

Inter American University of Puerto Rico

Technical Certificate Programs Catalog 2023-2024

Volume XXXI

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Technical Certificate Programs Catalog 2023-2024

Inter American University of Puerto Rico

Technical Certificate Programs Catalog

2023-2024

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Published by Inter American University of Puerto Rico, PO Box 363255, San Juan, Puerto Rico 00936-3255.

This Catalog is published in Spanish and English. In the event of a conflict as to its interpretation, the Spanish version shall prevail.

The provisions of this Catalog do not constitute an irrevocable contract between students and the University.

The University will make all reasonable efforts to maintain up-to-date information in this Catalog. However, it reserves the right to revise or change rules, revise tuition fees, service charges, requirements for programs of study, the requirements for degrees and academic distinctions, course content and any other arrangements that might affect students whenever it deems necessary or desirable.

Students are responsible for reading and understanding the academic, administrative, and disciplinary policies and regulations as well as the general requirements for the degree they hope to obtain from the moment they register in the University. They are also responsible for meeting the major requirements once they declare said major. Students deciding to change their major will be responsible for complying with the requirements in effect at the time they declare the new major.

Graduation requirements as well as academic curricula and programs may change while students are registered at the University. These changes will not be applied retroactively, but students have the option of completing the new requirements. Nonetheless, when professional certifying or licensing agencies make requirement changes for the corresponding certification or license, the necessary changes to the curricula or programs will be applicable immediately. Students will have the responsibility for deciding if they wish to take the new courses.

It is the University's policy to guarantee equal opportunity to all in all its educational programs, services, and benefits. The University does not discriminate against anyone because of race, color, religion, sex, national origin, handicap, age, marital status, physical appearance, political affiliation, or any other classification protected by the provisions of Title IX of the Amendments to the Education Act of 1972, Section 504 of the Rehabilitation Act of 1973, the Americans with Handicaps Act of 1990 or any other applicable federal or state law or regulation.

<http://www.inter.edu>

The IAUPR is an institution licensed by Postsecondary Institutions Board of Puerto Rico (<https://agencias.pr.gov/agencias/cepr/inicio/Pages/default.aspx>) and accredited by Middle States Commission on Higher Education (www.msache.org).

December 2023

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Directory

AGUADILLA CAMPUS

Inter American University
Barrio Corrales, Sector Calero
Aguadilla, Puerto Rico
*PO Box 20000
Aguadilla, Puerto Rico 00605-2000
Tel. (787) 891-0925
<http://aguadilla.inter.edu>

ARECIBO CAMPUS

Inter American University
Carretera #2, Km 80.4,
Bo. San Daniel, Sector Las Canelas
Arecibo, Puerto Rico
*PO Box 4050
Arecibo, Puerto Rico 00614-4050
Tel. (787) 878-5475
<http://arecibo.inter.edu>

BARRANQUITAS CAMPUS

Inter American University
Bo. Helechal, Carr.156
Intersección 719
Barranquitas, Puerto Rico
*PO Box 517
Barranquitas, Puerto Rico 00794-0517
Tel. (787) 857-3600
<http://br.inter.edu>

BAYAMÓN CAMPUS

Inter American University
*Bo. Cerro Gordo
500 Carretera John Will Harris
Bayamón, Puerto Rico 00957-6257
Tel. (787) 279-1912
<http://bayamon.inter.edu>

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Fajardo Puerto Rico
*PO Box 70003
Fajardo, Puerto Rico 00738-7003
Tel. (787) 863-2390
<http://fajardo.inter.edu>

GUAYAMA CAMPUS

Inter American University
Bo. Machete
Carr.744, Km 1.2
Guayama, Puerto Rico
*PO Box 10004
Guayama, Puerto Rico 00785-4004
Tel. (787) 864-2222
<http://guayama.inter.edu>

METROPOLITAN CAMPUS

Inter American University
118 Eleonor Roosevelt
Hato Rey, Puerto Rico
*PO Box 191293
San Juan, Puerto Rico 00919-1293
Tel. (787) 250-1912
<http://metro.inter.edu>

PONCE CAMPUS

Inter American University
104 Turpeaux Ind. Park
Mercedita, Puerto Rico 00715-1602
Tel. (787) 284-1912
<http://ponce.inter.edu>

SAN GERMÁN CAMPUS

Inter American University
Carretera #102
*PO Box 5100
San Germán, Puerto Rico 00683-9801
Tel. (787) 264-1912
<http://sg.inter.edu>

CENTRAL OFFICE

Universidad Interamericana
Urb. Jardines Metropolitanos
399 Calle Galileo
San Juan, Puerto Rico 00927-4517
*PO Box 363255
San Juan, Puerto Rico 00936-3255
Tel. (787) 766-1912
www.inter.edu

General Information

History of the University

Inter American University of Puerto Rico is a private institution with a Christian heritage and an ecumenical tradition. It is a non-profit organization that provides college instruction to people of both sexes. It was originally founded in 1912 as the Polytechnic Institute of Puerto Rico by the Reverend J. William Harris and offered elementary and secondary education on the land occupied today by the San Germán Campus. The first college level courses were started in 1921 and in 1927, the first group of students graduated with Bachelor's Degrees.

In 1944, the Institution was accredited by the Middle States Association of Colleges and Schools. It was the first four-year liberal arts college to be so accredited outside the continental limits of the United States. This accreditation has been maintained since then. The programs of the University are authorized by the Board of Postsecondary Institutions of Puerto Rico and recognized by the Commonwealth's Department of Education, which certifies teachers for the public school system of Puerto Rico. Also, the school is approved by the Puerto Rico State Approving Agency to provide academic training to the students under the various GI Bill® programs. "GI Bill®" is a registered trademark of the U.S. Department of Veterans Affairs (VA).

Inter American University's tradition of public service, the geographical location of its instructional units and its continuing attention to student needs make it especially attractive and accessible to students from all the municipalities of Puerto Rico. The University participates in federal and state financial aid programs for qualified students.

Considering the individual preferences and the occupational aspirations of the people it serves; Inter American University of Puerto Rico also offers study programs leading to a pre-university certificate. By means of programs of short duration and a practical approach, the Technical Certificate Program develops competencies that enable students graduated from high school or its equivalent to enter the labor force or to strengthen the skills of those who already work.

Governance

The highest governing body of Inter American University is a self-perpetuating Board of Trustees, whose members

are elected by the Board itself without any outside intervention or tutelage of any kind. The government of the Institution resides in its Board of Trustees and it has all the powers in harmony with a non-profit post-secondary institution.

The President is the chief executive and academic officer of the Institution. The Systemic Managerial Council is composed of the President of the University, who presides over the Council, the Vice-Presidents, Chancellors, the Deans of the Schools of Law and Optometry, an Executive Secretary appointed by the President, the Executive Director of the Information System, the Executive Director of the Office of the Juridical Advisor, and the Executive Director of the Office of Evaluation and Systemic Research. In addition, when affairs relevant to their functions are being considered by the Council, other people may participate.

Institutional Mission

Inter American University of Puerto Rico has the mission to offer post-secondary and higher education in the arts and sciences, by means of teaching, research and community service, within an ecumenical Christian context. In addition, it offers educational programs at the pre-school, elementary and secondary levels.

The University also, contributes to society, by educating people that come from different socioeconomic sectors, within and outside Puerto Rico. It incorporates in its offerings and services, innovating study modalities supported by informatics and telecommunications. The University aims to prepare its graduates to be responsible and cultured citizens, with democratic and Christian values, who are conscious of their social and environmental obligation, and can perform competently and exercise leadership in an occupational or professional context.

