surveying	3
ENTE 102	Construction Materials	3
ENTE 323	Building Construction Drawing I	4
ENTE 325	Building Construction Practice I	3
ENTE 330	Drawing Presentation Techniques	4
ENTE 334	Building Construction Drawing II	4
ENTE 336	Building Construction & Inspection Practice II	4
ENTE 346	Building Construction and Specifications	3

Associate of Sciences Degree in Computer Programming

The Associate of Sciences Degree in Computer Programming has been designed to provide the students with the basic concepts and skills in the field of computer programming and other computer Technology related areas. The courses include mathematics, programming languages, data structures, database, program web applications, repairmen principles, and business, commercial and educational applications. The Associate of Science in Computer Technology has two areas of emphasis:

- Programming Language
- Data Base

Objectives:

The program intends to achieve five basic objectives:

1. To prepare students who Concentration in computer sciences for an entry level position in industry and science careers.
2. To appraise students career opportunities and options available as a result of their training.
3. Develop the ability to work as a technician in computing related fields.
4. Develop in the student a practice where he or she accepts challenges in acquiring mastery of innovative methods in the computational field of study.
5. Provide the student with the latest versions of computer applications in order to be vanguard with the requirements of today's competitive job market and integrate telecommunications as a vital means for professional development.

ASSOCIATE OF SCIENCE DEGREE IN COMPUTER PROGRAMMING (AS)

Minimum Requirements:

3 credit hours in Introduction and Adjustment to University Life
30 credit hours in General Courses
10 credit hours in Core Courses
 $\frac{27}{70}$ credit hours in Concentration Courses

General Courses		Credit Hours
ENGL 101-102	Basic Course in English I-II	3-3
MATH 101-102	Introduction to College Mathematics I-II	3-3
SPAN 101-102	Basic Courses in Spanish I-II	3-3
HUMA 101-102	Study of Western Culture and Civilization I-II	3-3
SOSC 101	Introduction to Social Science I	3
COSC 101	Introduction to Computer Sciences	3
Core Courses		
ACCO 111	Elementary Accounting I	4
COSC 112	Microcomputer Application in Business	3
COSC 115	Fundamentals of Programming Logic	3
Concentration Courses		
COSC 204	C Language and Programming	3
COSC 207	Visual Basic I	3
COSC 206	Data Base of Management	3
COSC 210	Operating System	3
COSC 231	Basic Principles of Repairment and Maintenance of Computer	3
COSC 272	JAVA Programming	3
COSC 215	Web Page Design and Implementation	3
COSC 307	Systems Analysis and Design I	3
COSC 315	Networks and Computing Center	3

BACHELOR DEGREE PROGRAMS

Bachelor of Science Degree in Civil Engineering

The civil engineer transforms our environment through design, construction, maintenance and inspection of infrastructure to provide the community with civil works that meet its needs in an ethical, sustainable and cost-effective manner. The courses include an educational program of technical depth and breadth as well as a broad liberal education.

The Bachelor of Science in Civil Engineering has four areas of emphasis:

- Design and analysis of structures
- Systems and transport ways
- Water treatment and resources
- Soil mechanics

Mission

Civil Engineering joins the mission of the university, which is committed to the principle of accessibility with the most disadvantaged, comprehensiveness in its offerings, and adaptability to satisfy the needs of the community served. The Institution is also committed to the development of intellect and social ethics. In addition, it accepts the responsibility of fostering among its students respect for human dignity and their personal commitment towards improving society.

Program Educational Objectives:

A few years after graduation, graduates of the bachelor of sciences in Civil Engineering from Caribbean University will:

1. Evaluate, analyze, design, develop or make decisions over CE projects by considering safety standards, codes, regulations, ethics, resource optimization, costs and available technology within environmental, economic, social and political contexts.
2. Communicate effectively in both English and Spanish, and work in diverse, global and multidisciplinary teams.
3. Extend their learning process through lifelong professional development or other graduate education.
4. Become leaders in their profession and be involved in professional state board and associations.

Student Outcomes

It is expected that by the time of graduation, our students will have:

- a. an ability to apply knowledge of mathematics, science and engineering
- b. an ability to design and conduct experiments, as well as to analyze and interpret data

- c. an ability to design a system, component, or process to meet desired need within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- d. an ability to function on multidisciplinary teams
- e. an ability to identify, formulate, and solve engineering problems
- f. an understanding of professional and ethical responsibility
- g. an ability to communicate effectively
- h. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- i. a recognition of the need for, and an ability to engage in life-long learning
- j. a knowledge of contemporary issues
- k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

BACHELOR OF SCIENCES DEGREE IN CIVIL ENGINEERING (BSCE)

Minimum Requirements:

3	Introduction to Educational Academic and Personal Adjustment to College Environment
27	credit hours in General Courses
49	credit hours in Core Courses
25	credit hours in General Engineering
62	credit hours in Concentration Courses
<u>12</u>	credit hours in Suggested Elective Courses
178	

General Courses

Credit Hours

ENGL 101-102	Basic Course in English I-II	3-3
ENGL 217	Oral and Written Communication in English	3
SPAN 101-102	Basic Course in Spanish I-II	3-3
COSC 101	Introduction to Computer Sciences	3
ELECT SH	Socio Humanistic Electives	9

Core Courses

ECON 121	Principles and Problems of Economics	3
CHEM 101-102	General Chemistry I-II	4-4
MATH 133-134	Pre-Calculus I-II	3-3
MATH 230-232	Calculus I-II	4-4
MATH 302	Calculus III	4
MATH 304	Differential Equations	3
PHYS 201-202	General College Physics I-II	4-4
MATH 319	Introduction to Probability & Statistics	3
GEEN 245	Ethics in Engineering	3
COSC 204	C Language and Programming	3

General Engineering Courses

GEEN 104	Engineering Drawing	3
GEEN 105	Engineering Graphics and Design	3
GEEN 212	Engineering Static	3
GEEN 213	Engineering Dynamics	3
GEEN 221	Mathematical Methods for Engineering	3
INEN 323	Engineering Economy	3
ELEN 310	Electrical Circuits Analysis I	4
MEEN 302	Thermodynamics for Engineers	3

Concentration Courses

CIEN 301-302	Strength of Materials I-II	3-3
CIEN 303-421	Structural Analysis I-II	4-4
CIEN 311	Elementary Surveying	3
CIEN 312	Advanced Surveying	3
CIEN 313	Materials for Engineers	4
CIEN 322	Fluids Mechanics	4
CIEN 401	Design of Steel Structures	4
CIEN 402	Reinforced Concrete Design	4
CIEN 411	Curve Design and Highway Location	3
CIEN 412	Highway Engineering	3
CIEN 426	Fundamental of Environmental Engineering	3
CIEN 427	Water Treatment and Pollution Control	4
CIEN 432	Fundamentals of Geology and Soil Mechanics I	3
CIEN 433	Soil Mechanics II	4
CIEN 481	Civil Engineering Capstone I	3
CIEN 482	Civil Engineering Capstone II	3

Suggested Elective Courses

GEEN 106	Computer Graphics and Design I	3
GEEN 108	Computer Graphics and Design II	3
GEEN 310	Engineering Undergraduate Research	3
GEEN 356	Lecture of Construction Documents	3
ENTE 346	Building Construction and Specification	3
ENTE 336	Building Construction and Inspection Practice	4
CIEN 400	City Planning Principles	3
CIEN 405	Introduction to Hydrology	3
CIEN 410	Air Pollution Control	3
CIEN 415	Principles of Hydraulics	3
CIEN 420	Pre-Stressed Concrete Design	3
CIEN 425	Fundamentals of Bridge Design	3
CIEN 430	Matrix Methods of Structural Analysis	3
CIEN 436	Construction Management	3
CIEN 445	Legal Aspects of Engineering	3
CIEN 495	Civil Engineering Practice	3

OR INEN OR ELEN COURSES WITH THE COORDINATOR OR DIRECTOR'S APPROVAL

All engineering, mathematics and science courses must be approved with a grade of C or better.

Bachelor of Science Degree in Electrical Engineering

The electrical engineer studies, designs and monitors systems and / or equipment in the areas of power, communications, controls and computers to provide the community engineering works to meet its needs in an ethical, sustainable and cost-effective manner.

The Bachelor of Science in Electrical Engineering has four areas of emphasis:

- Power systems
- Communications
- Control systems
- Computers

Mission

Electrical Engineering joins the mission of the university, which is committed to the principle of accessibility with the most disadvantaged, comprehensiveness in its offerings, and adaptability to satisfy the needs of the community served. The Institution is also committed to the development of intellect and social ethics. In addition, it accepts the responsibility of fostering among its students respect for human dignity and their personal commitment towards improving society. The courses include an educational program of technical depth and breadth as well as a broad liberal education.

Program Educational Objectives:

A few years after graduation, graduates of the bachelor of sciences in Electrical Engineering from Caribbean University will:

1. Demonstrate their knowledge and depth of understanding for the analysis and design principles of electrical and electronic systems.
2. Analyze, design and manage EE projects by considering, safety standards, codes, regulations, resource optimization, costs, available modern technology within environmental, economic, social and political constraints.
3. Communicate effectively, oral and written, in both English and Spanish, and work in diverse, global and multidisciplinary environments.
4. Able to adapt to technological and social changes to remain relevant to their EE profession.

Student Outcomes

It is expected that by the time of graduation, our students will have:

- a. an ability to apply knowledge of mathematics, science and engineering
- b. an ability to design and conduct experiments, as well as to analyze and interpret data
- c. an ability to design a system, component, or process to meet desired need within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- d. an ability to function on multidisciplinary teams

- e. an ability to identify, formulate, and solve engineering problems
- f. an understanding of professional and ethical responsibility
- g. an ability to communicate effectively
- h. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- i. a recognition of the need for, and an ability to engage in life-long learning
- j. a knowledge of contemporary issues
- k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

BACHELOR OF SCIENCES DEGREE IN ELECTRICAL ENGINEERING (BSEE)

Minimum Requirements:

3	Introduction to Educational Academic and Personal Adjustment to College Environment
27	credit hours in General Courses
49	credit hours in Core Courses
28	credit hours in General Engineering
56	credit hours in Concentration Courses
<u>14</u>	credit hours in Suggested Elective Courses
177	

General Courses

Credit Hours

ENGL 101-102	Basic Course in English I-II	3-3
ENGL 217	Oral and Written Communication in English	3
SPAN 101-102	Basic Course in Spanish I-II	3-3
COSC 101	Introduction to Computer Sciences	3
ELECT SH	Socio Humanistic Electives	9

Core Courses

ECON 121	Principles and Problems of Economics	3
CHEM 101-102	General Chemistry I-II	4-4
MATH 133-134	Pre-Calculus I-II	3-3
MATH 230-232	Calculus I-II	4-4
MATH 302	Calculus III	4
MATH 304	Differential Equations	3
PHYS 201-202	General College Physics I-II	4-4
MATH 319	Introduction to Probability & Statistics	3
GEEN 245	Ethics in Engineering	3
COSC 204	C Language and Programming	3

General Engineering Courses

GEEN 104	Engineering Drawing	3
GEEN 106	Computer Graphics and Design I	3
GEEN 212	Engineering Static's	3
GEEN 213	Engineering Dynamics	3
CIEN 313	Materials for Engineers	4
GEEN 221	Mathematical Methods for Engineering	3
INEN 323	Engineering Economy	3
INEN 415	Industrial Safety	3
MEEN 302	Thermodynamics for Engineers	3

Concentration Courses

ELEN 310	Electrical Circuit Analysis I	4
ELEN 311	Electrical Circuit Analysis II	4
ELEN 340	Electronics Engineering I	4
ELEN 401	Electronics Engineering II	4
ELEN 350	Logic Circuits I	4
ELEN 405	Electromagnetics I	3
ELEN 406	Electromagnetics II	3
ELEN 410	Electrical Machines	4
ELEN 412	Communications Engineering	4
ELEN 418	Microprocessors	4
ELEN 415	Electric Power Transmission System Engineering	4
ELEN 420	Control Engineering	4
ELEN 430	Electrical Installation Design	4
ELEN 481	Electrical Engineering Capstone I	3
ELEN 482	Electrical Engineering Capstone II	3

Suggested Elective Courses

GEEN 108	Computer Graphic & Design II	3
GEEN 310	Engineering Undergraduate Research	3
ELEN 403	Logic Circuits II	4
ELEN 416	Electric Power Systems Protection Design	4
ELEN 417	Industrial Electronics Design	4
ELEN 419	Advanced Microprocessor	4
ELEN 422	Digital Signal Processing	4
ELEN 425	Digital Control Systems	4
ELEN 426	Fiber Optics Communications	4
ELEN 432	Electrical Power Distribution Systems	4
ELEN 433	Computer Aided Control System Design	4
ELEN 434	Power Plant	4
ELEN 435	Power Electronics Applications and Design	4
ELEN 442	Discrete Mathematics for Computer Engineering	4
ELEN 444	Computer Architecture	4
ELEN 446	Data Structure	4
ELEN 448	Data Base Design	4
ELEN 452	Programming Language	4
ELEN 454	Operating Systems	4
ELEN 456	Software Engineering	4
ELEN 457	Artificial Intelligence	4
ELEN 462	Computer Networks	4
ELEN 495	Electrical Engineering Practice	3

OR INEN OR CIEN COURSES WITH THE COORDINATOR OR DIRECTOR'S APPROVAL
All engineering, mathematics and science courses must be approved with a grade of C or better.

Bachelor of Science Degree in Industrial Engineering

The industrial engineer integrates personnel, machinery and materials for increased efficiency in manufacturing and service industries to provide the community with goods or services that meet its needs in an ethical and sustainable manner. The courses include an educational program of technical depth and breadth as well as a broad liberal education.

In Caribbean University, the Bachelor of Science in Industrial Engineering has four areas of emphasis:

- Facilities planning and design
- Production systems
- Quality control
- Work measurement and design

Mission

Industrial Engineering joins the mission of the university, which is committed to the principle of accessibility with the most disadvantaged, comprehensiveness in its offerings, and adaptability to satisfy the needs of the community served. The Institution is also committed to the development of intellect and social ethics. In addition, it accepts the responsibility of fostering among its students respect for human dignity and their personal commitment towards improving society.

Program Educational Objectives:

A few years after graduation, graduates of the bachelor of sciences in Industrial Engineering from Caribbean University will:

1. Demonstrate their knowledge and depth of understanding of Industrial Engineering analysis and system design principles in engineering practice.
2. Able to design, develop, implement and improve integrated systems, processes or components that may include people, materials, information, and equipment with the highest social and environmental ethical standards.
3. Communicate effectively, oral and written, in both English and Spanish, and work in diverse, global and multidisciplinary teams.
4. Extend their learning process through lifelong professional development or other graduate education.

Student Outcomes

It is expected that by the time of graduation, our students will have:

- a. an ability to apply knowledge of mathematics, science and engineering
- b. an ability to design and conduct experiments, as well as to analyze and interpret data

- c. an ability to design a system, component, or process to meet desired need within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- d. an ability to function on multidisciplinary teams
- e. an ability to identify, formulate, and solve engineering problems
- f. an understanding of professional and ethical responsibility
- g. an ability to communicate effectively
- h. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- i. a recognition of the need for, and an ability to engage in life-long learning
- j. a knowledge of contemporary issues
- k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

BACHELOR OF SCIENCES DEGREE IN INDUSTRIAL ENGINEERING (BSIE)

Minimum Requirements:

3	Introduction to Educational Academic and Personal Adjustment to College Environment
27	credit hours in General Courses
49	credit hours in Core Courses
33	credit hours in General Engineering
55	credit hours in Concentration Courses
<u>9</u>	credit hours in Suggested Elective Courses
176	

General Courses

Credit Hours

ENGL 101-102	Basic Course in English I-II	3-3
ENGL 217	Oral and Written Communication in English	3
SPAN 101-102	Basic Course in Spanish I-II	3-3
COSC 101	Introduction to Computer Sciences	3
ELECT SH	Socio Humanistic Electives	9

Core Courses

ECON 121	Principles and Problems of Economics	3
CHEM 101-102	General Chemistry I-II	4-4
MATH 133-134	Pre-Calculus I-II	3-3
MATH 230-232	Calculus I-II	4-4
MATH 302	Calculus III	4
MATH 304	Differential Equations	3
PHYS 201-202	General College Physics I-II	4-4
PHYS 301	Modern Physics	3
GEEN 245	Ethics in Engineering	3
COSC 204	C Language and Programming	3

General Engineering Courses

GEEN 104	Engineering Drawing	3
GEEN 105	Engineering Graphics and Design	3
GEEN 212	Engineering Static's	3
GEEN 213	Engineering Dynamics	3
GEEN 221	Mathematical Methods for Engineering	3
CIEN 301	Strength of Materials I	3
CIEN 313	Materials for Engineers	4
CIEN 322	Fluids Mechanics	4
ELEN 310	Electrical Circuits Analysis I	4
MEEN 302	Thermodynamics for Engineers	3

Concentration Courses

INEN 301	Industrial Organization and Management	3
INEN 311	Probability for Engineering	3
INEN 312	Statistics for Engineers	3
INEN 313	Work System Design	4
INEN 323	Engineering Economy	3
INEN 401-402	Operation Research I-II	3-3
INEN 433	Facilities Planning and Design	3
INEN 411	Quality Control	3
INEN 412-413	Production Planning I-II	3-3
INEN 421	Accounting for Engineers	3
INEN 422	Work Measurement	3
INEN 423	Cost Analysis	3
INEN 403	Systems Simulations	3
INEN 432	Robotics and Automation Systems	3
INEN 481	Industrial Engineering Capstone I	3
INEN 482	Industrial Engineering Capstone II	3

Suggested Elective Courses

GEEN 106	Computer Graphics and Design I	3
GEEN 108	Computer Graphics and Design II	3
GEEN 310	Engineering Undergraduate Research	3
INEN 405	Computer-Based Information Systems	3
INEN 410	Human Resources Management	3
INEN 415	Industrial Safety	3
INEN 495	Industrial Engineering Practice	3

OR CIEN OR ELEN COURSES WITH THE COORDINATOR OR DIRECTOR'S APPROVAL

All engineering, mathematics and science courses must be approved with a grade of C or better.

Bachelor of Science Degree in Computer Science concentration in Computing Programming

The Bachelor of Sciences Degree in Computer Science concentration in Computing Programming has been designed to provide the students with the basic concepts and skills in the field of computer programming and other computer Technology related areas. The courses include mathematics, programming languages, data structures, database, program web applications, repairmen principles, networks, and business, commercial and educational applications.

The Bachelor of Science in Computer Science has four areas of emphasis:

- Data Base
- Programming Language
- Computer Applications
- Network and Computing Center

Objectives:

The program intends to achieve six basic objectives:

1. To prepare students who Concentration in computer sciences for an entry level position in industry and science careers.
2. To appraise students career opportunities and options available as a result of their training.
3. To develop the ability to work as a technician in computing related fields.
4. To develop in the student a practice where he or she accepts challenges in acquiring mastery of innovative methods in the computational field of study.
5. To provide the student with the latest versions of computer applications in order to be vanguard with the requirements of today's competitive job market and integrate telecommunications as a vital means for professional development.
6. To prepare professionals with a social-humanistic base with scientific, technological, cultural, ethics and social attributes that can be developed in the technological field of programming and computing systems

**BACHELOR OF SCIENCE DEGREE IN COMPUTER (BS)
CONCENTRATION IN COMPUTER PROGRAMMING**

Minimum Requirements:

3 credit hours in Introduction and Adjustment to University Life
 40 credit hours in General Courses
 39 credit hours in Core Courses
 45 credit hours in Concentration Courses
9 credit hours in Suggested Elective Courses
 136

General Courses		Credit Hours
ENGL 101-102	Basic Course in English I-II	3-3
SPAN 101-102	Basic Course in Spanish I-II	3-3
HUMA 101-102	Study of Western Culture and Civilization I – II	3-3
SOSC 101-102	Introduction to Social Sciences I-II	3-3
MATH 101-102	Introduction to College Mathematics I-II	3-3
ENGL 217	Oral and Writing Communication in English	3
COSC 101	Introduction to Computer Sciences	3
GESC 101	Fundamentals of General Sciences	4
Core Courses		
COSC 112	Microcomputer Application in Business	3
COSC 115	Fundamentals of Programming Logic	3
ACCO 111-112	Elementary Accounting I-II	4-4
ECON 121-122	Principles and Problems in Economics I-II	3-3
MATH 133-134	Pre-Calculus I-II	3-3
MATH 230	Calculus I	4
SPAN 201-202	Business Communication in Spanish I-II	3-3
STAT 330	Statistical Analysis and Design	3
Concentration Courses		
COSC 204	C Language and Programming	3
COSC 206	Data Base of Management	3
COSC 207	Visual Basic I	3
COSC 208	Visual Basic II	3
COSC 210	Operating Systems	3
COSC 231	Basic Principles of Repairment and Maintenance of Computer	3
COSC 272	JAVA Programming	3
COSC 307	Systems Analysis and Design I	3

COSC 309	Data Structures	3
COSC 315	Network and Computing Center	3
COSC 215	Web Page Design and Implementation	3
COSC 410	Artificial Intelligence	3
COSC 413	Computer Architecture	3
COSC 419	Project Design	3

Practice

COSC 420	Practice	3
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Suggested Elective Courses

COSC 308	System Analysis Design II	3
COSC 320	Computer Business Commercial Application	3
COSC 321	Computer Control and Audit	3
COSC 417	Decision Support and Expert System	3
COSC 221	Application of Computers in Education	3

COURSE DESCRIPTIONS

ACCO 101 MATHEMATICS OF ACCOUNTING 3

Fundamentals of mathematics, short methods in addition, subtraction, multiplication, and division; solution of accounting problems; study of annuities, bonds, amortization, interest, commission, and bank discounts.

Three (3) hours of lecture per week.

ACCO 111 ELEMENTARY ACCOUNTING I 4

Fundamentals of accounting; complete accounting cycle and adjustment preparation; analysis of the worksheet and financial statements. Also work with special journals, subsidiary ledges, bank accounts and inventory valuations.

Four (4) hours of lecture per week.

ACCO 112 ELEMENTARY ACCOUNTING II 4

Pre-requisite: ACCO 111

The course deals with tangible and intangible assets, payroll, partnership and corporate accounts. It also has an introduction to the basic concepts of cost accounting and its applications in departmental manufacturing operations.

Four (4) hours of lecture per week.

ACCO 201 INTERMEDIATE ACCOUNTING I 4

Pre-requisite: ACCO 101 and ACCO 112

Presents a review of accounting processes or accounting cycle, studies in detail the basic financial statements, compound interest and future and present value, measurement of income and costs. Valuation cash and receivable of inventories, property plant and equipment and intangible assets.

Four (4) hours of lecture per week.

ACCO 202 INTERMEDIATE ACCOUNTING II 4

Pre-requisite: ACCO 201

Valuation of liabilities and investments, capital structural of corporations, and other special topics as accounting for income taxes, pensions, and lease contracts. It also works with the statement of cash flow.

Four (4) hours of lecture per week.

ACCO 203 **COST ACCOUNTING** **4**
Pre-requisite: ACCO 112

Fundamentals of cost accounting. Costs systems: Order cost system and process cost system. Methods to determine the bases of cost and non-cost systems; cost classification, solution of cost problems; preparation of cost report, and financial statements, use of cost records, and analysis of variances.

Four (4) hours of lecture per week.

ACCO 205 **INCOME-TAX PROCEDURES -PUERTO RICO** **3**
TAXES

Pre-requisite: ACCO 112

History, objectives and procedures related to income taxation. Statutes; including exclusion and deduction, of gross income; credits allowed; returns related to corporation, partnerships, individuals, and others. Emphasis is given to Income Tax Return forms preparation and the analysis of particular cases. It studies the basic differences between local and federal law.

Three (3) hours of lecture per week.

ACCO 304 **PRINCIPLES OF AUDITING** **3**
Pre-requisite: ACCO 202

Principles of audit practices and procedures currently used in audit engagements. Accepted accounting practice emphasized specially auditor's duties and responsibilities, sampling and other auditing techniques.

Three (3) hours of lecture per week.

ACCO 305 **FEDERAL TAXES I (U.S. TAXES)** **3**
Pre-requisite: ACCO 112

A detailed presentation of theory and procedures in the preparation of Federal Income Tax returns for individuals, corporations, successions, and trusts.

Three (3) hours of lecture per week.

ACCO 306 **FEDERAL INCOME TAXES II** **3**
Pre-requisite: ACCO 112

Includes a comprehensive discussion of the tax law related to partnerships, corporations, and estates, considering investment planning for company tax efficiency.

Three (3) hours lecture per week.

ACCO 309 **MANAGERIAL ACCOUNTING** **3**
Pre-requisite: ACCO 112

Use of accounting data in planning and controlling the business activities of the firm. Attention is given to the quantitative aspects of management as well as to the human behavior in the organization.

Three (3) hours of lecture per week.

ACCO 310 **ADVANCED ACCOUNTING** **3**
Pre-requisite: ACCO 202

Discussion of accounting theory that impacts organizations with headquarters or subsidiary operational and financial structures. Presentation and disclosure of earnings per share; combination of cooperate entities and consolidations.

Three (3) hours of lecture per week.

ACCO 381 **COMPUTER APPLICATION IN ACCOUNTING** **4**
Pre-requisite: ACCO 310

Theory and practice on the application of computers to accounting processes; introduction to Peachtree or Quickbooks accounting softwares. One (1) hour of lecture per week.

Three (3) hours laboratory.

Lab Fee: \$50.00

ACCO 412 **BUSINESS LAW AND PROFESSIONAL** **3**
RESPONSIBILITY

Pre-requisite: ACCO 304-for candidates CPA

This is a comprehensive business law and professional responsibility course including contracts, sales, secured transactions, bankruptcy, legal aspects of partnerships and corporations, states and trusts, federal securities regulations, real and personal property fire and casualty insurance, ethics and professional responsibilities and the accountant professional liability.

Three (3) hours of lecture per week.

ACCO 413 **AUDITED FINANCIAL STATEMENTS REPORTS** **3**
Pre-requisite: ACCO 305

Preparation of the audit report by the independent auditor, the management representation letter, inquiry of the client's lawyer in relation to legal matters. Confirmations to debtors, creditors and banks, letters for underwriters and communicating internal control reportable conditions to the audit committee, required by federal and state government agencies.

Three (3) hours of lecture per week.

BIOL 201 **GENERAL ZOOLOGY** **4**
Pre-requisite: BISC 102

Biology of the Concentration groups of animals. It emphasize; structure and function, treating, aspects of diversity, reproduction, development, ecology, behavior, evolution and taxonomy.
Three (3) hours of lecture and a three (3) hours laboratory per week.

Lab Fee: \$120.00

BIOL 202 **GENERAL BOTANY** **4**
Pre-requisite: BISC 102

Survey of the main groups of plants from the standpoint of their structure, development and reproduction. Emphasizes evolutionary relationships as revealed by comparisons in body organization and life history of living and extinct forms.

Three (3) hours of lecture and a three (3) hours laboratory per week.

Lab Fee: \$120.00

BIOL 203 **ECOLOGY** **4**
Pre-requisite: BISC 102

Study of ecosystem factors and organizations in terrestrial, fresh water and marine environments.
Three (3) hours of lecture and a three (3) hours laboratory of field trip per week.

Lab Fee: \$120.00

BIOL 212 **CYTOLOGY** **4**
Pre-requisite: BISC 102, CHEM 102

Extensive study of comparative cellular morphology and physiology, and an introduction to recent advances in the field.

Three (3) hours of lecture and a three (3) hours laboratory per week.

Lab Fee: \$120.00

BIOL 301 **GENERAL MICROBIOLOGY** **4**
Pre-requisite: BISC 102 (Except Nursing Program-Pre-requisite: BISC 101)

The study of microorganisms with emphasis on morphology, physiology, genetics, taxonomy and control, and their relation to sanitation, food, water and health.

Three (3) hours of lecture and a three (3) hours laboratory per week.

Lab Fee: \$120.00

BIOL 302 **BACTERIOLOGY** **4**
Pre-requisite: BIOL 301

This course introduces the morphology, chemistry, physiology and genetics of bacteria. Emphasis is placed on the economic importance and relationship to human well-being.

Three (3) hours of lecture and a three (3) hours laboratory per week.

Lab Fee: \$120.00

breeding. Also organic evolution, evidence, theories and its importance as related to genetics and genetics are studied.

Three (3) hours of lecture and a three (3) hours laboratory per week.

Lab Fee: \$120.00

BIOL 405 PARASITOLOGY 4
Pre-requisite: BIOL 201, BIOL 301

Morphology, taxonomy, ecology, lifecycles, and control of parasites. Special emphasis is given to the parasite host relationship.

Three (3) hours of lecture and a three (3) hours laboratory per week.

Lab Fee: \$120.00

BIOL 407 SEMINAR 2
Pre-requisite: BIOL 403

This course is designed to provide experience in carrying out library research in scientific topics using the latest journals and database systems available. The students must present an oral and written report, using guidelines provided by the professor. Classmates will evaluate works presented.

Two (2) hours of lecture per week.

BULA 204 BUSINESS LAW 3

Study of legal aspects of common business transactions with particular concern to legislation in Puerto Rico. Special attention is given to contracts, sales, agency and negotiable instruments.

Three (3) hours of lecture per week.

CHEM 101 GENERAL CHEMISTRY I 4

Study of principles and fundamental concepts of chemistry: the atomic structure, the chemical bonding, the periodic classification of elements, the chemical formulas and equations. The gases laws as well as the principles of chemical reactions are presented and thermochemical processes are analyzed. The electronic configuration and periodicity of elements are determined. The molecular and electronic geometry and the orbital molecular theory are described. Application exercises are performed in the laboratory according to the studied concepts.

Four (4) hours of lecture and a three (3) hours laboratory per week.

Lab Fee: \$150.00

CHEM 102 GENERAL CHEMISTRY II 4
Pre-requisite: CHEM 101

Study of principles and fundamental concepts in chemistry such as: the liquid and solid states, and different ways of expressing concentration. It emphasizes speed of reaction and chemical equilibrium, acid-base equilibrium, and solubility equilibrium. The thermodynamics processes are described. The concept of oxidation-reduction with the electrochemistry is related.

Application exercises are performed in the laboratory according to the concepts studied.

Four (4) hours of lecture and a three (3) hours laboratory per week.

Lab Fee: \$150.00

CHEM 201-202 ORGANIC CHEMISTRY I-II 4
Pre-requisite: CHEM 102 and MATH 134

A systematic study of the compounds of carbon and hydrogen and their substitute nomenclature, stereochemistry. Theories of different compounds with emphasis on the mechanism of the reactions and the use of important compounds. The synthetic methods available for preparation of aliphatic, aromatic, and other compounds are discussed.

Four (4) hours of lecture and a three (3) hours laboratory per week.

Lab Fee: \$150.00

CHEM 301 BIOCHEMISTRY 4
Pre-requisite: CHEM 202

The chemistry of the constituents of living matter including carbohydrates, lipids, proteins, nucleic acids, enzymes, vitamins, minerals and the relationship of these to processes. Laboratory practices will emphasize the use of modern technological analysis.