The University aims to maximize the educational potential of students in an environment without discrimination, in compliance with the law, the accreditation regulations and standards, and in harmony with the search for academic excellence. It, also, aims to make the best use of this environment to develop critical thinking, scientific knowledge, sensitivity towards the arts, ethical responsibility, and the skills of social coexistence.

Goals of the University

The University faculty and the administration strive to achieve the following institutional goals:

1. To promote, in the university community, an environment oriented towards a culture of peace, based on ethical, democratic, and institutional Christian-ecumenical values, directed to the integral development of the student.
2. To promote an integral education that leads to the formation of an educated person, well-versed in the different fields of the human knowledge, by means of the development of the capacity for critical thinking, the adequate use of the communication skills in Spanish and English, ethical and civic responsibility, environmental awareness, skills of social integration, and the knowledge of science, the arts and religious education within a Christian-ecumenical context.
3. To respond to the needs of the student population and society by offering a variety of both presentational and distance learning programs, at the different educational levels.
4. To foment academic excellence by means of the continuous development of the teaching staff in the mastery of their discipline, as well as in the application of techniques, modalities, and teaching methods, in harmony with the nature of the student population.
5. To foment the development of knowledge through research and creative activities in the academic community.
6. To promote efficiency and effectiveness in the teaching, administrative and student processes and services, in harmony with the provisions in the applicable laws and regulations, as well as in the standards of the accrediting agencies.
7. To cultivate leadership of the university community so that it may contribute to social and cultural enrichment of our country and to its economic development, by means of participation in communitarian, business, and professional projects.

Religious Life Policy

Inter American University of Puerto Rico is an ecumenically oriented institution but does not adhere to any one particular theology or ecclesiastical body.

Founded by Dr. John William Harris, a minister of the Presbyterian Church, Inter American University maintains a historic, friendly and enriching association with that communion as well as with other Christian groups in accordance with its ecumenical spirit.

Inter American University of Puerto Rico is a community of higher education dedicated to a comprehensive search for truth within an environment of responsible freedom and through the encouragement of a mature academic life which guarantees true freedom of investigation. Within this context, religion is studied in the University as an academic discipline designed to engage in fruitful dialog with other university disciplines.

In affirming its commitment to the Christian ecumenical ideal, the University dedicates itself to the renewal and reaffirmation not only of its own Christian heritage, but also the culture within which it is situated and which it serves. This does not oblige the acceptance of all the details of our Christian past nor of all the elements of modern Christianity. Nevertheless, the University has fostered and will continue to foster the convergence of all Christians in the one faith centered about the person of Jesus Christ as He is made known to us in the apostolic tradition of the Scriptures as the One whom Christians regard as decisive, definite, and normative in man's relations with God and his fellow men and society. The University affirms its conviction that to be a Christian today implies, on the one hand, knowledge of and obedience to the Gospel and, on the other, identification with the Universal church by means of an individual commitment to a particular Christian communion.

The ecumenical posture of the University involves openness to society, science, technology, and a plurality of faiths; it involves an integral education of each individual so he or she may exercise a vocation within his or her community in a responsible and productive way; it involves a commitment to serve though not to dominate society; and it involves the development of friendliness, fellowship and understanding to bridge human barriers.

The University promotes the following Christian-ecumenical values:

WE BELIEVE IN GOD AS A SUPREME BEING

God is the Supreme Being who created all that exists. His power and presence are revealed in the person of his Son Jesus, the Savior, and in the Holy Spirit, that guides the community of faith.

WE BELIEVE IN JESUS

We accept that the apostolic tradition of the Scriptures recognizes and accepts Jesus as decisive, definite, and normative for humans' relations with God, their fellow men, family, and society. Since He is the Savior and Mediator of Humanity, it is our commitment to continue fostering the convergence of all Christians through the one faith around the person of Jesus.

WE BELIEVE IN LIFE

We affirm that life is a gift of God. We foment that all human beings value their life so they may be able to give their best to the country, family, and society. We promote the preservation of life, and therefore promote a Christian consciousness in education.

WE BELIEVE IN THE FAMILY

We believe that the family is the essential social nucleus where the initial values that shape the person are developed. We commit ourselves to reinforce these values, from their Biblical foundation, that help each human being to achieve the complete life and make it extensive to others.

WE BELIEVE IN SERVICE

We affirm our ecumenical Christian ideal and devote our efforts to renew and reaffirm service to our country, society, family and fellow men.

WE BELIEVE IN THE IDENTITY OF THE CHRISTIAN COMMUNITY OF FAITH

We affirm that the conviction of being Christian implies knowledge of and obedience to the Word of God and, also, identification and commitment to the Church and to the person's particular Christian community.

WE BELIEVE IN INTEGRAL EDUCATION

Our Christian ecumenical position provides openness to society, science and technology, with an integral mentality, an attitude of respect and a moral conduct in harmony with our values.

We foment the integral education of each person for carrying out his vocation in a responsible way and with a moral conduct and a productive performance in his community.

We are a community of higher education in an integral search of the truth, within an environment of freedom, through the encouragement of a mature academic life that guarantees the true freedom of investigation.

WE BELIEVE IN THE COMMITMENT WITH OUR FELLOW MEN

We believe that to be Christian it is to have and show a commitment of service to others based on love and not on the dominion of society, but rather on promoting friendship, solidarity, tolerance and understanding to bridge human barrier.

WE BELIEVE IN THE STUDY OF THE CHRISTIAN RELIGION

We promote the study of the Christian religion as an academic discipline in which a fruitful dialog with the other academic disciplines is maintained.

We will continue to strengthen the development of the religion studies program by providing all students the opportunity to acquire an understanding of the Christian faith and its implications for our culture.

To achieve this, Inter American University of Puerto Rico will continue and strengthen the development of its programs of religious studies and will provide to all its students an opportunity to understand the Christian faith and its implications for our culture; the University will furnish information about the most important aspects of the world's major religions to its students and will encourage them to appreciate these religions within their historic, theological and philosophic context. In this way, the search for faith and for the means to humanize mankind may be seen as a relevant option in a world striving for greater understanding and happiness.

The commitment of Inter American University to its Christian Heritage, as well as to its academic mission, will manifest itself through the development of an ecumenical program of religious life.

In accordance with this basic religious philosophy for the academic study of religion and for the development of religious activities, Inter American University, by its act and works, will:

1. Encourage the expression of the Christian principles here set forth,
2. Require the academic study of fundamentals of the Christian faith,
3. Require each instructional unit to establish an Office of Religious Life, which will serve the entire University community.

Technical and Vocational Certificate Program

The Technical and Vocational Certificate Program is located in nine (9) campuses of Inter American University of Puerto Rico: Aguadilla, Arecibo, Barranquitas, Bayamón, Fajardo, Guayama, Metropolitan, Ponce and San Germán. Each academic unit selects its program offerings in agreement with the circumstances, needs of the people of the geographic area it serves, in coordination with the System Central Office.

Vision of the Technical and Vocational Certificate Program

The Post-secondary Technical Certificate Program aspires to be the main option of technical and high skills studies for those looking for new employment alternatives.

The Technical Certificate Program of Inter American University of Puerto Rico is characterized for the efficiency and the effectiveness of its services. It incorporates the most advanced techniques that promote agile organization and management, which are in harmony with the realities of today's world. It strengthens the University's bonds with civic, social, governmental, and business organizations to expand the service opportunities of the University. It proposes a new model of integration with business that facilitates the development of people technologically trained and it teaches greater dynamism to the administration and application of knowledge.