Four (4) hours of lecture and a three (3) hours laboratory per week.

Lab Fee: \$150.00

CHEM 317 QUANTITATIVE CHEMICAL ANALYSIS 4
Pre-requisite: CHEM 102, MATH 134 and COSC 101

A course designed to study the chemical methods applied in quantitative analysis; formulation and properties of precipitates. Theory of neutralization; redox titration with emphasis in industrial analysis.

Four (4) hours of lecture and a six (6) hours laboratory per week.

Lab Fee: \$300.00

CIEN 301 STRENGTH OF MATERIALS I 3
Pre-requisite: GEEN 212

This course emphasizes the study of the stress and strain caused by axial, torsional and flexural loads. It focuses in the determination of maximum stress and strain on both statically determine and indeterminate elements by applying different analysis methods. Include the application of shear and moment diagrams as design principles, considering temperature effects and stress concentration. Introduce to engineering design concepts, like allowable stress and safety factor.

Three (3) hours of lecture per week.

CIEN 322 **FLUIDS MECHANICS** **4**
Pre-requisite: CIEN 301 and MATH 304

This course emphasizes in the applications of the fundamental laws and theorems of fluid mechanics to solve engineering problems. It discusses definitions, properties, typical analysis methods of fluid mechanics and its applications in engineering, including dimensional analysis and flow modeling.

Three (3) hours of lecture and three (3) hours of laboratory per week.

Lab Fee: \$100.00

CIEN 400 **CITY PLANNING PRINCIPLES** **3**
Pre-requisite: Approval of Department Director or Program Coordinator

This course is an introduction to local and regional planning. It includes zoning and land use, considering social, economic, transportation and environmental factors. The course emphasizes on planning history, basic urban design principles, contemporary issues that affect cities and sustainable development.

Three (3) hours of lecture per week.

CIEN 401 **DESIGN OF STEEL STRUCTURES** **4**
Pre-requisite: CIEN 303

This course discusses the fundamentals of stress analysis, both elastic and inelastic strains due to axial, bending and shear loads. The course focuses on the design of steel structural elements, including tension members, bolted connections, welding, compression members, beams and steel joists.

Three (3) hours of lecture and three (3) hours of laboratory, computation per week.

Lab Fee: \$100.00

CIEN 402 **REINFORCED CONCRETE DESIGN** **4**
Pre-requisite: CIEN 303

Fundamentals of stress analysis and design of reinforced concrete elements; bending, shear and combined loading effects. Design of reinforced concrete structures using the Ultimate Strength Design Method.

Three (3) hours of lecture and three (3) hours of laboratory, computation per week.

Lab Fee: \$100.00

CIEN 405 **INTRODUCTION TO HYDROLOGY** **3**
Pre-requisite: CIEN 322

This course introduces to the study and analysis of the hydrology cycle, probability theory, probability distributions, hydrologic and hydraulic flood routing, analysis and use of hydrologic concepts in design.

Three (3) hours of lecture per week.

CIEN 410 **AIR POLLUTION CONTROL** **3**
Pre-requisite: CIEN 322

The course introduce the concept of air pollution engineering, providing an in-depth treatment of combustion, the formation of particulate matter and other pollutants, the principles of aerosol behavior, and basic theories of the removal of particulate and gaseous pollutants from effluent streams. Also, this course is designed to introduce students in the critical analysis of the air pollution control field and the technical and regulatory aspects involved.

Three (3) hours of lecture per week.

CIEN 411 **CURVE DESIGN AND HIGHWAY LOCATION** **3**
Pre-requisite: CIEN 312 and MATH 319

The course is expected to give the student the ability to localize highways and compare between alternatives. Design parameters and strategies for safe and cost effective horizontal and vertical curves (and curve transitions) will be covered. An understanding of highway super elevation and cross-sections, along with its relationship with the mass diagram will be discussed. A special project combining all the courses topics is required.

Three (3) hours of lecture and three (3) hours of laboratory, computation per week.

Lab Fee: \$150.00

CIEN 412 **HIGHWAY ENGINEERING** **3**
Pre-requisite: CIEN 411

An understanding of highway systems, including classification, planning, administration, vehicle characteristics, pavement design, freeways and geometric design will be provided. The student will develop the ability to design flexible pavements, and apply queuing theory, traffic flow analysis and level of service analysis.

Three (3) hours of lecture per week.

CIEN 415 **PRINCIPLE OF HYDRAULICS** **3**
Pre-requisite: CIEN 322

This course introduces the analysis and problem solving in hydraulic modeling, hydrostatics, pipe flow, pipelines pipe networks, pumps, open channel flow, hydraulic structures, water measurement devices, and hydraulic similitude.

Three (3) hours of lecture per week.

CIEN 420 **PRE-STRESSED CONCRETE DESIGN** **3**
Pre-requisite: CIEN 402

The course introduce to the design of pre-stressed concrete structural elements. It focuses in the flexural design of pre-stressed concrete elements. Include shear strength design, crack control, tension members, and compression members considering pre-stressed engineering codes and standards.

Three (3) hours of lecture per week.

CIEN 421 STRUCTURAL ANALYSIS II 4
Pre-requisite: CIEN 303

This course focuses in analytical and numerical solutions for statically indeterminate structures by different methods, including force, slope-deflection, moment distribution and stiffness methods. The course emphasizes the use of structural analysis software.

Three (3) hours of lecture and three (3) hours laboratory, computation per week.
Lab Fee: \$100.00

CIEN 425 FUNDAMENTALS OF BRIDGE DESIGN 3
Pre-requisite: CIEN 401 and CIEN 402

Introduction to fundamental concepts of highway bridges design using the engineering codes and standards. Emphasize the implementation of American Association of State Highways and Transportation Officials (AASHTO) standards and specification as relevant procedures/parameter for bridges design. Also include designs procedures of both, the American Concrete Institute (ACI) and the load and resistant factor design (LRFD).

Three (3) hours of lecture per week.

CIEN 426 FUNDAMENTAL OF ENVIRONMENTAL 3
ENGINEERING

Pre-requisite: CIEN 322 and CHEM 102

This course introduces the study and analysis of water and waste treatment, quality measurement, pollution effects, solid waste management and air pollution control. In addition, this course is designed to develop in the student a thorough understanding of domestic and industrial uses of water, water supply and quality standard.

Three (3) hours of lecture per week.

CIEN 427 WATER TREATMENT AND POLLUTION 4
CONTROL

Pre-requisite: CIEN 426

This course introduces the study of water quality management, water and wastewater treatment, air pollution effects and control, solid waste engineering, hazardous waste management, agriculture and environment and noise pollution.

Three (3) hours of lecture and three (3) hours of laboratory per week. Lab Fee: \$100.00

CIEN 430 MATRIX METHODS OF STRUCTURAL 3
ANALYSIS

Pre-requisite: CIEN 421 and GEEN 221

Study of stiffness and flexibility methods employed for structural analysis. The course provides an introduction to nonlinear analysis, element stiffness matrices and fixed forces for various

CIEN 481 **CIVIL ENGINEERING CAPSTONE I** **3**
Requisites: Approval of Department Director or Program Coordinator. Must have 140 credits approved, including at least 36 in concentration credits.

This course is the first part of the Civil Engineering Mayor Design Experience (Capstone Project). At the end of this course, the student is required to complete a feasibility study for a civil engineering problem proposed by the professor or students at the beginning of the course. A professor will be assigned to provide guidance and evaluate students. The project should be made in groups; the scope of the project must be adjusted depending on the group's size. The students will have several presentations and written reports. The course will end with a written report and the project's final presentation, open to the whole academic community. The evaluation depends on all the presentations, reports and evaluation of the group work.

One (1) contact hour and eight (8) hours of laboratory, computation weekly.

Lab Fee: \$250.00

CIEN 482 **CIVIL ENGINEERING CAPSTONE II** **3**
Pre-requisite: CIEN 481

This course is the second part of the Civil Engineering Mayor Design Experience (Capstone Project). At the end of the course, the student is required to implement the solution (i.e Feasibility Study) to the problem proposed on CIEN 481. A professor will be assigned to guide and evaluate the students. The project will be made in groups; the scope of the project will be adjusted depending on the group's size. The students will have several presentations and written reports. The course will end with a written report and the project's final presentation, open to the whole academic community. The evaluation depends on all the presentations, reports and self-evaluation of the group work.

One (1) contact hour and eight (8) hours of laboratory, computation weekly.

Lab Fee: \$250.00

CIEN 495 **CIVIL ENGINEERING PRACTICE** **3**
Pre-requisite: Approval of Department Director or Program Coordinator. Must have 150 credits approved, including at least 30 in concentration credits.

The student will provide a civil engineering solution to a practical or technical problem. The students are required to have a period of practice equivalent to three credit hours during a semester. A professor and tutor will be assigned to supervise, advise and guide the students. It is required to coordinate with the Director of the department or Coordinator, an agency in which the student can obtain the required work experience. The students are required to prepare an oral presentation and a written report of their work experience.

One (1) hour of seminar/conference and ten (10) hours of practice in industry per week.

Practice Fee: \$125.00

COSC 101**INTRODUCTION TO COMPUTER SCIENCE****3**

General study of the evolution, terminology, and integration of the productivity tools in the management of computers. It summarizes and identifies the Concentration components of an information system. It integrates the management of the Internet and e-mail as learning tools. Through practice, the student understands the use and application of the operating systems, word processors, spreadsheets, tools for the design of presentations and publications. The course promotes the application of safety standards and ethics in the use of information systems.

Three (3) hours of lecture per week.

Lab Fee: \$50.00

COSC 112**MICROCOMPUTER APPLICATION IN BUSINESS****3**

Pre-requisite: COSC 101

Study of the most commonly used techniques in the use of "software" of productivity. This course discusses the concepts related to the management of data using the programmed: electronic spreadsheet and introduction to databases. This course provides students the tools necessary for the process of analysis of the information at the moment of effective decision-making. Collection, tabulation and data analysis techniques are developed.

Three (3) hours of lecture per week.

Lab Fee: \$50.00

COSC 115**FUNDAMENTS OF PROGRAMMING LOGIC****3**

Pre-requisite: COSC 101

The course exposes in a simple and detailed manner, the necessary mechanisms to develop the logic of a computer program and its operation. Problems are resolved using logic, inferential mechanisms and design tools such as pseudocodes, Input-Processing-Output (IPO) diagram, decision tree and flowcharts, among others. Algorithms are developed to define the structure of computer programs, including sequential, structured and object-oriented programming.

Three (3) hours of lecture per week.

Lab Fee: \$50.00

COSC 204**C LANGUAGE AND PROGRAMMING****3**

Pre-requisite: COSC 101

In this course, students will develop programming skills using the C# (C Sharp) language as a platform. Programming techniques for the development of commercial and industrial applications are discussed. The student implements the stages of development of a computer program and strengthens their analytical and logical skills in solving problems. Implements logical algorithms aligned with structured programming. (Object-Oriented Programming - OOP) object-oriented programming and the design applications in a graphical environment (Graphics User Interface - GUI) are practiced.

Three (3) hours of lecture per week.

Lab Fee: \$50.00

COSC 206 DATA BASE MANAGEMENT 3
Pre-requisite: COSC 112

The course teaches the student in the design and management of databases. Learning backup techniques, data recovery and creation of data dictionaries. To develop skills of normalization of database tables. Design logical models of tables and diagrams (Entity Relationship Diagram - ERD). Describes the importance of the use of structured query (Structured Query Language - SQL) language for the management of related databases. The student performs exercises using commands or most common SQL instructions.

Three (3) hours of lecture per week.

Lab Fee: \$50.0

COSC 207 VISUAL BASIC I 3
Pre-requisite: COSC 115

This course addresses the Concentration techniques used to design applications, making use of the Visual Basic (VB) language. Provides the student the necessary tools of analysis, design, development and implementation of applications that provide productivity solutions to the company. It integrates, interface design, assigning properties to objects and object programming. The student develops techniques for input and output of data, distinction of the different types of data, instructions of control, cycle, managing files and subroutines.

Three (3) hours of lecture per week.

Lab Fee: \$50.00

COSC 208 VISUAL BASIC II 3
Pre-requisite: COSC 207

This is a continuation of the introductory course to the computer Visual Basic programming language. Training for the creation of applications at the commercial or business level, which meet the standards and requirements of the market using databases, modular programming, procedures, functions, variables, global and local parameters, current and formal parameters by value, variables and creating reports and classes. Analysis of potential problems at the enterprise level and the decision-making process to recommend solutions to them, using the Visual Basic language connected to databases.

Three (3) hours of lecture per week.

Lab Fee: \$50.00

COSC 210 OPERATING SYSTEMS 3
Pre-requisite: COSC 101

This course describes the function of the operating systems and how they manage resources in computerized systems. Skills are developed in the installation and management of operating systems focused on the optimization of the performance of the same. It includes the analysis and management of resources, hardware and software required for computer systems. It integrates the study of the evolution of operating systems up to the present.

Three (3) hours of lecture per week.

Lab Fee: \$50.00

COSC 215 **WEB PAGE DESIGN AND IMPLEMENTATION** **3**
Pre-requisite: COSC 101

An introductory course in which students will design, and publish a website. At the end of the course the student will have a basic knowledge of JavaScript and HTML, in order to make the webpage more attractive and efficient. This course includes all the aspects of language, including the tags of HTML and the most used platform to develop webpage.

Three (3) hours of lecture per week.

Lab Fee: \$50.00

COSC 221 **APPLICATIONS OF COMPUTERS** **3**
IN EDUCATION

Pre-requisite: COSC 101

Course aimed in integrating information technology to facilitate the teaching and learning process. It integrates practical exercises as a strategy to maximize the various programs of productivity, such as word processors, electronic spreadsheet, presentations and publication programs. The Internet is used to integrate tools of Web 2.0, commonly used in the educational setting and instructional modules are designed. The fundamentals are studied to manage online education platforms.

Three (3) hours of lecture per week.

Lab Fee: \$50.00

COSC 231 **BASIC PRINCIPLES OF REPAIRMENT** **3**
AND MAINTENANCE OF COMPUTER

Pre-requisite: COSC 210

The course provides basic knowledge of the function and compatibility between the components of the computer system. The student develops skills to identify components of computer failures and providing assertive diagnosis of such failures, offering solutions; either with replacements of physical components "hardware" programs or "software", thus achieving system efficiency. The course includes the execution of technical tasks of diagnosis and maintenance, in order to prevent system malfunction and perform repair processes when necessary.

Three (3) hours of lecture per week.

Lab Fee: \$50.00

COSC 272 **JAVA PROGRAMMING** **3**
Pre-requisite: COSC 115 and COSC 207

In this course the student develops object-oriented applications using the JAVA language programming platform. The course emphasizes the management of the General fundamentals of the JAVA language and its applicability in the current market. The student develops programming skills in JAVA, using the syntax and programming instructions in this language.

Three (3) hours of lecture per week.

Lab Fee: \$50.00

COSC 417 DECISION SUPPORT AND EXPERT SYSTEM 3
Pre-requisite: COSC 307

This course is aimed at the design and development of support tools for management decision making using information systems. It emphasizes the importance of support systems in decision-making and expert systems in the process of reasoning and the use of logic in an organization. These systems are applied using simulators, existing and created in the course, thus contributing in making managerial decisions.

Three (3) hours of lecture per week.

Lab Fee: \$50.00

COSC 419 PROJECT DESIGN 3
Pre-requisite: COSC 206, COSC 307 and Authorization by the Program Coordinator

In this course students put into practice the knowledge and experiences acquired through the curriculum of the program. They develop a project of information systems by integrating analysis and design, programming languages and databases in an efficient way. The working environment and the evaluation of the project system simulate conditions similar to industry and field requirements and related with computing technology.

Three (3) hours of lecture per week.

Lab Fee: \$50.00

COSC 420 PRACTICE 3
Pre-requisite: COSC 419 and Authorization by the Program Coordinator

The course provides experiences working in a company in the area of information systems. The student has the opportunity to integrate the knowledge acquired in their courses and apply them in a real scenario, demonstrating high professional and ethical standards; at the same time contributing to the achievement of the objectives of the organization. The course includes seminars and practice in an authorized practice center.

Three (3) hours of lecture per week.

Lab Fee: \$50.00

CRJU 216 DEALING WITH ALCOHOL AND DRUG ABUSE 3

The course is designed to study the legal, medical and social aspect of the use and abuse of substances and alcohol. The legal and social implications of the user's behavior in our society are analyzed.

Three (3) hours lectures per week.

CRJU 301 JUVENILE DELINQUENCY AND LAW 3
Pre-requisite: POSC 102

Study of the laws, regulations, public policy, and social services that deal with juvenile delinquency in Puerto Rico. It focuses causes of social problems.

Three (3) hours of lecture per week.

CRJU 335 **LAW AND SOCIETY** **3**
Pre-requisite: POSC 102

The course examines issues related to the law and society. Analyzes and evaluates the importance of in the development of human societies. It compares the different manifestations of the law as an expression of Justice. It is an analysis of the origins of the law and describes the legal changes in accordance with the development of society.

Three (3) hours of lecture per week.

CRJU 350 **CRIMINAL PROCEDURE** **3**
Pre-requisite: POSC 102

Study and analysis of the rules and procedures applied to the investigation process of the judicial system in Puerto Rico. Emphasis is given to techniques dealing with arrest, the search of houses with a warrant, the constitutional rights of the accused and others.

Three (3) hours of lecture per week.

CRJU 400 **CIVIL RIGHTS & CONSTITUTIONAL LAW** **3**
Pre-requisite: POSC 102

Investigation and discussion of subjects related to civil rights in Puerto Rico. Sample cases are discussed for analysis.

Three (3) hours of lecture per week.

CRJU 404 **CRIMINOLOGY AND THE REHABILITATION** **3**
PROCESS

The course emphasizes the study of the causes of crime, the characteristics of the criminals as well as the methods, which are used to punish and rehabilitate the individual that violates the law. It describes the importance of modern Criminology in the search for possible solutions to the problem of crime. It analyzes the causes of the crime using as reference the main theories that attempt to explain the phenomenon of the crime. The correctional system, the therapeutic strategies and community institutional treatment in order to assess its effectiveness in the process of rehabilitation of the confined is studied.

Three (3) hours of lecture per week.

CRJU 407 **SPECIAL LAWS** **3**
Pre-requisite: POSC 204

Consist of the study, analysis, and interpretation of the regulations that constitute the special penal laws in our country. It analyses and evaluates the procedures and punishments established according to the infringe articles.

Three (3) hours of lecture per week.

CRJU 410 International Criminal Justice System 4
Pre-requisite: POSC 204 and CRJU 350

A comparative analysis of the present Criminal Justice Systems of England, Japan, France, and Sweden. It evaluates how the Criminal Justice Systems of these Nations determine the way they will face problems related to crime, delinquency, and the administration of justice.
Four (4) hours of lecture per week.

CRJU 412 CONTROVERSIAL ISSUES IN THE CRIMINAL JUSTICE SYSTEMS 3
Pre-requisite: POSC 102

Analysis and evaluation of several works related to the Criminal Justice System.
Three (3) hours of lecture per week.

CRJU 414 THE CRIMINAL JUSTICE SYSTEM IN THE UNITED STATES 3
Pre-requisites: POSC 204 and CRJU 350

Study of the Criminal Justice System in the United States.
Three (3) hours of lecture per week.

CRJU 416 CRIMINAL JUSTICE PRACTICE 6
Pre-requisite: Approval of 100 credits and approval of Program Coordinator

The practice course is an educational-professional experience in Criminal Justice in that the student participates in the functions of the component of the Puerto Rico Criminal Justice System. Students are trained to occupy positions of responsibility in the agencies that make up the system. Students acquire knowledge, integrate and practice what they have learned, to interact directly with the professionals working in the agencies. Students will comply with the rules and procedures established by the Center of Practice, with the instructions and recommendations of their professional liaison and the course professor.
Twenty (20) hours of practice per week.
Practice fee: \$125

ECON 121 PRINCIPLES AND PROBLEMS OF ECONOMICS (MICRO ECONOMICS) 3

Principles of economics affecting production, income and consumption prices. There is emphasis on the interaction among producers and consumers in the free market.
Three (3) hours of lecture per week.

EDUC 306 CHILDREN LITERATURE 3

Study of different genres and content of literature for children from ancient folklore to modern works. Analysis of representation pieces of literature for children stressing content, critical thinking, and development of values.

Three (3) hours of lecture per week.

EDUC 309 SPECIAL EDUCATION FOR PRE-SCHOOL CHILDREN 3

Pre-requisite: EDUC 208

This course examines the nature and needs of the mildly handicapped pre-school children. It also includes assessment, mainstreaming, curriculum and methods of instruction.

Three (3) hours of lecture per week.

EDUC 324 SOCIOLOGICAL FOUNDATIONS OF EDUCATION 3

The study of education as a social institution and the relationship of school and community. It focuses social changes and studies the role of the school in the process of changes in the society.

Three (3) hours of lecture per week.

EDUC 328 PHILOSOPHICAL FOUNDATIONS OF EDUCATION 3

This course delineates the historical background and trends of formal education and its philosophical development in Puerto Rico.

Three (3) hours of lecture per week.

EDUC 336 EVALUATION AND MEASUREMENT 3

Pre-requisite: MATH 102

The criteria of suitable measuring devices, achievement tests, intelligence scales, pupil classification, and diagnosis as the basis for programming remedial teaching are studied. The construction, administration, and interpretation of results and grades with different testing devices are studied. Assessment is included.

Three (3) hours of lecture per week.

EDUC 349 GRAMMAR AND COMPOSITION IN ELEMENTARY SCHOOL 3

Pre-requisite: SPAN 102

This course studies the basic principles in communication skills and writing. It emphasizes grammar, and composition. It analyzes curriculum, methods and strategies in teaching at the elementary levels. The teacher's role in assessment is included.

Three (3) hours of lecture per week.

EDUC 412 **METHODS IN THE TEACHING** **3**
BIOLOGY IN THE SECONDARY SCHOOL

Pre-requisite: BISC 102

This course focuses in the analysis of concepts, curriculum, assessment, methods, instructional strategies, and the application of modern techniques in teaching biology at secondary school. Demonstration classes are presented for discussion.

Three (3) hours of lecture per week.

EDUC 413 **PRE-TEACHING METHODS AND STRATEGIES** **3**
ELEMENTARY SCHOOL

Pre-requisite: Pre-PCMAS, EDUC 401, 402, 403, 404,405

Experience that familiarizes the prospective student with the educational system, and the school community. Seminars, visits to schools, class observations, analysis of real learning situations, lesson plan, and school laws and regulations are studied.

Three (3) hours of lecture per week.

Lab Fee: 285.00

EDUC 414 **CURRICULUM AND METHODS FOR THE** **3**
TEACHING OF ENGLISH IN SECONDARY SCHOOL

Pre-requisite: ENGL 102

The historical background of the teaching of English in Puerto Rico and the development of listening, speaking, reading, and writing skills in the teaching of English as a second language are studied. Instructional materials, lesson plan, and demonstration classes and assessment will be discussed.

Three (3) hours of lecture per week.

EDUC 415 **PRE-INTERSHIP E IN METHODS AND** **3**
TECHNIQUES IN SPECIAL EDUCATION

Pre-requisite: EDUC 375, EDUC 390

Clinical and laboratory experiences concerning different environments for learning situations. Lectures, seminars, films and other instructional strategies are carried out.

Three (3) hours of lecture per week.

EDUC 418 **CURRICULUM AND METHODS TEACHING** **3**
MATHEMATICS IN SECONDARY SCHOOL

Pre-requisite: MATH 102

A study of the curriculum, methods, instructional strategies, assessment, adaptations, and use of resources in teaching mathematics at secondary schools. Importance will be given to demonstration classes.

Three (3) hours of lecture per week.

EDUC 422 **PRE-TEACHING PRACTICE IN METHODS AND 3**
TECHNIQUES IN SECONDARY EDUCATION

Pre-requisite: Pre-PCMAS

Clinical and laboratory experiences that familiarize the students with the educational system and the school community. Visits to secondary schools, class observations, seminars, lectures, films, planning, and development of lessons in simulated situations, and school laws are covered.

Three (3) hours of lecture per week.

Lab Fee: 285.00

EDUC 429 **TEACHING PRACTICE IN ELEMENTARY 6**
EDUCATION

Pre-requisite: EDUC 413

Teaching experiences supervised by professional personnel in real classroom situations in elementary schools. Application of learning theories and teaching methods.

Twenty (20) hours of practice per week.

Practice fee: \$125.00

EDUC 431 **INTERNSHIP IN SPECIAL EDUCATION 6**

Pre-requisite: EDUC 415

Teaching experiences supervised by professional personnel in classroom situations of special education. Application of learning theories and teaching methods for mildly handicapped children.

Twenty (20) hours of practice per week.

Practice fee: \$125.00

EDUC 433 **TEACHING PRACTICE IN SECONDARY 6**
EDUCATION

Pre-requisite: EDUC 422

Teaching experiences supervised by professional personnel in real classroom situations in secondary schools. Application of learning theories and teaching methods in teaching secondary level.

Twenty (20) hours of practice per week.

Practice fee: \$125.00

EDUC 462 **NATURE AND NEEDS OF THE EXCEPTIONAL 4**
CHILD

Pre-requisite: EDUC 200

(EDUC 210 Only for Special Education and Physical Education)

This course focuses the sociological and psychological needs of exceptional children: the handicapped, and the talented. Federal and local laws are studied.

Four (4) hours of lecture per week.

ELEN 310 **ELECTRICAL CIRCUITS ANALYSIS I** **4**
Pre-requisite: PHYS 202
Co-requisite: MATH 302

Study of the basic electric concepts of electrical quantities and electric elements. Kirchhoff laws and circuit analysis of resistive circuits. Study of circuit analysis techniques such as node- voltage, mesh- current, source transformation, Thevenin and Norton theorems, and superposition. Maximum Power Transfer. Study of capacitors, inductors and mutual inductance and the analysis of RC, RL and RLC circuits. Sinusoidal steady state analysis. Analysis of circuits using the computer.

Three (3) hours of lecture and three (3) hours of laboratory per week.

ELEN 311 **ELECTRICAL CIRCUITS ANALYSIS II** **4**
Pre-requisite: ELEN 310
Co-requisite: MATH 304

Study of linear electric circuits primarily excited by Alternating Current (A.C) sources. Physical-mathematical review of basic circuit elements and its use to build common devices in Electrical Engineering. Study of mathematical tools to be used in practical implementation. Power consumption and three-phase circuits study. Analysis of circuits using the computer.

Three (3) hours of lecture and three (3) hours of laboratory, computation per week.

ELEN 340 **ELECTRONICS ENGINEERING I** **4**
Pre-requisite: ELEN 310

Study of the semiconductors theory and their characteristic properties. DC and AC analysis of Bipolar Transistors (BJT) and Field Effect Transistors (FET). Analysis and design of electronic circuits and devices that contain diodes and transistors. Study of the difference between BJT and FET. A design project is required.

Three (3) hours of lecture and three (3) hours of laboratory per week.

ELEN 350 **LOGIC CIRCUITS I** **4**
Pre-requisite: ELEN 310

Study of digital systems and binary numbers. Explain theorems and postulates of Boolean algebra and its application to logic functions. Apply different techniques for the minimization of logic functions. Design of combinational and sequential logic circuits. A design project is required.

Three (3) hours of lecture and three (3) hours of laboratory per week.

ELEN 401 **ELECTRONICS ENGINEERING II** **4**
Pre-requisite: ELEN 340

Introduction to operational amplifier components and circuits. Study of low and high frequency responses in BJT and FETs. Analysis of power amplifiers and discussion of differential, multi-stage amplifiers and circuits with active load and its implementation in integrated circuits (IC).

Study of feedback circuits and relationship between stability and feedback. A design project is required.

Three (3) hours of lecture and three (3) hours of laboratory per week.

ELEN 403 LOGIC CIRCUITS II 4
Pre-requisite: ELEN 350

Study of the structural methods for digital systems design. Design of combinational and sequential systems. Use of programmable logic devices in digital systems design. Analysis and design of system controllers. Computer aided digital systems design and testing. A design project is required.
Three (3) hours of lecture and three (3) hours of laboratory, computation per week.

ELEN 405 ELECTROMAGNETIC I 3
Pre-requisite: ELEN 310

Study of electrostatics and magnetostatics fields. Description of the different types of electromagnetics materials. Resistance, conductance, capacitance, inductance and magnetics circuits. Maxwell's equations and its applications using computing software.
Three (3) hours of lecture per week.

ELEN 406 ELECTROMAGNETIC II 3
Pre-requisite: ELEN 405

Interpret the Maxwell's equations and wave equations. Describe the planes wave in dielectric, space and conducting media. Infer Power and Poynting vector. Recognize polarization, reflection and diffraction of waves. Describe transmission lines and apply Smith Chart and impedance matching. State and apply waveguides and antennas.
Three (3) hours of lecture per week.

ELEN 410 ELECTRICAL MACHINES 4
Pre-requisite: ELEN 311

Study of machinery principles, transformers and machinery fundamentals. Describe, analyze and design different type of machinery such as AC, induction, synchronous and DC machinery. Theory and operation of single-phase and special-purpose motors. A design project is required.
Three (3) hours of lecture and three (3) hours of laboratory per week.

ELEN 412 COMMUNICATIONS ENGINEERING 4
Co-requisite: ELEN 401

Study of the communication systems theory. Spectral analysis using Fourier transforms. General considerations of system response in time-frequency domain. Study of linear and angle continuous-wave modulation systems. Sampling theory. A design project is required.
Three (3) hours of lecture and three (3) hours of laboratory, computation per week.

ELEN 420 **CONTROL ENGINEERING** **4**
Pre-requisite: ELEN 410

Study the type and representation of control systems. Analysis of control systems and their mathematical models. Study of the control systems characteristics. Computer solution of problems will be emphasized and a design project is required.
Three (3) hours of lecture and three (3) hours of laboratory, computation per week.

ELEN 422 **DIGITAL SIGNAL PROCESSING** **4**
Pre-requisite: ELEN 412

This course introduces Digital Signal Processing (DSP) principles, algorithms and applications. It includes the study and application of signal processing techniques and its representation. The course focuses on the application of the Fourier transforms of discrete signals and systems to solve engineering problems and the design of IIR and FIR filters. A design project is required.
Three (3) hours of lecture and three (3) hours of laboratory, computation per week.

ELEN 425 **DIGITAL CONTROL SYSTEMS** **4**
Pre-requisite: ELEN 420

Introduction to digital control systems, fundamentals and structures. Definition of discrete-time systems and the Z-transform. Discussion of sampling and reconstruction. Analysis of discrete-time system configurations, characteristics and stability. Design of digital controllers. A design project is required.
Three (3) hours of lecture and three (3) hours of laboratory, computation per week.

ELEN 426 **FIBER OPTICS COMMUNICATIONS** **4**
Pre-requisite: ELEN 412

Study of the three primary components of a fiber optic communication system: optical fibers, optical transmitters and optical receivers. Light wave architecture and design guideline. Design of advanced light wave systems. A design project is required.
Three (3) hours of lecture per week and three (3) hours of laboratory, computation per week.