Mission of the Technical and Vocational Certificate Program

The mission of the Technical and Vocational Certificate Program is to strengthen the vocational, technical and high skills of the people to prepare them for service to the community.

Goals of the Technical and Vocational Certificate Program

The Technical and Vocational Certificate Program is designed to offer short career program to young people and adults, to meet the existing demand for trained personnel in technical and high skills areas in banking, business, industry, government and for self-employment.

The goals of the Technical and Vocational Certificate Program are to:

- Provide a technical education and with high skills that responds to the needs of a job market that is becoming more and more exigent.
- Develop in students the skills and knowledge directly related to the profession they choose to serve the community.
- Support students in the attainment of their academic, professional, and work goals.
- Promote the appropriate use of technological resources as continuous learning tools.
- Provide students with experiences in real work scenarios, or by means of laboratories to bring them near to the world of work.
- Foment in students the interest in their continuous professional development.
- Develop in students the minimum entrepreneurial competencies that will allow them to consider self-employment as an alternative to professional development.

The Technical and Vocational Certificate Program promotes the retention of students by offering services and activities that support the achievement of their academic goals. In addition, it provides programs that foster the development of knowledge, skills, values, and aptitudes that prepare students with the appropriate competencies to perform in society.

Academic Information

Admission to the Technical and Vocational Certificate Program

Inter American University grants admission to a specific campus for a specific time in any registration period within the academic year for which admission is to be granted. Admission to a certificate program depends on whether the student fulfills its admission requirements.

Students applying for admission to the Technical and Vocational Certificate Program of Inter American University must:

1. Present evidence of graduation from an accredited high school or its equivalent. Evidence of the most recently conferred degree, from an institution properly authorized by the Council of Education of Puerto Rico, may be considered, in case the student does not have the high school evidence available.
2. Present immunization certificate (PVAC-3) if the student is under 21 years of age.
3. Meet any specific requirement established for admission to the academic program of interest, in the campus to which they request admission.

Note: For programs that require a practice or internship, the academic unit may require that students submit additional documents to meet the regulations of the relevant agencies.

Provisional Admission to the Technical and Vocational Certificate Program

In case students have difficulty in obtaining their graduation certification or other documents required by the Institution, they may be considered for provisional admission if they meet the admission requirements.

Students may be admitted by granting them a term of up to 30 days to submit the corresponding documentation. The chief executive officer of the campus may extend this period for just cause. If the students do not comply with the requirements by the conclusion of the extension, they will be dropped from the University.

Admission to University Programs

Students of the Technical Certificate Program may be accepted to the regular program (associate or bachelor's degree) of the Institution if they have a minimum grade point index of 2.00 when completing the certificate program. In this case, the high school index will be replaced by the general index attained in the certificate program, and the norms established in the current General Catalog will be applied when they are admitted to a regular program.

It will be the responsibility of students to comply with all the established admission requirements of the program of their interest. The courses approved in the Technical and Vocational Certificate program will not be validated in the university program or substituted by those of a university academic program.

Admission Procedures

To apply for admission to the Technical and Vocational Certificate Program in a campus, students must:

1. Fill out and apply in the Admissions Office of the selected campus.
2. Present the high school transcript, or the most recent evidence of an obtained degree, in a sealed envelope to the Admissions Office or its equivalent.
3. Submit an updated immunization certificate (PVAC-3) if the student is under 21 years of age.

Homeschooling

1. Students of homeschooling may apply for admission to the University in two ways:
 - a. Present evidence of having completed a study program equivalent to high school graduation in Puerto Rico. This equivalency must be certified by the Department of Education of Puerto Rico.
 - b. If certification is not available from the Department of Education of Puerto Rico, a parent or tutor of the student will present:
 - i. A sworn statement declaring that the student culminated his studies by homeschooling.

- ii. A results of the College Board test. The student is required to have obtained a minimum average of 500 points in the achievement tests in English, Spanish and mathematics.
- 2. The applicant must obtain a minimum admission index of 800. This is computed from the results of the College Board examinations and an equivalence of the high school index calculated by the University.
- 3. If the University deems necessary, the student must attend an interview.

Admission of Special Students

Special students will be:

1. students of other institutions of higher education that have authorization to take courses at Inter American University of Puerto Rico (IAU) to fulfill requirements of their home institution. These students will be required to present a certification indicating the courses they are authorized to take at IAU;
2. persons not interested in obtaining an academic degree, but in taking courses for their professional or personal improvement.
3. teachers of the Department of Education of Puerto Rico (DEPR) who want to satisfy some requirement of that agency. An official document from the DEPR indicating the courses they must take will be required.
4. high school students authorized to take advanced courses as part of their high school requirements.
5. students from other universities participating in student exchanges.

Special students will not be required to submit a copy of their academic file to be admitted.

The special students described above in numbers 1 to 4 will not be eligible for federal Title IV, or state financial aid.

All applicants who later decide to continue their studies with a view to obtaining a university degree or certificate must comply with the University's requirements and admission procedures, in harmony with the study program of their interest.

In case special high school students are later admitted as university students, the courses already approved may be accredited to them.

Applicants, who later decide to continue their studies to obtain a certificate, must comply with all admission requirements and procedures for admission to the Technical and Vocational Certificate Program. These students will not be eligible for financial aid from Title IV. All the nontraditional study modalities authorized for the Technical and Vocational Certificate Program will be available for students admitted under these criteria.

Admission of Foreign Students

Foreign students interested in entering the University must submit their questions directly to the academic unit to which they wish to be admitted. Inter American University reserves the right to interview the applicants as part of the admission requirements. If the applicants are approved for admission, the Admissions Office will fill out the 1-20 Form from the Immigration and Naturalization Service of the United States of America, so they may obtain student visas.

Admission of Transfer Students

All candidates for admission by transfer from another university or college must apply for this purpose. Students must request that the office of the registrar of the university or college of origin send a copy of their official transcript to the appropriate Admissions Office of Inter American University.

Students will be considered candidate for admission by transfer if they:

1. Passed at another accredited institution at least 12 credits with a grade of C or better, except in academic programs that establish different requirements, in which case they must meet these requirements.
2. Meet the academic progress and the disciplinary norms of this University.
3. Submit an updated vaccination certificate if they are under 21 years of age.

The school accepts a maximum of 25% of transfer credits from other schools toward the program of study. Every transfer credit will be counted as an attempted credit for the maximum time frame.

All acceptable courses completed at Inter American University or elsewhere by students not regularly admitted to the University or in the Early Admission Program will be credited as soon as they have been admitted as regular students. Once students have been enrolled, no further

consideration of previous credits from other institutions will be given, except for courses in progress. Every transferred course will be entered as an attempted and approved course for purposes of the satisfactory academic progress norm and the norm for repeating courses.

If students take a course that is in their academic record as a transferred course and receive a grade, the administrative action symbol T must prevail in the file. If the student obtains the grade of C or above, this will be considered to determine the general academic index and the academic index in the study program, as applicable. If the student obtains a grade of D or F, this will not be considered to determine these indices.

Admission of Students from an Undergraduate Program

The credits of university programs may be validated in their content, grade, and credit hours. For this reason, contact hours will not be validated for purposes of Federal Financial Aid. In those cases, in which, after the validation, the hours required by the corresponding certificate are not met, the validated university course must be replaced with another class.

Readmission

Students who have discontinued their studies for two academic terms or more, must apply for readmission. Re-admitted students will follow the Technical and Vocational Certificate Program Catalog and other norms and regulations in effect at the time of their readmission.