ELEN 430 **ELECTRICAL INSTALLATION DESIGN** **4**
Pre-requisite: ELEN 406

Definition of materials, design, wiring methods and protection schemes used in electrical installations. Description of use and installation of transformers. Planning and design of grounding and bonding systems. Design of electrical services for industrial, commercial and residential buildings. A design project is required.
Three (3) hours of lecture and three (3) hours of laboratory, computation per week.

ELEN 456 **SOFTWARE ENGINEERING** **4**
Pre-requisite: ELEN 446

Study of fundamental concepts of software engineering. Description of each state of the development cycle. Use of Unified Model Language (UML) to visualize the design of a system. A design project is required.

Three (3) hours of lecture and three (3) hours of laboratory, computation per week.

ELEN 457 **ARTIFICIAL INTELLIGENCE** **4**
Pre-requisite: ELEN 446

Introduction to the concepts and history of Artificial Intelligence (AI). Study of techniques and algorithms to solve search problems including adversarial search (games). Knowledge representation through propositional and first-order logic. Analysis of inference in first-order logic. A design project is required.

Three (3) hours of lecture and three (3) hours of laboratory, computation per week.

ELEN 462 **COMPUTER NETWORKS** **4**
Pre-requisite: ELEN 412

Study of fundamental concepts of computer networks such as hardware, software, reference models and examples of networks. Description of each OSI model layer for understands the communication and connection between two or more computers. Analysis of security techniques in computer networks. A design project is required.

Three (3) hours of lecture and three (3) hours of laboratory, computation per week.

ELEN 481 **ELECTRICAL ENGINEERING CAPSTONE I** **3**

Requisite: Approval of Department Director or Program Coordinator. Must have 140 credits approved, including at least 36 in concentration credits.

This course is the first part of the Electrical Engineering Major Design Experience (Capstone Project). At the end of this course, the student is required to complete a feasibility study for an Electrical engineering problem proposed by the professor or students at the beginning of the course. A professor will be assigned to provide guidance and evaluate students. The project should be made in groups; the scope of the project must be adjusted depending on the group's size. The students will have several presentations and written reports. The course will end with a written report and the project's final presentation, open to the whole academic community. The evaluation depends on all the presentations, reports and evaluation of the group work.

One (1) contact hour and eight (8) hours of laboratory, computation weekly.

Lab Fee: \$250.00

ELEN 482 **ELECTRICAL ENGINEERING CAPSTONE II** **3**
Pre-requisite: ELEN 481

This course is the second part of the Electrical Engineering Mayor Design Experience (Capstone Project). At the end of the course, the student is required to implement the solution (i.e Feasibility Study) to the problem proposed on ELEN 481. A professor will be assigned to guide and evaluate the students. The project will be made in groups; the scope of the project will be adjusted depending on the group's size. The students will have several presentations and written reports. The course will end with a written report and the project's final presentation, open to the whole academic community. The evaluation depends on all the presentations, reports and self-evaluation of the group work.

One (1) contact hour and eight (8) hours of laboratory, computation weekly.
Lab Fee: \$250.00

ELEN 495 **ELECTRICAL ENGINEERING PRACTICE** **3**
Pre-requisite: Approval of Department Director or Program Coordinator. Must have 150 credits approved, including at least 30 in concentration credits.

The student will provide an electrical engineering solution to a practical or technical problem. The students are required to have a period of practice equivalent to three credit hours during a semester. A professor and tutor will be assigned to supervise, advise and guide the students. It is required to coordinate with the Director of the department or Coordinator, an agency in which the student can obtain the required work experience. The students are required to prepare an oral presentation and a written report of their work experience.

One (1) hour of seminar/conference and ten (10) hours of practice in industry per week.

ENGL 100 **PREPARATORY ENGLISH** **3**

This course is developed to teach the students the basic skills in English as a Second language. It consists of the four Language Arts (Listening, Speaking, Reading and Writing) in grammar context. The course is reinforced with a computerized technology laboratory session. It adapts to the individual needs of the students by integrating the basic laboratory skills needed to perform successfully at higher levels.

Three (3) hours of lecture per week and two (2) hours of laboratory per week.

ENGL 101 **BASIC COURSE IN ENGLISH I** **3**

This English course is intended to provide students with the fundamentals of the language and a foundation for advancing through the four required levels of English proficiency. It consists of the four Language Arts (Listening, Speaking, Reading and Writing) in grammar context. The course is reinforced with a computerized technology laboratory session. It adapts to the individual needs of the students by integrating the basic laboratory skills needed to perform successfully at higher levels.

Three (3) hours of lecture per week and two (2) hours of laboratory per week.

ERDEF 210 **DEVELOPMENT OF VIGOROUS** **3**
MOVEMENT PROGRAMS

Introductory course of physical education at global levels and at Puerto Rico. It covers the scope and contemporary visions in the development of sports activities for youths.
Three (3) hours of lecture per week.

ERDEF 211 **PHYSICAL DEVELOPMENT & MOTOR** **3**
LEARNING

Study of the background and advances of the motor behavior in the human vigorous movement scenario with emphasis in the voluntary motor learning. It includes the study of principles, distinctive characteristics, applicable terminology strategies, methods, and instrumentation to facilitate motor skills learning.
Three (3) hours of lecture per week.

ERDEF 216 **PHYSICAL EDUCATION FOR YOUTHS** **3**
WITH SPECIAL NEEDS

Study of legal, ethic, and methodological fundamentals in the movement education of children and youths with special needs, both temporary and permanent. It includes practice in the making and implementation of educational individualized plans.
Three (3) hours of lecture per week.

ERDEF 312 **ANATOMY & KINESIOLOGY RELATED** **3**
TO VIGOROUS MOVEMENT

Pre-requisite: BISC 101 & BIOL 103

Study of the muscle-skeletal structure in the performance of movement for the physical fitness context and for the acquisition of motion skills. It considers the functional morphology, according to growing processes and gender development between the ages of 5 to 9 years, as well as the relationship with neuromuscular demands of the physical performance.
Three (3) hours of lecture per week.

ERDEF 313 **PHYSIOLOGY OF HUMAN MOVEMENT** **3**
Pre-requisite: ERDEF 312

Study of the adaptation and the organism functioning in the energetic, cardio respiratory and neuromuscular order that is produced in the disciplines related to the human movement. These are oriented toward total welfare and a fine physical performance of children and youths from both genders.
Three (3) hours of lecture per week.

ERDEF 410 **DESIGNS OF PHYSICAL EDUCATION** **3**
PROGRAMS FROM LEVELS K-6

To study the focus on the curricular models that applies to the physical education programs from kinder to six grades. Development of knowledge attitudes and skills for it design, organization, implantation, and evaluation of programs related to the discipline that study the phenomenon of human movement vigorous in its multiple manifestations. To study the professional recommendations of the rules that can be apply. Curricular segment production with technological integration.

Three (3) hours of lecture per week.

ERDEF 411 **PHYSICAL EDUCATION PROGRAMS** **3**
DESIGN FOR GRADES 7-12

The study of the curricular focus and models that apply to physical education in the seven through twelve grades. Development of knowledge, attitude and skills for the design for the organization, implantation, and evaluation related to the discipline. The study of the phenomenon of the vigorous human movement and its multiple manifestations. To study the professional recommendation and rules that applies. Curricular segment production with integrated technology.

Three (3) hours of lecture per week.

ERDEF 412 **TEACHING METHODOLOGY K-6** **3**
Pre-requisite: ERDEF 410

A critical test of the theories and the practices for the implantation of teaching-learning process in physical education in the elementary level. Focus application, models, strategies, techniques, procedures, and quality elements associated to the achievement in the educational objectives in this class orientated as the holistic learning of the elementary level. Learning the documentation making use of technology. It requires real experiences in the working environment.

Three (3) hours of lecture per week.

ERDEF 413 **TEACHING METHODOLOGY 7-12** **3**
Pre-requisite: ERDEF 411

A critical test of the theories and the practices for the implantation of teaching-learning process in physical education in the secondary level. Focus application, models, strategies, techniques, procedures, and quality elements associated to the achievement in the educational objectives in this class orientated as the holistic learning of the secondary level. Learning the documentation making use of technology. It requires real experiences in the working environment.

Three (3) hours of lecture per week.

ERDEF 490

**TEACHING TEACHER'S PRACTICE
EXPERIENCE IN THE TEACHING OF PHYSICAL
EDUCATION IN THE K-6 LEVEL**

6

Pre-requisite: Educ 328,115credits approved and 2.50 GPA as well as concentration point average.

Supervise teaching experience by a university professor with the help of a cooperative teacher in the traditional classroom and other scenes for the teaching of physical education in the elementary level. Application of the learning and methodology teaching theories and official appraisements related to the class and real job environment.

Twenty (20) hours of practice per week.

Practice fee: \$125.00

ERDEF 491

**PRACTICAL PRACTICE IN THE TEACHING
OF PHYSICAL EDUCATION LEVELS 7-12**

6

Pre-requisite: EDUC 328,115credits approved and 2.50 GPA as well as concentration point average.

Supervise teaching experiences by a university professor with the aid of a cooperative teacher in a traditional classroom or another environment for the teaching of physical education to secondary level students. Application of the learning and methodology theories in the teaching and official appraisements in the real job environment.

Twenty (20) hours of practice per week.

Practice fee: \$125.00

GEEN 104

ENGINEERING DRAWING

3

The course introduces to the field of engineering graphics as a design and documentation tool. Topics include free hand drawing, orthographic projections, points, lines, planes, solids, sections, isometrics, oblique drawing, dimensioning, and feature control symbols.

Two (2) hours of lecture and two (2) hours of laboratory per week.

Lab fee: \$65.00

GEEN 105

ENGINEERING GRAPHICS AND DESIGN

3

Pre-requisite: GEEN 104

An introduction to graphical language techniques used in engineering, including the application of basic delineation, symbols and standards to solve engineering space problems. The course includes the application of descriptive geometric principles, like distances and angles between lines and planes; and rotation problems, as graphic design tools in engineering. The students apply vector graphics solutions as engineering analysis and design tools.

Two (2) hours of lecture and two (2) hours of laboratory per week.

Lab fee: \$65.00

GEEN 106 COMPUTER GRAPHICS & DESIGN I 3
Pre-requisite: COSC 101 and GEEN 104

This course introduces the fundamentals of computer aid design (CAD) in engineering. It emphasizes in the application of engineering graphics using a CAD software like AutoCad or other similar program.

Two (2) hours of lecture and two (2) hours of laboratory per week.

Lab fee: \$100.00

GEEN 108 COMPUTER GRAPHICS AND DESIGN II 3
Pre-requisite: GEEN 106

Advanced computer drawing in engineering. The course focuses in Three-Dimensional graphical drawing using a CAD software like AutoCad or other similar program.

Two (2) hours of lecture and two (2) hours of laboratory per week.

Lab fee: \$100.00

GEEN 212 ENGINEERING STATICS 3
Pre-requisite: MATH 230 and PHYS 201

This course introduces to the analysis of forces and moment systems through force vectors. It discusses the equilibrium laws over particles and rigid bodies, including the study of simple trusses, frames, beam's internal forces, friction forces, centroid and moment of inertia of geometric sections. **Three (3) hours of lecture per week.**

GEEN 213 ENGINEERING DYNAMICS 3
Pre-requisite: GEEN 212

The course introduces to the rigid-body kinematics and kinetics applied to engineering problems. It emphasizes on Newtonian dynamics of particles and rigid bodies, work and energy, impulse and momentum, impact and relative motion of a system of rigid bodies in plane motion.

Three (3) hours of lecture per week.

GEEN 221 MATHEMATICAL METHODS FOR ENGINEERING 3
Pre-requisite: MA TH 304

Mathematical methods applied to the specific solution of engineering problems with an introduction to numerical methods and computer software. The topics of study included the solution of linear algebraic equations, vector calculus, matrices, Fourier series, partial differential equations, and numerical analysis. In this course, students apply your knowledge of previous mathematics courses to the solution of a variety of engineering problems.

Three (3) hours of lecture per week.

GEEN 245 ETHICS FOR ENGINEERING 3

The course focuses on the moral and legal aspects of ethics and the application of these concepts to a variety of engineering disciplines.

Three (3) hours of lecture per week.

GEEN 310 ENGINEERING UNDERGRADUATE RESEARCH 3

Pre-requisite: Approval of Department Director or Program Coordinator

This course is for undergraduate research under the direct supervision of a faculty member. In this course the students acquire the necessary skills for doing research and showing results. The research topic could be selected by the student and/or faculty.

One (1) contact hour and eight (8) hours of student research per week.

GEEN 356 LECTURE OF CONSTRUCTION DOCUMENTS 3

Pre-requisite: GEEN 105

A study of construction documents including reading and interpreting of construction drawings and specifications for projects from civil drawings, architectural drawings, structural drawings, mechanical drawings, electrical drawings and finishes.

Three (3) hours of lecture per week.

GESC 101 FUNDAMENTALS OF GENERAL SCIENCES 4

An introductory interdisciplinary course in natural sciences. Emphasis on the general concepts of Biology, Chemistry and Physical Sciences. The course is designed for non -science Concentrations.

Four (4) hours of lecture and a two (2) hours laboratory per week.

Lab fee: \$115.00

HUMA 101 STUDY OF WESTERN CULTURE AND CIVILIZATION I 3

The course focuses on theoretical and critical analysis of economic, political, and socio-cultural processes and military conflicts of the great civilizations of mankind. Beginning from the appearance of mankind, the populace of the Near East, the classical Greco-Roman until the beginning of the Middle Ages. The course develops from the research of the Concentration cultural, religious, philosophical contributions and its application to present.

Three (3) hours of lecture per week.

HUMA 102 STUDY OF WESTERN CULTURE AND CIVILIZATION II 3

Pre-requisite: HUMA 101

This course includes the study of Western civilization, from the Middle Ages to the 21st century. It analyzes the philosophical and cultural thought of the population that make up the so-called

Western civilization. Economic, political, and socio-cultural processes and military conflicts of the population of Europe and its influence on the changes experienced by the Western society in our time are identified.

Three (3) hours of lecture per week.

HUMA 206 HISTORY OF THE UNITED STATES 3
(CONDENSED)

The course provides a historical background of the economic, political and socio-cultural development of the United States, from its origins to modern times. Emphasis will be given to the development of colonial institutions, constitutional policy, and the democratic system, the rise of capitalism as an economic system and the problems of the American nation in the 21st century. An overview of the contributions made by the American people is presented to humanity.

Three (3) hours of lecture per week.

HUMA 209 HISTORY OF PUERTO RICO I 3

The course studies the geological origins, the environment and the location of the Puerto Rican archipelago in the Caribbean context. Study of the pre-Hispanic cultures and its historical legacy. Stresses the formation and development of the Puerto Rican society from its origins to the 18th century. Study the institutions of colonial government in America and the process of economic development in Puerto Rico. Examines the role of the Church in the formation and character of the Puerto Rican, as well as folklore and the outstanding artistic expressions.

Three (3) hours of lecture per week.

HUMA 210 HISTORY OF PUERTO RICO II 3
Pre-requisite: HUMA 209

The study of the formation and development of Puerto Rican society between the 19th and 20th century. Emphasis will be given on the most important economic events, political and social occurrences during the Spanish Colonial regimen, and after the change of sovereignty to the present.

Three (3) hours of lecture per week.

HUMA 215 HISTORY OF PUERTO RICO 3

Synthesis of economic, political, and socio-cultural processes and armed conflicts in the history of Puerto Rico, from its origins to the present. The discussion of the impact of changes before and after 1898 is integrated. The importance of the geographical location of the Puerto Rican archipelago is analyzed from the 16th to the 21st century.

Three (3) hours of lecture per week.