Readmission to the University of Veteran and Military Students

When a student in the technical certificate program with veteran and military status has discontinued studies for one academic year or more, must request readmission at the Registrar's Office of the academic unit to which is interested in being readmitted. Pursuant to regulations 34 CFR 668.18 (a) (e) and (g), the student will be readmitted with the same academic status as when he or she was last enrolled or admitted to the university. These requirements apply to any student who is unable to attend college due to military service.

The readmission process will entail the application of the institutional guidelines established by the University. The request can be processed through the traditional or electronic means available. The Registrar's Office, after

analyzing the official documents, will determine the student's eligibility for readmission, using the admission standards established by the Inter-American University of Puerto Rico and the study program of interest. The request must be made at least one month before the next registration period. Exceptions will be considered individually by the Dean of Academic Affairs.

For all other academic or administrative processes, the student will be governed by the stipulations of the Technical Certificates Catalog in force at the time of readmission.

Transfers within the University

Students wishing to transfer from one campus to another must meet the admission norms of the certificate they are requesting and the intra-University transfer norms. Students must notify their intentions to transfer to the Office of the Registrar of the campus in which they studied. The requests must be made prior to the registration period.

Norms and Services Related to the Office of the Registrar

The Office of the Registrar is responsible for registration, maintenance of all official academic records of students, the issuance of transcripts and certification of studies and certification that students have met graduation requirements. It also issues study certification upon student request. There is an Office of the Registrar at each instructional unit of the University. Forms requesting services of the Registrar are also available through Internet.

Services for Veterans, Military Personnel and Dependents

The school is approved by the Puerto Rico State Approving Agency to provide academic training to the students under the various GI Bill® programs. "GI Bill®" is a registered trademark of the U.S. Department of Veterans Affairs (VA). Eligible students intending to enroll and receive VA educational benefits should submit an application through the Department of Veterans Affairs portal.

The eligible students, have the right to enjoy these benefits only for the period of time required for completing their academic degree as established in this Catalog and by applicable legislation and regulations.

Study time required for completing an academic program depends on the number of credits required for the program, the nature of the courses and the number of credits the student takes each term. An estimate of the period required may be obtained by dividing the total number of credits required for the program by 15, which is the average number of credits taken by a full-time regular student.

Students accumulate semesters of study as indicated below:

Term	Student Classification	Terms of Study (in percent)
Semester	Full-time	100.0
	Part-time	50.0
Trimester	Full-time	66.7
	Part-time	33.3
Bimester	Full-time	50.0
	Part-time	25.0

Students also accumulate study time at the rate of one (1) semester for every twelve (12) transferred credits.

A Covered Individual is any individual who is entitled to educational assistance under chapter 31 Veterans Readiness and Employment and chapter 33 Post-9/11 "GI Bill®". "GI Bill®" is a registered trademark of the U.S. Department of Veterans Affairs (VA).

Our policy permits any covered individual to attend or participate during education during the period beginning on the date on which the individual provides to the educational institution a certificate of eligibility for entitlement to educational assistance under chapter 31 and chapter 33. A "certificate of eligibility" can also include a "Statement of Benefits" obtained from the Department of Veterans Affairs' (VA) website - eBenefits, or a VAF 28-1905 form for chapter 31 authorization purposes) and ending on the earlier of the following dates:

1. The date on which payment from VA is made to the institution.
2. 90 days after the date the institution certified tuition and fees following the receipt of the certificate of eligibility.

Our policy ensures that our educational institution will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a covered individual borrow additional funds, on any covered individual because of the individual's inability to meet his or her financial obligations to the institution due to the delayed disbursement funding from VA under chapter 31 and chapter 33.

Academic-Administrative Calendars

Students may take courses following the calendars established for the regular semesters (August to December and January to May) and other semesters that may be available. The calendars corresponding to each academic term are distributed on the campuses.

Registration and Changes

Students will register on the day and hour designated for this purpose. After registration, students will be able to make changes to their class programs during the period specified in the Academic-Administrative Calendar.

1. Changes:

Program modifications during the period of changes: To add or drop a course or change a course section during the period of change designated on the Academic Calendar, students should complete a change-of-program form or submit their petition for a change through electronic media. This should be presented or sent to the Office of the Registrar to be officially processed.

2. Dropping Courses:

Dropping courses: After the period of program change has ended, a student will be able to drop one or more courses (partial withdrawal or total withdrawal). For partial withdrawal, the student will first consult the professor of the course and will present a completed partial withdrawal form to the Registrar's Office. For total withdrawal from the University, please consult the section "Withdrawal from the University" of this Catalog. Students may drop a class or completely withdraw from the University until the last day of class as established in the Academic-Administrative Calendar.

Student Records

Students requiring information concerning records or issuance of transcripts should contact the Office of the Registrar in the unit where they were registered.

At the end of each academic term, the Registrars will mail grade reports to their respective students. Students who believe there are errors in these reports should notify the appropriate Registrar, in writing. The deadline to submit these claims is the date established for the removal of grades of "Incomplete" in the following academic term of the same type. A student who does not receive a grade report should contact the corresponding Office of the Registrar.

Upon completing the certificate, the academic transcript will indicate the title of the study program as approved by the Puerto Rico Board of Postsecondary Institutions (PRBPI).

Student Academic and Personal Files

Student academic and personal files are confidential, and the release or handling of information contained in them is limited to certain faculty and administrative personnel who, in the regular performance of their functions, have to work with these files. Once the documents required by the University are received, they become the exclusive property of the Institution. Students have the right to examine their academic or personnel file at any moment in the presence of an official of the Office of the Registrar. They may not make copies of the documents contained in their files, except in the cases explained below.

The information contained in the academic files may be released to parents of dependent students. Parents must present evidence of their condition as father or mother, as well as the dependency of the student through the presentation of relevant documentation. The information contained in the academic or personal files may not be released to students' parents in any other cases.

The release of information contained in the academic or personal files of students to third parties, to any type of institution, to government or judicial agencies will only be made with written authorization from the student or in compliance with an order to this effect issued by the competent authority.

Transcripts, study certification and certification of degrees are available to students who may obtain them in the Office of the Registrar, who will inform the cost of each transcript.

Transcripts requested for transfer to another educational institution, for continuing graduates' studies, completing the requirements of certifying agencies or for the purpose of employment are sent directly to the address provided by the student in the request. In no case will transcripts requested for these purposes be delivered to the student.

The request for transcripts by students whose files is active will be processed within a reasonable time that under normal circumstances should not exceed ten days from the date on which the request was received in the Office of the Registrar. The requests for transcription of students whose files are inactive require a longer time to be processed.

University Policy Regarding Students and Alumni Directory

The University, in compliance with federal law “Family Educational Rights and Privacy Act (FERPA), provides students and alumni access to their academic files, the right to request that the information contained in those files be amended and certain control over the disclosure of academic information.

1. Students and alumni have the right to inspect and review their academic files. They may request this in writing to the file custodian and indicate the file they wish to review. The file custodian will make the necessary arrangements so that the student or alumni may review the files within a period no greater than 45 days from the date in which the student or alumni presented the written request. If the person receiving the request from the student or alumni does not have the file, this person will indicate the correct place for the request to be presented.
2. Students and alumni have the right to request that incorrect information contained in their academic files be corrected. Interested students or alumni must present a written request to the University official in charge of the file, indicate the part of the file to be corrected and explain the mistake. If the University decides not to correct the file, the student or alumni will be notified of this decision in writing and the person will be informed of the right to request an informal hearing.
3. Students or alumni have the right to prevent the University from disclosing personal information found in the academic files, except in those cases where FERPA authorizes disclosure. These cases include the following:
 - a. Disclosure of information to Institution officials. Institutional officials are taken to mean administrative or teaching employees, people contacted by the University, members of the Board of Trustees and student members of special committees.
 - b. Disclosure of Directory information. The University has designated the following data as Directory information: student or alumni name, address, major and year of study. Students and alumni have the right to prevent the University from disclosing Directory information to third parties. The disclosure to third parties includes the

release of information to the Armed Forces. If students or alumni wish to prevent their information from being disclosed to the United States Armed Forces, it is necessary that they express their desire that no information be disclosed to third parties. To prevent information from being disclosed to third parties, it is necessary that students or alumni submit their request to this effect, in writing, to the Office of the Registrar of their academic unit. For the request to be effective for the academic year, it is important that students submit the request in or on September 1st of that year.

- c. Information to other universities. The University will release student or alumni information to those universities to which they request admission.
- d. Exceptional circumstances. The University will disclose student or alumni information if they are economically dependent upon their parents. The University assumes undergraduate students and alumni are economically dependent upon their parents; therefore, in some cases it may disclose information without the consent of the student or alumni to parents that request it. Undergraduate students or alumni who are not economically dependent upon their parents must present this evidence to the Office of the Registrar to prevent information from being released to their parents. Information on graduate students or alumni will not be given to parents without their consent.
- e. Emergency cases. These are cases in which the health or security of a student, alumni or other person is in danger.
- f. Immigration and Naturalization Service. The University is obliged to give information to Immigration Service regarding certain foreign students or alumni.

If students or alumni believe that the University has not complied with these obligations, they have the right to file a claim to the Department of Federal Education, Family Policy Compliance Officer, 400 Maryland Avenue SW, Washington D.C. 20202-4605.

Solomon-Pombo Act

Inter American University established its institutional policy regarding the student and alumni directory for the academic year 1999-2000. This measure was adopted to incorporate the new changes in the federal laws known as

the Solomon-Pombo Act. This federal law permits third parties to request from the Institution all personal data that is included by the University as Directory information.

Inter American University establishes the following data as Directory information:

Name
Major
Address
Year of study

The University exhorts all students not in agreement that these data be included in the Directory to contact the Dean of Academic Affairs of their Campus.

Change of Address

At the moment of registration it is required that students submit their mailing address to the Office of the registrar. If a change of address is required, students must visit this office or they will make the change by using the self-service of BANNER (Inter Web). If they do not maintain this address updated, the University will not be responsible for the notifications sent to the students.

Any notice, official or otherwise, mailed to a student's address as it appears on the records shall be deemed sufficient notice.

Course Codification System

This system consists of a four-letter alphabetical section where the first letter is C. The following three letters respond to one of the following criteria:

1. Core Program:

Designed to strengthen skills in the areas of Spanish, English, mathematics, computers, and other general area of knowledge necessary for the greatest benefit from the certificate. These courses have the abbreviation CMED and a numerical part where (0) as the first digit indicates a course at the certificate level, the second digit suggests the sequence of the course in the subject, the third digit indicates the subject and the fourth establishes the continuity of the course. The values of the subjects are: (1) Spanish; (2) English; (3) mathematics; (4) computers; and (5) other subjects.

2. Study Programs:

Courses of the study program where the letters that accompany the C identify the Certificate. The numerical section of four digits identifies the level of the course and the sequence in which they are taken, in the case where this exists. The first digit (0) identifies courses at the certificate level. The second digit is used to suggest the level or academic term in which the course will be taken. The third digit suggests the sequence of the course in the academic term and the fourth may indicate if the course has a continuation.

3. Seminars, Practices and Internships:

Together with the alphabetical section that indicates the certificate, the numerical combination identifies the supervised internships or practices with 0291, and seminars with 0297.

Declaration of Study Program

Students will declare a major in one of the programs authorized for the campus at the time of their admission. Once they are admitted, students will receive appropriate professional and academic guidance related to the program of their interest, as needed, from either the Technical and Vocational Certificate Program Office or from the Orientation Center.

Students, who justify the change of major and qualify for it, will submit the application for change in their declaration of major to the Office of the Registrar, or will follow the procedure established at the time of their request. The declaration of major does not imply admission to a program. Admission to a program depends on whether the requirements for admission are met.

The first change of major will be free of cost. A fee will be charged for the following changes.

Academic Advisement

The University offers academic advisement services to its students. Once a formal declaration of the study program has been made, the Certificate Program Director or a Professional Counselor will assist in the process of developing student study potential to the utmost.

Students should meet with the Program Director to plan for their study program during the academic term. However, students are responsible for planning their study program.

Student Course Load

One credit is granted for each 37.5 contact hours per

academic session (34 CFR 668.8 (1)(1), which establishes the definition of a credit as equivalent to 37.5 hours, in effect, since July 1 of 2011), part of the hours should be completed by tasks assigned to be carried out outside the classroom; one credit for every 30 hours of lab and one credit for every 45 hours of practice.

The regular load of a student consists of 12 to 15 credits per term, or the maximum established by the study program for each term, except for the summer sessions. In order to take more than the number of credits allowed, students must obtain written authorization from the Certificate Program Director or the Dean of Studies.

Students are classified as full or part-time students according to the number of credits in which they are registered. Under the semester or quarterly calendar, they are classified as follows:

Full-time - twelve or more credits.

Three-fourth time - from nine to eleven credits.

Half time - from six to eight credits.

Less than half time - five or less credits.

Satisfactory Academic Progress (SAP)

The Inter American University of Puerto Rico has the fundamental mission of developing the talent of its students and is committed to making every reasonable effort to help them complete the study program in which they are enrolled, and thus obtain the corresponding Academic degree. Aware of this responsibility, the University has incorporated the practice of periodically evaluating the Academic Progress of students throughout their years of study. This allows the University to take the necessary steps to achieve greater student retention and make it easier for students to achieve their educational goals.

Requirements to achieve Satisfactory Academic Progress

Inter American University of Puerto Rico requires that all students of the Technical and Vocational Certificate programs, demonstrate Satisfactory Academic Progress while taking their program of study. The University will evaluate the Academic Progress of the students at the end of each Academic Term. The requirements to achieve Satisfactory Academic Progress are divided into two components: qualitative and quantitative.

Qualitative Component

1. Academic index
To fulfill this component, the student must achieve a minimum Academic index of:

- 1 .80 at the end of the first Term of studies.
- 2.00 in subsequent Terms

2. Academic graduation rate

To complete the requirements of a technical certificate, the student must have a minimum average of 2.00 points.

Quantitative Component

1. Approval Rate

- To meet the approval rate, the student must pass at least 66.67% of the credits attempted in each Academic Term.
- The result of the calculation will be rounded to the nearest hundredth. For example: 66.66666665 will round to 66 67%.

Meeting the passing rate ensures that the student completes the degree requirements within the maximum eligibility period.

Maximum time frame

The student must complete the requirements of the study program in 150% of the time required by the program. The maximum period of eligibility to receive financial aid depends on the number of credits in the program of study.

First Academic Probation and Financial Aid Warning

- The first time that the student who does not meet the minimum general average requirement, or does not pass 66.67% of the attempted credits, will be classified in the First Academic Probation. In addition, be classified as a student with a Financial Aid Warning. No need to appeal.
- The campus will be responsible for guiding the student regarding how to overcome the Financial Aid Warning status, as well as the period of Academic Probation,
- At the end of the first period of Academic Probation and Financial Aid Warning, the student who complies with the provisions of the norm will be considered a student with Satisfactory Academic Progress and will be classified as such.