INEN 402 OPERATIONS RESEARCH II: PROBABILISTIC MODELS 3

Pre-requisite: INEN 401

Simulation modeling and analysis, queuing theory, engineering applications to industrial problems.

Three (3) hours of lecture per week.

INEN 403 SYSTEMS SIMULATION 3

Pre-requisites: INEN 312 and COSC 204

Modeling the interrelationship between system components by means of computer programs; generation of stochastic varieties; emphasis is placed on problem solving.

Two (2) hours of lecture and two (2) hours of laboratory, computation per week.

Lab fee: \$50.00

INEN 405 COMPUTER-BASED INFORMATION SYSTEMS 3

Pre-requisite: INEN 313, COSC 204

Analysis and design of management information systems, theory of communication and information flow; methods of collecting and controlling information, development of information processing systems.

Two (2) hours of lecture and one (1) hour of laboratory, computation per week.

Lab fee: \$50.00

INEN 410 HUMAN RESOURCES MANAGEMENT 3

Pre-requisite: INEN 422

Analysis of techniques for selecting and training, using effectively and controlling human resources.

Three (3) hours of lecture per week.

INEN 411 QUALITY CONTROL 3

Pre-requisite: INEN 312

Statistical control of the quality of production processes, analysis and design of sampling inspection plans, control charts, cause and effect diagrams, simulation of random processes.

Two (2) hours of lecture and a two (2) hour laboratory, computation per week.

Lab fee: \$50.00

INEN 412 PRODUCTION PLANNING I 3

Pre-requisite: INEN 312

Process analysis, project analysis, design of operations, facility planning, forecasting, aggregate planning, inventory control, material requirement planning, and scheduling are studied.

Three (3) hours of lecture per week.

INEN 413 PRODUCTION PLANNING II 3
Pre-requisite: INEN 412

Modern concepts in production control systems. Bill of materials, capacity planning, shop floor control, cycle counting, system implementation, master production scheduling.
Three (3) hours of lecture per week.

INEN 415 INDUSTRIAL SAFETY 3
Pre-requisite: CIEN 313

Analysis and prevention of work accidents, costs, safety measures, accident problems in Puerto Rico, and public safety policies.
Three (3) hours of lecture per week.

INEN 421 ACCOUNTING FOR ENGINEERS 3
Pre-requisite: INEN 323

Fundamentals of accounting for management planning and control, cost accounting, budgeting and use of the accounting information in management decisions in Engineering.
Three (3) hours of lecture per week.

INEN 422 WORK MEASUREMENT 3
Pre-requisites: INEN 312 and INEN 313

Work measurement systems. Time studies, standard data, predetermined time systems, work sampling.
Three (3) hours of lecture and two (2) hour laboratory, computation per week.
Lab fee: \$50.00

INEN 423 COST ANALYSIS 3
Pre-requisite: INEN 421

Methods used in industry for budgeting, recording, analyzing and controlling costs. The role of the engineer in profit planning, design and operation of cost systems, standard cost, and financial statement analysis.
Three (3) hours of lecture per week.

INEN 432 ROBOTICS AND AUTOMATED SYSTEMS 3
Pre-requisite: COSC 204

Use of the computer to control processes using digital and analysis signals. Design processed using electrical, pneumatic, and hydraulic systems. Introduction to programmable logic controllers, industrial robots, and control systems.
Two (2) hours of lecture and two (2) hours of laboratory, computation per week.
Lab fee: \$80.00

INEN 433 FACILITIES PLANNING AND DESIGN 3
Pre-requisites: INEN 412 and INEN 422

Planning, locating and laying out of facilities. Handling of materials; operations research techniques applied to engineering design of facilities.

Two (2) hours of lecture and a one (1) hour laboratory, computation per week.

Lab fee: \$30.00

INEN 481 INDUSTRIAL ENGINEERING CAPSTONE I 3
Requisites: Approval of Department Director or Program Coordinator. Must have 140 credits approved, including at least 26 in concentration credits.

This course is the first part of the Industrial Engineering Mayor Design Experience (Capstone Project). At the end of this course, the student is required to complete a feasibility study for an Industrial engineering problem proposed by the professor or students at the beginning of the course. A professor will be assigned to provide guidance and evaluate students. The project should be made in groups; the scope of the project must be adjusted depending on the group's size. The students will have several presentations and written reports. The course will end with a written report and the project's final presentation, open to the whole academic community. The evaluation depends on all the presentations, reports and evaluation of the group work.

One (1) contact hour and eight (8) hours of laboratory, computation weekly.

Lab Fee: \$250.00

INEN 482 INDUSTRIAL ENGINEERING CAPSTONE II 3
Pre-requisite: INEN 481

This course is the second part of the Industrial Engineering Mayor Design Experience (Capstone Project). At the end of the course, the student is required to implement the solution (i.e Feasibility Study) to the problem proposed on INEN 481. A professor will be assigned to guide and evaluate the students. The project will be made in groups; the scope of the project will be adjusted depending on the group's size. The students will have several presentations and written reports. The course will end with a written report and the project's final presentation, open to the whole academic community. The evaluation depends on all the presentations, reports and self-evaluation of the group work.

One (1) contact hour and eight (8) hours of laboratory, computation weekly.

Lab Fee: \$250.00

INEN 495 INDUSTRIAL ENGINEERING PRACTICE 3
Pre-requisite: Approval of Department Director or Program Coordinator. Must have 150 credits approved, including at least 30 in concentration credits.

The student will provide an industrial engineering solution to a practical or technical problem. The students are required to have a period of practice equivalent to three credit hours during a semester. A professor and tutor will be assigned to supervise, advise and guide the students. It is required to coordinate with the Director of the department or Coordinator, an agency in which

Fifteen (15) hours of practice per week and one additional hour of conference per week. This course is scheduled on the last semester before graduation.

Practice fee: \$125.00

MARK 111 INTRODUCTION TO PUBLIC RELATIONS 3

The role of public relation in organizations and society; its function as an element of growth in the enterprise field, and as a complement for the marketing and budgeting plans in business and government agencies. A necessary devise that enables the management to establish effective communication with the public or clientele. How successful public relations programs are developed and implemented is analyzed.

Three (3) hours of lecture per week.

MARK 133 FUNDAMENTALS OF MARKETING 3

Marketing as a business function and a social process. Problems and policies of manufacturers, wholesalers and retailers in the marketing of goods and services. Channels of distribution, unfair competition, functions or roles of departments, market research and analysis.

Three (3) hours of lecture per week.

MARK 135 FUNDAMENTALS OF RETAILING 3

Pre-requisite: MARK 133

A study of the merchandising functions for the modern retail store, layout, location, management, policy formation, control, publicity, personal practices, and pertinent legislation.

Three (3) hours of lecture per week.

MARK 201 FUNDAMENTALS OF COMMUNICATION 3

Pre-requisite: MARK 133

Study of the fundamental concepts of marketing, including the social, economic and creative aspects, involved in the work of the advertising agencies and their sub-divisions. Also studied are the basic elements of public relations and the different strategies leading to advertising campaigns through the use of the different media.

Three (3) hours of lecture per week.

MARK 233 CONSUMER BEHAVIOR 3

Pre-requisite: MARK 133

Seeks to provide the student an understanding of the decision making processes affecting consumer behavior and the general psychology of human behavior.

Three (3) hours of lecture per week.

MARK 235 **FUNDAMENTALS OF ADVERTISING** **3**
Pre-requisite: MARK 133

Thorough analysis of the fundamentals of advertising, planning, development and implementation, using the management decision making processes.
Three (3) hours of lecture per week.

MARK 303 **SALESMANSHIP** **3**
Pre-requisite: MARK 133

General principles of personal selling in both consumer and industrial markets. Specialty selling.
Three (3) hours of lecture per week.

MARK 306 **MARKETING MANAGEMENT** **3**
Pre-requisite: MARK 133

Studies the principles, functions and practices involved in buying, selling, transporting, storing, grading, distributing and financing of goods. Emphasis is given to the selection, training, supervision, compensation, and stimulation of salesmanship as a profession.
Three (3) hours of lecture per week.

MARK 308 **INTERNATIONAL MARKETING** **3**
Pre-requisite: MARK 133

A survey of the aspects involved in marketing products and services in the international market including, tariffs, cultural restrictions, business environment and legal restrictions. It presents the function of local and national businesses and how it influences in the stability of the international markets.
Three (3) hours of lecture per week.

MARK 309 **SALES MANAGEMENT** **3**
Pre-requisite: MARK 133

Studies the organization of sales departments and aspects related to product research, personnel selection and recruiting, including compensation plans, routing, supervision and cost analysis. Included in this course is a discussion of the different problems confronted by sales executives.
Three (3) hours of lecture per week.

MARK 310 **MARKETING RESEARCH** **3**
Pre-requisites: MARK 135, MARK 201 and MARK 233

It presents and studies the use of the scientific method in gathering, analyzing and interpreting of data. Emphasis is placed on gathering, registering and using data in the decision-making process of marketing strategies. It includes investigation, evaluation and segmentation of market for designing and implementing an effective public relations program.
Three (3) hours of lecture per week.

MATH 100**PREPARATORY MATHEMATICS****3**

This course explores the basics of mathematical logical language, which will be used in the following mathematics courses. Basic concepts of theory, the properties of the system of real numbers, operation of arithmetic of cardinal numbers, whole numbers, fractions, decimals and percents are studied. This course adapts to the individual needs of students and integrates a math skills laboratory.

Three (3) hours of lecture per week and two (2) hours of laboratory per week.

MATH 101**INTRODUCTION TO COLLEGE MATHEMATICS I 3**

This course offers the students the opportunity to prepare to take advanced courses in the area of mathematics, including solving verbal problems. It begins with the study of real numbers, the number line and the concept of order. The rules of exponents, basic operations and factorization of polynomials, solving equations and inequalities with a variable, graphs and basic operations with algebraic fractions is studied. This course adapts to the individual needs of students and integrates a math skills laboratory.

Three (3) hours of lecture per week and two (2) hours of laboratory per week.

MATH 102**INTRODUCTION TO COLLEGE MATHEMATICS II 3**

Pre-requisite: MATH 101

This course emphasizes the study of linear equations with two variables, systems of linear equations, radicals, equations with radicals and quadratic equations. In addition, the basic concepts of intuitive geometry are introduced. The solution and application methods are used with oral problems.

Three (3) hours of lecture per week.

MATH 120**GEOMETRY****3**

Pre-requisite: MATH 102

This course is intended, to impart the fundamental concepts of geometry, which allow the student to develop deductive reasoning. Examines the abstract themes of geometry, relating them with experiences of the student in their daily living, thus learning to investigate and analyze situations, making use of the concepts, postulates and theorems of this discipline. The course commences with the detailed study of the basic concepts: point, straight and plane, their geometric representations, classifications and operations. The postulates, theorems, and fundamental corollaries of the Euclidean geometry including similarity and parallelism are studied. The properties of plane and solids figures, as well as determining its perimeter, area and volume are shown. The solution of oral problems and geometric constructions using compass, conveyor and rule is applied.

Three (3) hours of lecture per week.

MATH 303 **THEORY OF NUMBERS** **3**
Pre-requisite: MATH 230

Study of divisibility, congruencies, Euclidean algorithm, prime numbers, Euler's function, quadratic residues, Diophantine equations.

Three (3) hours of lecture per week.

MATH 304 **DIFFERENTIAL EQUATIONS** **3**
Pre-requisite: MATH 302

This course introduces to the solution of differential equations: first order equations, linear equations with constant coefficients, second order linear differential equations, numerical methods, series solutions, existence theorems, systems of simultaneous differential equations, differential operators and applications.

Three (3) hours of lecture per week.

MATH 309 **LINEAL ALGEBRA** **3**
Pre-requisite: MATH 230

Study the systems of linear equations, vector spaces, linear dependence, bases, dimension, linear mapping, matrices, matrix algebra, determinants, eigenvectors and eigenvalues.

Three (3) hours of lecture per week.

MATH 319 **INTRODUCTION TO PROBABILITY** **3**
AND STATISTICS

Pre-requisite: MATH 230

The course introduces experimental and theoretical statistics. It focuses on the application of mathematical testing in engineering. The course includes descriptive statistics, samples, probability distributions, hypothesis tests, correlations and regressions, as well as, elements of probability, theorems of conditional probability, independent and mutually exclusive events.

Three (3) hours of lecture per week.

MATH 340 **ALGEBRAIC STRUCTURES** **3**
Pre-requisite: MATH 309

In this course groups, subgroups and groups ratios, normal subgroups, homeomorphisms, permutations, Abelian groups, Jordan- Schönflies curve theorem, rings, vector spaces theorems, ratios, ratios rings, rings of polynomials, auto orphisms, factoring over a field, extension, algebraic extensions and introduction to the theory of Galois fields are studied.

Three (3) hours of lecture per week.

NURS 207 **PROCESS WITH CHILDREN AND ADOLESCENT** **5**

Pre-requisite: NURS 205

In this course, the student acquires knowledge about the different stages of children's growth and development, from infancy through adolescence. Health disorders that affect growth and development, taking into account social, cultural aspects and public policy are studied. Integrate aspects such as family environment, community resources and laws that guard the health, well-being and the protection of the child in the community. With this knowledge the student, using and integrating the nursing process, may intervene with infants, children, adolescents and family in the phases of prevention, maintenance and health deviation stages, with emphasis on the factors that affect the customers self-care.

Three hours (3) of lecture and six (6) hours of clinical practice per week.

Lab fee: \$150.00

Practice Fee: \$50.00

NURS 208 **PRINCIPLES IN RESEARCH AND EVALUATION** **3**

Pre-requisite: STAT 117

This course is designed so that students develop basic skills in the process of scientific research and the use in nursing practice. Describes the changes in the principles of research. The student will use and apply the scientific method in the solution of existing problems, integrating the ethical, moral and legal aspects in research. The different roles that the nursing professional plays in the practice of his profession are also discussed. The research process will be used in the analysis and interpretation of the findings in the solution of problems and/or recommendations.

Three (3) hours of lecture per week.

NURS 235 **PRINCIPLES OF MORAL AND ETHICS IN NURSING** **3**

This course is designed to help professionals in nursing address ethical issues and real life dilemmas from the diverse social, cultural, and religious perspectives. It provides the basic knowledge relating to the legislation applicable to the role of nursing and the theoretical frameworks of ethics. Moral aspects of the profession, as well as laws and their implications for the practice of nursing for the decision-making of client, family and community are discussed.

Three (3) hours of lecture per week.

NURS 309 **PROCESS WITH ADULTS AND THE ELDERLY I** **5**

Pre-requisites: NURS 102 and NURS 103

Co-requisite: NURS 207

The course is based on the principles of patient, family and community care in the different stages of growth and development. It emphasizes basic needs affected in the young, middle and older adult. It discusses stages of growth and development, balance of fluids and electrolytes,

OSAD 113 **SPANISH SPEEDWRITING SYSTEMS** **4**

Develops speed writing skills in Spanish through reading, writing and hand transcriptions. Emphasizes the correct use of grammar and punctuation. At the end of the semester students must be able to take dictation of the least 60 words per minute and transcribe at a rate of 14 words per minute with 85% accuracy.

Fours (4) hours of lecture per week.

OSAD 125 **ELEMENTARY KEYBOARDING** **3**

Course covers the techniques of typing and the correct use of the computer keyboard. Students study and master different keyboarding techniques and user interface: hardware and software. They also learn to operate the keyboard, format basic business documents, simple reports and basic table. At the end of the semester students should be able to type 26 words per minute with a maximum of 5 errors maximum.

Three (3) hours of lecture per week.