- The student who, at the end of the Financial Aid Warning period, does not reach the index of 2.00, or does not pass 66.67% of the attempted credits, will not have achieved Satisfactory Academic Progress. Consequently, be suspended from the Technical Certificate Program for an Academic Term. Students will be assigned Academic Suspension and Financial Aid Suspension status. The student may appeal both suspensions.

Academic Plan, appeal process for Academic Suspension and appeal process to reinstate financial aid.

- All students suspended Academically must develop, together with a professional counselor, an Academic Plan that may be valid for a maximum of two (2) consecutive Academic Terms.
- As part of the Academic Plan, the student will give priority, but not limited to, the following:
 1. repeat and pass those courses in which you have failed or have not obtained the required grade for the courses in your program
 2. pass no less than 66.67% of the attempted credits at the end of each Academic Term.
 3. obtain an Academic index of 2.00 at the end of the Term.
 4. enroll a maximum of twelve (12) credits
- The student interested in appealing the Suspension of financial aid, and the Academic Suspension, will have to submit the completed Appeal Request to the Dean of Academic Affairs or the designated person, as soon as the student receives the notification of the Suspension of financial and Academic aid. . Financial aid can only be authorized after the approval of the appeal, so it is recommended to complete the Appeal Request before or during the beginning of the Academic Term in which expect to enroll. The Appeal Request must be accompanied by the Academic Plan.
- The student who is not interested in appealing the Academic suspension will remain in that status for an Academic Term.
- If the student decides not to appeal the suspension of financial aid, the student will not receive the aid.
- If the student only appeals the Academic Suspension

and it is considered favorably, the student may continue studying without financial aid, under the status of a second Academic Probation.

- The student must base the appeal on causes or circumstances beyond the student's control, such as: 1) suffering from a documented medical condition, 2) death of a member of a family member, 3) military deployment or 4) other circumstances of a major nature beyond the student's and must present the evidence to justify the request. In addition, the student must indicate how the circumstances have changed at the time of filing the appeal, so as to allow the student to achieve Satisfactory Academic Progress. The Dean of Academic Affairs will refer the student's request to the Appeals Committee.
- In each campus there will be an appeals committee appointed by the chancellor to evaluate the appeal requests submitted by the students. The Committee will be composed of the Dean of Academic Affairs or the designated person, the Dean of students or the designated person, a professional advisor and the director of financial aid or designated person. The Committee will have the power to request advice from professors or any other official of the University that it deems pertinent.
- When evaluating the petition, the Appeals Committee will take into consideration whether the student can obtain the required Academic Progress at the end of the next Academic Term in which the student enrolls or upon completion of the Academic Plan. For this, the Committee will analyze the case and inform the chancellor of the Academic unit about the decision.
- If the Committee concludes that the student will be able to achieve Satisfactory Academic Progress during the next Academic Term in which the student enroll, or will be able to reasonably comply with what is established in the Academic Plan, it will declare their appeal valid, and may grant the student with a second Academic probation and a Probation of financial aid for the next Academic Term in which student enroll.
- If at the end of the Term under Financial Aid Probation and the period of the second Academic Probation, the student manages to achieve Satisfactory Academic Progress, the probation status (both Academic and financial aid) will be removed and the student will be considered in compliance with the Satisfactory Academic Progress Standard.

- If at the end of the Term under Financial Aid Probation and period of the second Academic Probation the student fails to achieve Satisfactory Academic Progress but has complied with the provisions of the Academic Plan for said Academic Term, the student will maintain their eligibility to receive financial aid for the next Academic Term.
- If at the end of the Term under Financial Aid Probation and the period of the second Academic probation, the student fails to achieve Satisfactory Academic Progress and has not complied with what is stipulated for said Academic Term in the Academic Plan, the student will be suspended a second time.

Second Academic Suspension and Financial Aid Suspension

- If at the end of the Term to comply with the Terms of the Academic Plan, during the second Academic Probation, the student does not achieve Satisfactory Academic Progress, the financial aid will be suspended, and the student will be suspended Academically for one (1) Academic year and will not be able to appeal this decision.
- The Dean of Academic Affairs will notify the student of the decision by letter or email, a copy of which will be included in the student's Academic record.
- Once this period of suspension has concluded, the student may request readmission and if the Dean of Academic Affairs or the designated person concludes that there is a possibility that the student will achieve Satisfactory Academic Progress in the period of one (1) Academic year, the student may be readmitted under the status of third Academic Probation.
- Being readmitted under the status of third Academic Probation does not imply that the student will be eligible to receive financial aid.
- The student must comply with the provisions of this norm, to achieve Satisfactory Academic Progress and appeal the Suspension of financial aid to restore its eligibility.
- A student with status of Academic Suspension, who has not appealed and who has completed the enrollment process for the next Academic Term (with payment), will receive a total withdrawal with a 100% refund.

Readmission of Suspended Students

- Any request for readmission of a student previously suspended, as stipulated in this rule or who has interrupted studies while on Academic probation, will be evaluated by the Dean of Academic Affairs or the designated person designated.
- The student may be readmitted under the status of Academic Probation as long as the Dean of Academic Affairs or the designated person determines the possibility of reaching Satisfactory Academic Progress in a period of one (1) Academic year, starting from the readmission date,
- All students thus readmitted must comply with the provisions of this norm in order to achieve Satisfactory Academic Progress and appeal their Financial Aid Suspension to restore its eligibility.
- Being readmitted under Academic probation status does not imply that the student will be eligible to receive financial aid,

General Dispositions

- This norm establishes the criteria to determine the student's Academic Progress. In addition, it establishes the eligibility requirements to participate in financial aid.
- The University will evaluate the Academic Progress of each student at the end of each Academic Term.
- The student who does not complete the program of study within the maximum time frame established in the applicable federal regulations, and who, therefore, does not achieve Satisfactory Academic Progress, will not be able to continue studies with financial aid. When the student exceeds the limits indicated in this document, the Dean of Academic Affairs or designated person evaluate each case to determine if the student can continue his studies.
- The student must declare the technical certificate program of interest may change it after consulting with the career counselor or the director or person in charge of the Technical Certificate Program. When the student changes the technical certificate program, the attempted credits associated with the courses of the previous technical certificate will not be considered towards the Satisfactory Academic Progress standard, except

when these credits are also part of the requirements of the new program.

- The courses of a technical certificate program may be paid for with financial aid while the student remains in the original program or after making a duly authorized and registered change of program of study.
- A student who officially withdraws (W), abandons the course (UW) or fails it, that is, obtains an "F" or "NP" grade, can repeat that or those courses as many times as necessary and cover it with financial aid, until approved. On the other hand, a student who wants to repeat a previously approved course may cover it with financial aid only one (1) time. A previously passed course is one in which the student earned a grade of A, B, C, D, or P. Course repetitions affect the quantitative component of the Satisfactory Progress Standard.
- All repeated courses are considered as attempted credits for the purpose of determining the maximum period of eligibility measured in credits and the rate of approval. Only the highest grade of the repeated courses will be considered to calculate the student's Academic index.
- The Institution accepts a maximum of 25% of credits transferred from other institutions for technical certificate programs. Validated courses must have a minimum grade of C and will not be taken into consideration to determine the student's general average.
- Transferred credits (T) are considered as part of the student's Academic record for purposes of establishing the percentage of approved credits of the program of study requirements and to determine the maximum period of eligibility to receive financial aid. Only transferred credits applicable to the program of study will be validated.
- The evaluation to determine the student's Academic Progress will not consider the courses in which the student has received the mark of incomplete (I) until said mark has been removed.
- The University will notify the student, by letter or email, of her Academic status and how it affects the eligibility to receive financial aid.
- After graduation, the credit transcript will not reflect the student's probationary and suspension periods.
- A student may not appeal a Financial Aid Suspension

and obtain Financial Aid Probation status for the same circumstances on more than one occasion.

Class Attendance

Regular class attendance and meeting the requirements established for courses offered by non-traditional modalities are considered by the University as essential elements of the educational process. For this reason, class attendance is required of every student registered in courses requiring their presence. In the same manner, the fulfillment of requirements is compulsory for all courses offered by non-traditional modalities. Student participation in institutional activities will be considered a valid excuse for not attending class. Students are responsible for completing course requirements as stipulated in the course syllabus.

Students who during the period established in the academic calendar, have never attended a course will be dropped administratively. This includes courses offered by nontraditional modalities.

The last date of class attendance will be used to determine the applicable refund for students who stop attending class without officially withdrawing. This arrangement is established in harmony with University regulations.

Attendance Policy in the Certificate Level Academic Programs with Clock Hours

Federal regulations require that students in academic programs measured in clock hours comply with the total of hours required in the term. In this way, they can maintain their eligibility to receive federal funds during the next payment period or term of study in which they study. Students who are absent will have to make up all the hours of the academic term in which they were enrolled, prior to the beginning of the following academic term in which they register or before receiving additional federal funds.

However, students who present a justification in writing, in which they explain the reason why they could not attend classes, are not required to make up the hours, if the time in which they were absent does not exceed 10% of the hours programmed for the academic term in which they were registered. For example, if the total of hours of the academic term is 450 hours and the student did not complete them, he can request that he be exempt from making up the time and continue receiving federal aid, if the absence does not exceed 45 hours.

The absences may be justified for the following reasons:

- Illness of the student
- Illness or death of near relative
- Transportation problem
- Problem with the care of child (children)
- Pressing economic situations
- Appointments in governmental or private agencies
- Appointments or visits to courts
- Maternity
- Military exercises
- Participation as a jury member

The director of the program, as well as the registrar or the dean of studies may evaluate any other situation that the student presents, for which it is understood that an absence is justified.

Withdrawal of a Course from the Class Schedule

The University will make every reasonable effort to offer courses as announced, but it reserves the right to withdraw a course from the schedule, when it is deemed necessary.

Repeating Courses

Students will have the right to repeat courses when not satisfied with their grades. Students will pay the repetition of courses with their own money unless the federal and institutional regulations allow the granting of financial aid. In case a course is no longer offered at the University, it will be substituted with the new course created in the curricular revision or with an equivalent course approved by the Vice-President for Academic and Student Affairs. The highest grade and its corresponding credits will remain on the student's transcript and lower grades will be changed to an R (repeated) course. When students repeat a course and obtain the same grade as in the previous term, the grade of the most recent term will appear on the transcript. The administration action symbol R and its corresponding credits will not be considered in determining if a student has satisfied the graduation requirements. Courses repeated after graduation are not considered in the computation of the graduation grade point index.

Withdrawal from the University

Students wishing to withdraw from the University must report to a professional advisor or to the person designated by the Chief Executive Office of the academic unit. Then, they must go to the Office of the Registrar to fill out the withdrawal form and should then proceed as directed. For withdrawals from the University by students who are completely distance learning students or for withdrawals not requested in person, students should inform their desire to withdraw to the Registrar of the academic unit by regular or electronic mail.

Grading System

There are other grading scales for certain academic programs and for certain courses.

Course grades indicate the degree of student achievement in any given course. The University has established a quality point system to be used in accumulating and summarizing these grades. This quality point system is used to determine the minimum degree of general competence for graduation and for continuing the program at any level and to assign special honors to students who excel. Grades are reported in accordance with the following grading system:

- A- Superior academic achievement; 4 honor points per credit hour.
- B- Above average academic achievement; 3 honor points per credit hour.
- C- Average academic achievement; 2 honor points per credit hour.
- D- Deficiency in academic achievement; 1 honor point per credit hour.
- F- Failure in academic achievement; no honor point per credit hour.
- P- Passing; this grade is assigned to students satisfying the requirements in courses taken by proficiency examinations and for courses in which such grade is required. This grade is not included in the computation of the grade point index.
- NP- Not passing; this grade is assigned to students who fail in the courses indicated under the grade P. This grade is not included in the computation of the grade point index.

Courses completed at the University and taken in other

higher education institutions having previous authorization from the corresponding authorities at Inter American University will be included in the computation of the grade point index. The grade point index is determined by dividing the total number of honor quality points by the total number of credits completed with the grades of A,B,C,D, or F.

All courses that grant academic credit require tests or other grading tools. This includes a final examination or its equivalent. Faculty members will indicate on their class register how the final grade was determined.

Change of Grades Request

Students who believe that their final grade in a course is erroneous must notify this, in writing, to the course instructor, with a copy to the proper department chairman. This faculty member will be responsible for discussing the evaluations with the student and if necessary, will submit an amendment to the student's final grade according to the process established by the Institution.

If students are not satisfied with the attention given to grade change request, they may resort to the procedure established in Article 2, Part A, number 8, of the General Student Regulations.

The deadline for requesting a change of grade will be the deadline for withdrawal with a grade of W of the academic term following the term of the same type in which the grade was given.

Administrative Action Symbols

The following symbols are used to indicate administrative action taken regarding student status in courses for which they registered.

- W- Course Withdrawal: Assigned when the student withdraws from a course after the end of the period for class changes, but no later than the last day of class. This symbol appears in the academic file.
- DC- Course Withdrawal: Assigned when the student withdraws from a course before the end of the period for class changes. This symbol does not appear on the student transcript.
- AD- Administrative Drop: Assigned when the University drops the student for reasons such as death, suspension or other situations warranting a drop. This symbol appears in the academic file.
- AW- Assigned in the electronic register when the professor informs, no later than the dates established in the academic-administrative calendar, that the registered student never attended the course or any related academic activity.
- MW- Symbol used to indicate total withdrawal for military reasons.
- I- Incomplete: When students have not completed a course requirement and the professor determines that there are valid reasons for it, the symbol "I" (Incomplete) may be assigned. Together with the symbol "I", the professor will include a provisional grade, after assigning zero for the unfinished work. When faculty members assign an "I", they shall report to their immediate supervisor the grade that the student has earned up to that time, the evaluation criteria and a description of the unfinished work if applicable. A student who receives an "I" must remove it by the date specified on the Academic Calendar. The responsibility for removing the "Incomplete" rests on the student. If the "Incomplete" is not removed within the time specified, the student will receive the informed provisional grade. This norm will apply whether the student enrolls the following semester.
- UW- Assigned in the electronic registry when the student stopped attending class, and does not qualify for the grade of incomplete (I) or F.
- AU- Symbol used to indicate on student transcripts that the course was audited. No honor points or University credits are awarded.

- R- Symbol used to indicate the course was repeated. This symbol appears in the academic file.
- T- Symbol used to indicate the course was transferred from another institution. This symbol appears in the academic file.

Graduation Requirements

In case a required course of the selected Catalog is no longer offered in the University, substitutions may be made with the approval of the Director of the Technical and Vocational Certificate Program. Courses required in more than one certificate may be accredited as such in each of those certificates. The courses taken after students have graduated will not alter in any way their graduation index.

To complete a certificate degree in the Inter American University the student must:

1. Complete the academic requirements of the study program.
2. Obtain a final minimum general average end of 2.00 points.
3. Approve in Inter American University of Puerto Rico at least 75 percent of the total of credits required for the degree. Credits obtained by means of the validation of learning experiences, transfers or advanced level tests, as well as a combination of these, will be considered to satisfy this requirement.