Lab Fee: \$25.00

OSAD 126 **DOCUMENTS PRODUCTION I** **3**

Pre-requisite: OSAD 125

Teaches the techniques for speed and accuracy in keyboarding, emphasizing the application of skills to letter and memo formats, table and tabs to enhance document formats. At the end of the semester students should be able to type 35 words per minute with a maximum of 5 errors.

Three (3) hours of lectures per week.

Lab Fee: \$25.00

OSAD 214 **SPANISH TRANSCRIPTION** **3**

Pre-requisite: OSAD 113 and OSAD 126

Development of transcription skills. Emphasis on correct use of the Spanish language, word division, punctuation, spelling, arrangement of letters and proofreading. At the end of the semester students should be able to take dictation at a speed of 70 words per minute and transcript using a computer at a rate of 14 words per minute.

Three (3) hours of lecture per week.

Lab Fee: \$25.00

OSAD 225 **DOCUMENTS PRODUCTION II** **3**

Pre-requisite: OSAD 126

Emphasizes the further development of speed and accuracy in Keyboarding; application of skills to letter arrangements, writing of letters in the computer; tabulated business forms reports and manuscripts. Minimum requirement at the end of the course: 40 words per minute with a maximum of 6 errors. **Three (3) hours of lecture per week.** Lab Fee: \$25.00

OSAD 280 RECORDS MANAGEMENT 3

Introduces the students to the various filing systems with emphasis on the rules of alphabetical, numerical, geographical, subject and other filing systems. Covers control of office documents.

Three (3) hours of lecture per week.

OSAD 287 LAW OFFICE MANAGEMENT 3

Pre-requisite: OSAD 126

Studies the techniques, procedures, and terminology frequently used in a law firm and aspects related to the functions and responsibilities of a legal secretary.

Three (3) hours of lecture per week.

OSAD 289 MEDICAL OFFICE MANAGEMENT 3

Covers clinical and administrative techniques that are generally used in medical offices, clinics and hospitals. Emphasis is given to the usage and handling of instruments used in a medical office: the microscope, sterilizer, electro-cardiograph, stethoscope, neurological hammer, ophthalmoscope, thermometer and others. Medical terminology and the proper way to fill out medical forms used at the office are covered.

Three (3) hours of lecture per week.

OSAD 290 ETHICS AND ETIQUETTE FOR PROFESSIONAL 3

Study of the ethics, etiquette, civility, and good manners norms to applied to the economics and professional activities in the public as well as private sectors. Its content is based on the believe that the knowledge and practice of good manners are the base of good social and professional relations.

Three (3) hours of lecture per week.

OSAD 325 OFFICE INFORMATION SYSTEMS 3

Pre-requisite: OSAD 125

Covers the creation and revision professional looking documents such as announcements, letting, resumes, reports, brochures, advert, and newsletters. The student learns all the features of a word processing program.

Three (3) hours of lectures per week.

OSAD 326 SPREADSHEETS & ELECTRONIC PRESENTATIONS 3

Pre-requisite: OSAD 325

Seeks to develop skills to organize data, complete calculations, make decisions, graph data, and develop professional looking reports with a spreadsheet program. The student learns to produce professional looking presentations.

Three (3) hours of lectures per week.

POSC 204 **PENAL LAW AND SYSTEMS** **3**
Pre-requisite: POSC 102

Study of the dispositions of Law 149 -Penal Code of Puerto Rico. Students have the opportunity to relate themselves with the penal system in our country and determine their effectiveness. Analysis of jurisprudence of the Supreme Court of Puerto Rico.

Three (3) hours of lecture per week.

POSC 207 **LAW OF EVIDENCE AND COURT PROCEDURES** **3**
Pre-requisite: POSC 102

Study of the Rules of Evidence and their application in the judicial process in Puerto Rico. Analysis of jurisprudence of the Supreme Court of Puerto Rico is covered.

Three (3) hours of lecture per week.

PSYC 101 **INTRODUCTION TO PSYCHOLOGY I** **3**

The course introduces the basic principles and methods of psychology from a bio psychosocial approach. It includes the analysis of the development of psychology as a science. It emphasizes strategies for research and application of the scientific method, strengthening the development of critical thinking of the problems affecting the individual and society. The biological basis of behavior, sensation and perception, motivation and emotion, thought and language, learning, development lifecycle, memory and social psychology is studied.

Three (3) hours of lecture per week.

PSYC 102 **INTRODUCTION TO PSYCHOLOGY II** **3**
Pre-requisite: PSYC 101

The course continues the study of the basic principles of psychology. It includes the study of intelligence and personality, the factors that influence their development, theories and its measurement. The effects of stress on physical and mental health, mental disorders, and therapeutic approaches in psychology are studied. It applies the scientific method considering variables such as diversity and the phenomenon of globalization.

Three (3) hours of lecture per week.

PSYC 204 **SOCIAL PSYCHOLOGY** **3**
Pre-requisite: PSYC 102

This course focuses on the social and cultural factors that affect human behavior: social perception, attitudes, social influence and social action. Includes the study of pro-social behavior and an approach is made to the nature, causes and the control of aggression. Applying skills of critical analysis, students will recommend alternatives to prevent and address social problems.

Three (3) hours of lecture per week.

SOWO 210

HEALTH AND HUMAN ECOLOGY

3

The course analyzes the influence of the environment in physical health, social, mental and emotional in Puerto Rico, from the eco-systemic perspective. The conditions of health and its relationship with the social functioning of individuals, groups, families and communities are investigated. It emphasizes the interrelation of various disciplines and the public policy established in the provision of services in different scenarios and populations.

Three (3) hours of lecture per week.

SOWO 211

**INTRODUCTION TO THE STUDY OF
SEXUALLY TRANSMITTED DISEASES**

3

It studies the importance of prevention and treatment of sexually transmitted diseases, and their physical, social, and emotional implications. It also analyses the role of the social worker in the health system.

Three (3) hours of lecture per week.

SOWO 212

**INTRODUCTION TO THE STUDY
OF CHILD ABUSE**

3

The course focuses on the definition, the dimensions and implications of child abuse. The different forms of child abuse and its effect in the short and long term in the lives of victims and their impact on society are studied. The discussion on public policies relevant to the social situation, as well as the services offered by the state.

Three (3) hours of lecture per week.

SOWO 213

**VIOLENCE IN THE CONTEMPORARY
PUERTO RICAN SOCIETY**

3

The course is directed toward the study of violence in Puerto Rico, analyze the causes and the factors that affect this social problem. The models of intervention that uses the social worker for the management of the violent individuals and their families are studied; from a comprehensive and preventive approach.

Three (3) hours of lecture per week.

SOWO 217

**INTRODUCTION TO THE STUDY
OF GERONTOLOGY**

3

The course introduces concepts related to Gerontology and Geriatrics. Social considerations and institutional services are examined to elderly people. It includes the role of the Social worker with this population, from the legislative perspective related to the rights of elderly persons. The dimension of sexuality in older persons and the respective changes are analyzed. It describes the biological, psychological and social processes that occur prior to death and the strategies appropriate for the management of the loss.

Three (3) hours of lecture per week.

SOWO 310 METHODS AND TECHNIQUES OF SOCIAL 4
SCIENTIFIC RESEARCH

Pre-requisite: SOCS 215
STAT 117 (Only for Speech Language Therapy)

The course emphasizes the relevance of scientific research in the field of social sciences and of the conduct. The student applies skills, procedures, strategies, methodologies and techniques for the design, verification and exploration of social phenomena. It requires the development of a research proposal.

Four (4) hours of lecture per week.

SOWO 350 HUMAN BEHAVIOR IN THE SOCIAL 3
ENVIRONMENT

Pre-requisite: SOCS 101

The course introduces on human behavior in interaction with the social environment. The transactions and interrelationships between the individual, families, groups and community in close relation to other systems of society are analyzed. The individual is studied in an integrated manner using the systemic perspective, ecological, and organizational roles in addition to other theoretical perspectives necessary for the widespread practice of Social Work.

Three (3) hours of lecture per week.

SOWO 352 FAMILY AS A SOCIAL SYSTEM 3

Pre-requisites: SOWO 350 and PSYC102

The course emphasizes the family as part of an interaction social system in the social context. It discusses the structural and functional characteristics, cycle of family life, changes in the family through the time, followed by the economic and social prospects. It also looks at all aspects of family theories and dynamic in the family. With the knowledge acquired through analysis and practice exercises it is expected that the student will be able to speak during the process to help with all kinds of family.

Three (3) hours of lecture per week.

SOWO 382 ETHICS, PROFESSIONAL RELATION AND 3
INTERVENTION IN SOCIAL WORK

Pre-requisite: SOWO 268

This course emphasizes the study of concepts, theoretical and methodological frameworks of the social system of services to strengthen the process of professional intervention. It analyzes the Code of Ethics of the Professional Social Work Association in Puerto Rico in the establishment of social intervention. The student starts in the implementation of the skills and techniques required of communication, interviews, writing of histories, and drafting of reports.

Three (3) hours of lecture per week.

SOWO 490 **SOCIAL WORK AND THE LAW** **3**
Pre-requisites: SOWO 274 and SOWO 306

The course provides the student the opportunity to learn about the connection between Social Work and the laws. It emphasizes the operationalization of social policies in various scenarios governed by laws, which govern the provision of human services. The student will learn and analyze laws and issues related to the judicial scenario and its relevance in the ethical-professional role.

Three (3) hours of lecture per week.

SOWO 492 **METHODOLOGY IN SOCIAL WORK I** **3**
Pre-requisites: SOWO 382 and SOWO 352

In this course, the student will apply communication skills, interview and perform assessment in the field of Social Work. It focuses on the identification of social situations that affect the participants and the application of methods of intervention. The student will select the right model to meet the client system. It focuses on the implementation of the models: troubleshooting, intervention with families, ecological and bio-psychosocial.

Three (3) hours of lecture per week.

SOWO 494 **METHODOLOGY IN SOCIAL WORK II** **3**
Pre-requisite: SOWO 492
Co-requisite: SOWO 496

During this course, the student applies knowledge, skills, techniques and strategies related to the methodology of intervention of Social Work in the support process. It applies theories, models, and conceptual frameworks, which facilitate the study, analysis, and considering of the social situations that impact individual, family, groups and communities. It includes a review of the principles and concepts of the generic approach in social work and problem-solving model during the process of support. It emphasizes the concepts of crisis intervention, family therapy, social action and conflict mediation. The students establish ideas on the needs, areas to improve, strengths, and processes of the population to be attended.

Three (3) hours of lecture per week.

SOWO 495 **SOCIAL WORK WITH COMMUNITIES** **3**
AND SMALL GROUPS
Pre-requisite: SOWO 268

The course initiates the student in the study of characteristics and methods of intervention of social work with small groups and communities. It covers the models of intervention with the communities, the strategies and techniques for working with both systems. It provides the knowledge, skills and abilities required of the future social worker to help the small groups and communities to achieve their social status.

Three (3) hours of lecture per week.

SOWO 496**SEMINAR AND SOCIAL WORK PRACTICE I 6****Pre-requisite: Approval of 100 credits and approval of Program Coordinator**

This course provides experiences that will help the student in their development as a professional in social work. The Manual of Supervised Practice in Social Work from Caribbean University is studied, analyzing in detail the duties, responsibilities and desirable attitude of the practitioner. The course integrates the seminar and the practical experience. The seminar offers the opportunity to review concepts related to the comprehensive social intervention. In the practice experience, the student begins in the exercise of the profession.

Three hundred (300) hours per semester.

Practice fee: \$100.00

SOWO 497**SOCIAL WORK PRACTICE II 6****Pre-requisites: SOWO 492 and SOWO 496. Approval of Program Coordinator.**

Internship that provides intensive experience to develop the self-awareness essential to the social work profession. The course offers the opportunity, and expects the students, to perform as an independent beginning professional. All students taking this course must follow the guidelines in the Practice Manual.

Three hundred (300) hours per semester.

Practice fee: \$100.00

SPAN 100**PREPARATORY SPANISH 3**

This course reinforces basic spelling skills: use of lyrics doubtful use of questionable spelling, use of uppercase or lowercase letters, accentuation and punctuation rules applying in writing of sentences. In addition, increases the conception and use of the Spanish Lexicon, integrating the analysis of reading with writing simple sentences. The course includes laboratory and technology sessions as complements for the achievement of the objectives, adapted to the individual needs of the students.

Three (3) hours of lecture per week and two (2) hours of laboratory per week.**SPAN 101****BASIC COURSE IN SPANISH 3**

The course introduces the study of the Spanish grammar from the structural point of view grammar, functional, training and integrated perspective. It develops fundamental skills of the language arts. Basic form is introduced the study of the origins of the Spanish and the conceptualization of the linguistic signs. The simple sentence syntactic formation is discussed. The course includes laboratory and technology sessions as complements for the achievement of the objectives, adapted to the individual needs of the students.

Three (3) hours of lecture per week and two (2) hours of laboratory per week.

SPAN 102 **BASIC COURSE IN SPANISH II** **3**
Pre-requisite: SPAN 101

This course continues the development of written communication skills. It is used as the basis for a structural, functional, training and integrated conception. The syntactic composition of the compound sentence and their different classifications is analyzed. The study of the principles of practical writing, through different types of paragraphs and composition. In addition, it is an introduction to the study and analysis of literary works, the news and advertising texts.

Three (3) hours of lecture per week.

SPAN 201 **BUSINESS COMMUNICATION IN SPANISH I** **3**
Pre-requisite: SPAN 102

The course introduces principles of analysis business writing and communication. It develops the grammatical skills necessary for the drafting of documents related to the business world. The student studies the psychological principles of business communication. Explains the basic and complimentary parts of the letter. The resume is drafted, the letter that accompanies the resume and the emails.

Three (3) hours of lecture per week.

SPAN 202 **BUSINESS COMMUNICATION IN SPANISH II** **3**
Pre-requisite: SPAN 201

The course consists of writing letters and documents related to the business world. The psychological characteristics of the style are applied in paragraphs of business letters and discuss grammatical aspects of an effective writing. It explores the format of business documents for the drafting of letters and reports, such as: letter of complaint, sales letter, resignation letter, letter of recommendation, circular letter, memorandum, among other documents. In addition, documents are analyzed and produced related to the business field.

Three (3) hours of lecture per week.

SPAN 213 **ORAL AND WRITTEN COMMUNICATION** **3**
IN SPANISH

Pre-requisite: SPAN 102

This course introduces the general principles of oral and written communication by setting their differences and methods. It develops the skills necessary to achieve the mastery of oral communication and written communication. In addition, studying the qualities of the style, which ensure effective communication through presentations and reports.

Three (3) hours of lecture per week.

SPAN 215 **INTRODUCTION TO LITERARY GENRES I** **3**
Pre-requisite: SPAN 102

This course is an introduction to the study of literary genres and literary communication. It intends to associate the student with representative works of the story and the novel. It develops language

SPLAT 306 HEARING DISORDERS 3
Pre-requisites: SPLAT 204 and SPLAT 206

This course provides for the study of science of audiologist. Include discussion and analysis of assessment for diagnosis, treatment and management of ear disease and hearing disorders. Include clinical observation experience.

Three (3) hours of lecture per week.

SPLAT 308 VOICE DISORDERS 2
Pre-requisites: SPLAT 204 and SPLAT 206

This course provides specialized knowledge in the areas of normal and disordered voice production with the primary focus in the physiological bases of dysphonic. Theoretical principles underlying the prevention, assessment and treatment. Include clinical observation experience.

Three (3) hours of lecture per week.

SPLAT 310 SIGN LANGUAGE 3
Pre-requisite: SPLAT 206

This course is an introduction to American Sign Language and Deaf Culture. It covers basic ASL skills, both receptive (seeing and understanding) and expressive (signing) as well as basic

Three (3) hours of lecture per week.

SPLAT 312 AURAL REHABILITATION 3
Pre-requisites: SPLAT 306

This course provides a philosophy and techniques of rehabilitating hearing impaired individuals. Emphasis placed on auditory development and training and application of speech reading techniques. Include clinical observation experience.

Three (3) hours of lecture per week.

SPLAT 315 ORAL ANOMALIES, CRANIUM-FACIAL & NEUROMOTOR DIFFICULTIES 3

Pre-requisites: SPLAT 204 and SPLAT 302

This course provide students with information of the communication problems related to craniofacial abnormalities like cleft palate, cleft lip, craniofacial anomalies, cerebral palsy, among others. The students learn and explore topics related to feeding problems and dysphagia and learn how to manage this population in therapy. This course includes clinical observation.

Three hours of lecture per week.

SPLAT 489-490 **CLINICAL PRACTICUM IN SPEECH AND LANGUAGE DISORDER I-II** **3-3**

Pre-requisite for SPLAT 489: SPLAT 390

Pre-requisite for SPLAT 490: SPLAT 489

Clinical experience supervised by Licenses Speech and Language Pathologist in approved clinical sites during two semesters. The practicum consists of minimum of 65 hours per semester of direct services to clients between 0-21 years old with communicative disorders. 15 hours in a Clinical Practicum Seminar are required during each semester. Clinical focus is on screening, planning and implementation of treatment procedures or articulation, language, voice and fluency disorders.

Three (3) hours of lecture per week.

Practice fee for each course: \$75.00

STAT 115-116 **ELEMENTS OF STATISTICS I-II** **3-3**

Pre-requisite for STAT 115: MATH 102

Pre-requisite for STAT 116: STAT 115

General theory of statistics; procedures for collecting and analyzing data. Graphing frequency distribution and curves, index members and the figuring of correlative statistical methods to solve business problems.

Three (3) hours of lecture per week.

STAT 117 **BASIC ELEMENTS OF BIO-STATISTICS** **3**

Pre-requisite: MATH 102

The use of basic principles of statistics in the health related areas; procedures on collecting and analyzing data, use of the figuring of correlative statistical methods of investigating health problems.

Three (3) hours of lecture per week.

STAT 330 **STATISTICAL ANALYSIS AND DESIGN** **3**

Pre-requisite: MATH 102

Study of general uses of statistics in data analysis. Emphasis is given to the following concepts: description, parameter, probability, sampling and distribution, statistics estimates, correlation and others.

Three (3) hours of lecture per week.

Lab fee for each course: \$50.00

UNIV 100 **INTRODUCTION AND ADJUSTMENT TO UNIVERSITY LIFE** **3**

This course aids the student in the process of adaptation to the university level, offering him/her the opportunity to develop a number of basic skills needed to achieve success. The personal, academic and educational adjustment of the student is stressed to facilitate his/her self-realization.

Three (3) hours of lecture per week

FULL TIME FACULTY

ALEJANDRO SERRANO, ANGEL M., Instructor- General Sciences – BS Biology (Pre-Medical Technology and Microbiology), Interamerican University – MS Environmental Management, UPR – MD Medicine, Central University del Este, San Pedro de Macoris, RD.

BERMUDEZ SANCHEZ, CARLOS, Instructor -Spanish- BA Hispanic Studies, UPR - MA Linguistics, UPR

CAMACHO ALICEA, ISRAEL, Instructor -Business Administration-Management, Marketing-BBA Management, UPR- MBA Management, Turabo University - JD – Law Interamerican University

CAMPOS BISTANI, LUIS F., Instructor -Civil Engineering – BSCE Civil Engineering, UPRRM – MS Environmental Engineering, Manhattan College - Ph.D Civil Engineering, UPRRM

CARRENO CHAVEZ, ROLANDO, Instructor – Engineering – BS Energy Engineering, National University of Santa, Chambote, Peru – MS Mechanical Engineering, UPRRM – PhD. Mechanical Engineering, West Virginia University

COLON CARPENA, ROSA M., Instructor- Criminal Justice- BA Elementary Education, Pontifical Catholic University of Puerto Rico – MA Criminal Justice, Interamerican University

CORDOBA RODAS, ANGIE, Instructor- Electrical Engineering – BS Mathematics, Escuela Colombina de Ingeniería, Julio Garavito – MS Computer Engineering (Computer System), UPR

CORDERO GARCIA, MARCO A., Instructor –Computer Sciences –BA Computer Sciences, USC- MS Management Information Systems, EDP College

COTTON LOPEZ, HECTOR I., Auxiliary Professor- Criminal Justice- BA Policies Sciences, International Institute of the America – MA Criminal Justice, Interamerican University

CUEBAS ROSARIO, MARINA, Instructor- English- BA English, UPR - MA TESOL, Interamerican University

CUEVAS NEGRON, MARLENE, Instructor- English – BA English Secondary, UPR – MA TESOL, Interamerican University

DALMAU SAMBOLIN, ALBERTO, Instructor- Mathematics- BC Engineering Civil, UPRRM - MS Mathematics (Statistics), UPRRM

DELGADO QUINTERO, RAFAEL, Auxiliary Professor-Management- BBA Accounting, Catholic University of Puerto Rico, MBA- Business Administration (Accounting, Management) Catholic University of Puerto Rico

FRANCO DOMINICCI, ANGEL R., Instructor – Education – BS Secondary Education (Spanish), UPR – MAE – Technology Educative & System de Instruction, Caribbean University – EdD – Curriculum & Teaching, Pontifical Catholic University of Puerto Rico Catholic

GALARZA ECHEVARRIA, RAMON A., Auxiliary Professor- General Sciences – BS Biology (Pre-Medical), UPR – MD Medicine, Central University of Este, RD.

GARCIA PALENCIA, OSCAR., Instructor – Electrical Engineering – BS Engineering Physics, University of Cauca, Popayan, Colombia- MS Electrical Engineering, UPRRM

GARCIA RAMOS, DEVORAH I., Instructor-English- BA Secondary Education (English), Caribbean University

GARCIA RIVERA, CARMEN L., Instructor-Social Work- BA Social Work, Interamerican University – MSW Social Work, UPR

GARCIA VILLAMIL, JOSE E., Instructor- Engineering Civil – BS Engineering Civil, Caribbean University - MSCE Engineering Civil, Michigan State University

GONZALEZ ORTIZ, SARA L., Auxiliary Professor - Speech and Language – BS Speech Language, UPR -MS Pathology Speech and Language, UPR

GONZALEZ SANTIAGO, ROSA A., Instructor-Spanish - BA Spanish, Interamerican University - MA Hispanic Studies, Catholic University of Puerto Rico.

GONZALEZ ZAYAS, GLENDA L., Instructor- Nursing – BSN Nursing, Pontifical Catholic of PR – MSN Medical Surgical Nursing, Pontifical Catholic of PR

HERNANDEZ ROMAN, LOURDES, Instructor- Spanish- BA Studies Hispanic, UPR- MA Studies Hispanic, UPR.

INFANTE MENDEZ, RAFAEL, Instructor-Chemistry- PhD Analytical/Physical (Chemistry), University of Nebraska - MS Analytical/Physical (Chemistry), University of Nebraska - BS in Chemistry, UPR

LA TORRE RODRIGUEZ, ANGEL E., Auxiliary Professor-Business Administration - BBA Management, Turabo University – MBA Marketing and Personnel Administration, Interamerican University

LAZO VILELLA, SANTIAGO, Auxiliary Professor- Sciences Computer - Ed.D Systems Information Management, Turabo University – MBA Information Systems, Pontifical Catholic University of Puerto Rico – BBA Computer Management in Business, Pontifical Catholic University of Puerto Rico

LEBRON CORTES, EMERITA, Instructor- Nursing- BSN Nursing, Pontifical Catholic University of Puerto Rico - MSN Medical Surgical Nursing, Pontifical Catholic University of Puerto Rico

LEON VELAZQUEZ, MADELINE S., Instructor – Chemistry - Ph.D Chemistry, UPR - MS Chemistry, UPR - BS Chemistry, UPR

LLORENS ALICEA, IDALIA I., Instructor- History - PhD Geography & History, Complutense University, Madrid - BA History, Pontifical Catholic University of Puerto Rico

LOPEZ MARTINEZ, LUIS., Auxiliary Professor– BA Social Sciences, UPR – MA Public Administration, Centro de Estudios Avanzados de Puerto Rico y el Caribe

LORENZO MERCADO, MIGUEL A., Instructor -Accounting – BBA Accounting, UPR, CPA

LUNA SERRANO, IRENE, Instructor- Nursing - BEd, Education (Health Education), National University College – MSN Nursing (Case Management), UMET

MANGUAL MIRANDA, MARIANITA, Auxiliary Professor - Educational Technology- BA Sciences (Sociology & Mathematics), UPR – MAE Technology Educational, Caribbean University

MARCUCCI GUTIERREZ, MYRNA M., Instructor-English – BS Secondary Education (English, Studies Social), Pontifical Catholic University of Puerto Rico- MAE Secondary Education (English), University Harthford Connecticut

MARQUEZ CASTRO, ABIMAEL, Instructor- Engineering – BS Architecture, Environmental Design, UPR – MS Architecture, UPR

MARRERO MARTINEZ, WILFREDO, Instructor – Nursing- BSN Nursing, Caribbean University- MSN Nursing (Gerontology), Caribbean University

MARTINEZ LUGO, LYGIA, Instructor-English – BS English, Interamerican University - MAE, Curriculum English, Caribbean University

MCKINLEY LEBRON, LARRY D., Instructor- Education – BS Sciences (Biology), USC- MS Education (Teaching of Science Secondary) Interamerican University

MENENDEZ BERRIOS, NAYRA I., Instructor – Nursing – BSN Nursing, National University College – MSN Nursing (Maternity, Childs, Adolescents), UPRRCM

MILLAN FUENTES, ALVIN., Auxiliary Professor– Speech, Language- BS Speech Therapy, UPR, Medical Sciences Campus – MS Speech, Language Pathology Medical Sciences Campus, UPR

NIEVES HERNANDEZ, SHEMUEL, Instructor-Spanish- BA Spanish (Secondary Education)
UPR – MAE Curriculum - Spanish, Caribbean University

O’FARRILL GARCÍA, ESTEBAN., Instructor-Business Administration- BA Economics,
Interamerican University – BBA Management, Interamerican University – MA Economics and
Sociology, Interamerican University

ORTIZ BONILLA, RAQUEL, Instructor-Nursing – BA Nursing, USC – MSN Nursing (Mothers
and Children’s), UPR

OTERO PAGAN ANA M., Instructor- Nursing – BSN Nursing, UPR – MSN Nursing (Adults),
UPR

PASTOR MARTINEZ, CARLOS C., Instructor -Business Administration - BBA Accounting,
Interamerican University – MBA Accounting, Interamerican University

PEREZ CASILLAS, ALBA N., Instructor – English – BA Secondary Education (English) – MA
Secondary Education, UPR

PEREZ MELENDEZ, GABINO E., Auxiliary Professor– Physical Education – BA Physical
Education in (Special Education & Elementary), UPR- MA Physical Education Adapted, UMET

PEREZ SANTOS, VILMA, Instructor-Nursing – BA Nursing, UMET – MSN Nursing (Critical
Care), UMET

PEREZ TORRUELLAS, EDNA M., Instructor- Social Sciences – BA Psychology, UPR – MA
Psychology, UPR - JD in Law, Interamerican University – PhD Psychology, Carlos Albizu
University

RAMOS NIEVES, JOSE A., Instructor – Social Sciences- BA Elementary & Secondary
Education, UPR- MA Puerto Rican Studies, Centro Estudios Avanzados de PR y el Caribe

RIVERA CALDERON, JUAN, Instructor – Spanish – BA Biology, UPR – MA Hispanic Studies,
UPR

RIVERA COLON, VILMA, Instructor - Speech and Language – BS Secondary Education (Conc.
Special Education / Subspecialty in Deaf Child), UPR – MS Pathology Speech and Language,
UPR

RIVERA MATOS, RUDOLPH, Instructor – Mathematics – BA Education (Mathematics), UPR –
MA Education (Mathematics) Interamerican University

RODRIGUEZ DAVILA, ILEANA., Instructor- History – BA System Office Administration,
Catholic University of PR – MA Commercial Education, Interamerican University – PhD
Philosophy, History, Interamerican University

RODRIGUEZ PAGAN, MICHELLE, Instructor – Social Sciences – BA Criminology, Pontifical Catholic University of Puerto Rico – MSP Clinic Psychology, Pontifical Catholic University of Puerto Rico

ROMAN OTERO, CELIS M., Instructor- Speech, Language – BS Speech Language, Medical Sciences Campus, UPR- MS Speech Language Pathology Medical Sciences Campus, UPR

ROSARIO TORRES, ZAIRA M., Instructor- Psychology – BA Social Psychology, UPR- MA Social Psychology, Universidad Nacional Autónoma de México

ROSAS CINTRON, NELSON A., Instructor-Physical Education – BA Physical Education, UPR – MA Physical Education Secondary, New York University.

RUBERO RIVERA, MARIA L., Instructor-Mathematics- BA Education (Mathematics), UPR- MA Administration and Supervision, Interamerican University

SANCHEZ MELO, ANTHONY G., Instructor-Engineering - BS Architecture (Environmental Design), UPR- MS Architecture, UPR.

SANCHEZ PEREZ, ENRIQUE, Instructor-Mathematics- BA Mathematics, Caribbean University – MA Administration and Supervision, UPR- MA Mathematics, University of Phoenix

SANTIAGO MALDONADO, VIRGEN M., Instructor-Spanish- BA Secondary Education (Spanish) - MA School Administration and Supervision, Catholic University of Puerto Rico.

SERRANO QUINONEZ, MIGDONIA, Instructor- Mathematics – BS Secondary Education (Mathematics) - MA Administration and Supervision, University Catholic de Ponce

SERRANO VAZQUEZ, EFRAIN, Instructor- Mathematics – BA Mathematics & Sciences, UPR – MA Administration and Supervision, UPR.

SOLER BATISTA, CAMILLE R., Instructor- Nursing- BSN Nursing, UPR – MSN Nursing (Case Management), UPR

SOTO RIVERA, GLORIA I., Instructor -Business Administration – BA Secondary Education (Commercial Education), UPR – MA Administration Commercial, Interamerican University.

SOUCHET GARCIA, ARLENE, Instructor – Spanish - BA Public Communication, UPR.

TENORIO PEREZ, AIDA L., Instructor –Chemistry- BS Chemistry, Santiago de Cali University – MA Secondary Education (Chemistry), UPR.

TORRES COLON, NELIDA, Instructor -Speech, Language - BA Elementary Education (Subspecialist in Special Education), UPR - MS Pathology Speech and Language, UPR

TORRES TORRES, NEIL O., Instructor - Studies Hispanics- BA Studies Hispanics, UPR – MA Studies Hispanics, UPR

TRUJILLO RODRIGUEZ, JOSE J., Auxiliary Professor-Business Administration- BBA Accounting, Interamerican University – MBA Accounting, Interamerican University.

VEGA RIVERA, JOSE R., Instructor -Mathematics- BS Biology (Minor: Chemistry/Mathematics), UPR – MIS Management Information System, EDP College

VELEZ FRONTERA, JOSE I., Instructor -Humanities – BA Social Studies and Spanish, Pontific Catholic University of Puerto Rico – MA School Administration and Supervision, UPR.

VIERA RAMIREZ, MINERVA, Auxiliary Professor - Nursing – BSN Nursing, Interamerican University - MSN Nursing (Mental Health, Critical Care), UPR.

ZAYAS PEDROGO, VICTOR, Instructor-Mathematics- BA Elementary Education, Catholic University of Puerto Rico- MA General Supervisors in Secondary Schools, New York University

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