Application for Graduation

Students should apply for graduation no later than when one third of the academic term in which they expect to graduate has passed or by the date established by the Office of the Registrar of their campus. Applications may be obtained at the Office of the Registrar and should be returned to that Office after they have been filled out and stamped by the Business Office showing that the non-refundable fee of \$100.00 has been paid for the doctor, master, bachelor's and associate degrees. Failure to comply with this procedure may result in the postponement of the granting of the diploma.

Any alleged error in the evaluation of the application for graduation should be reported to the appropriate Registrar within a week after the receipt of the evaluation.

The payment of graduation fees of any kind, the listing of the student as a candidate for graduation in any document and/or invitation either to the graduation ceremonies or to any other activity related to graduation exercises shall not be interpreted as an offer to graduate or a covenant to that effect. Only the completion of all requirements listed in this catalog or in any other official University directive entitles a student to graduation irrespective of any representation of any kind made by any official of this

University.

Candidacy for graduation will be attained by the student after the faculty has determined that the requirements for graduation have been fulfilled. Subsequently, the faculty will present the degree candidates to the Chief Executive Officer of the Campus.

Students that have completed the graduate requirements and paid the graduation fee, but interrupt their studies, have the right that their payment be considered effective for one academic year from the date of the last term in which they studied.

After this period, students will pay the difference, if there is one of the cost of the graduation fee, but they will not have to apply for graduation again.

Graduation with Honors

The academic distinctions are only granted to students with an excellent level of academic achievement in the Certificate. In order to be eligible for these honors, the student must have obtained a minimum general academic index of:

- 3.85 for the distinction with "High Honors"
- 3.50 for the distinction with "Honors".

The academic distinctions will be recognized in official diplomas or certificates.

These academic distinctions will be only granted the students who have approved a minimum of the 75 percent of the credits required for the degree in this Institution. This same index of graduation will be used for the granting of any other academic award.

Academic Excellence Award by Program

At the Graduation Service the students with the highest-grade point average, provided this is at least 3.50, will be recognized for academic excellence.

Student Leadership Award

At the Graduation Service recognition of student leadership will be given to the students, who meet the academic progress norms, are distinguished by the faculty and/or the administration and who meet any of the

following requirements:

Outstanding participation in student organizations.

Distinction in the external community.

Contribution to improvement of university community conditions.

Certificate Diplomas

Students graduated from the Technical and Vocational Certificate Program will claim their diplomas in the Office of the Registrar no later than a year following the graduation. The University will not be responsible for diplomas after that time.

Student Financial Aid

The University awards financial aid, within the limitations of available funds, to students who meet the specific requirements established by those offering the aid. Applicant eligibility for such aid is reviewed each academic year.

Students can obtain orientation on financial aid in the Financial Aid Office of the campuses. To apply for funds for the Federal Pell Grant, students only have to complete the Free Application for, Federal Student Aid, known as FAFSA. The forms for this application may be obtained through the Internet by accessing www.fafsa.ed.gov. The Financial Aid Office personnel can offer more information on the aid available in the university, as well as the requirements established by each program, and the procedure to apply for the funds or you may access www.inter.edu and then select the section on financial aid.

Military personnel and other people duly qualified may make use of veterans' benefits as permitted by current law. The information about these programs can be obtained in the Office of the Registrar of the campuses.

Federal Funds

Maximum Time Requirements for Federal Financial Aid

The period for which students are eligible to receive financial aid from federal sources depends on the duration of the program of studies as defined by the University. For this purpose, the University has determined the duration of its programs according to the number of credits they require. Students must complete their program of studies within a period that does not exceed 150% of its duration. The courses considered in this percentage are those required by the selected program. Students accumulate time for transferred credits.

Federal Pell Grant

As of 2012 July, the duration of the eligibility of the Pell Federal Scholarship is reduced to 6 years studying full-time or 600%. The Federal Department of Education calls the percentage of use of the scholarship *Lifetime Eligibility Used: LEU*. To know how the Department of Federal Education does the calculation you can access: www.studentaid.ed.gov/pell-limit.

There are several ways to submit the request:

1. The new student completes the application via Internet or submits it to the Financial Aid Office of Inter American University where it will be processed, electronically, to the United States Central Processing Center. Inter American University of Puerto Rico will receive information concerning the eligibility of the applicant informed on the Student Aid Report (ISIR) and will communicate this to the applicant. The advantage of this method is that it speeds up the process, avoids errors and the applicant does not have to wait to receive the response by mail. Normally, Inter American University of Puerto Rico receives the response within 72 working hours from the time the application was transmitted. This method speeds up the process because:
 - a. The Free Application for Federal Student Aid (FAFSA) is available on Internet and may be completed from anywhere at any time.
 - b. Information does not need to go through the mail.
 - c. If the application is not approved or if information was assumed in the approval process, the Financial Aid Director can help and can get in touch with the student. The Financial Aid Office corrects the error electronically.
 - d. If the application is approved, the financial aid offer letter will be prepared when the student selects courses for registration,
 - e. The payment process during enrollment is simplified. It can even be done by mail.
2. Applicants that received Federal Aid at Inter American University of Puerto Rico the previous year need only to update their application for renewal via Internet (www.fafsa.ed.gov) by using a personal identification number "PIN number" mailed by the US Department of Education. Students that do not have a PIN number may request it by accessing www.pin.ed.gov. This request will be processed immediately so the process may continue.
3. Indicate on the application the campus of Inter American University where the student intends to study, authorize said campus to receive information regarding the applicant's eligibility and send the

application by mail. This method is not as fast as the one described in item #1 because the application is sent by mail to an intermediary agency where the data information is entered and transmitted to the Central Processing Center. Furthermore, the information is not reviewed by a financial aid official to avoid errors. The response is electronically transmitted to Inter American University.

4. Send the application by mail without authorizing Inter American University to receive the information electronically. This is the slowest method in processing the application since the application and the response are processed by mail and the University cannot process the application for the grant until the applicant receives it by mail and submits the answer to the Financial Aid Office.

The Financial Aid Officer will determine the amount of aid to be awarded by using the formula which considers the cost of education, the academic load, and the Expected Family Contribution.

Eligibility for the Federal Pell Grant expires when the student completes the academic requirements for the first Bachelor's Degree. Upon completion of the second year of study, students must maintain a minimum grade point index of 1.50 in order to receive federal financial aid.

Students that received their first payment of Federal Pell Grant after the July 1, 2008, have only 18 semesters or equivalent terms to receive this grant.

Federal Supplemental Educational Opportunity Grant (FSEOG)

Inter American University of Puerto Rico distributes this additional aid to poor students. The Financial Aid Office determines the eligibility of the student based on an analysis of economic need. Aid is granted to students who have not completed any bachelor's degree. Students with exceptional need are taken care of first in this program. The participants of Beca Pell have priority.

Perkins Federal Student Loan Program

This is a low interest loan available to students whose studies lead to a degree. Students must demonstrate their intention to pay. They are required to sign a promissory note and other documents. Participants will begin payment on principal and interest from six (6) to nine (9) months after the last term in which they studied with an academic loan of at least six (6) credits. Students may apply for

deferral and cancellation of installments. The annual interest rate after October 1, 1981 is 5%. These funds are assigned preferably to students with exceptional needs. These funds are matched with Inter American University funds.

Federal Direct Loans

The Federal Direct Loans Program offers both subsidized and unsubsidized loans. Subsidized loans are awarded based on financial need and the federal government pays interest on the loan until the borrower begins to pay and during periods of authorized deferment. Unsubsidized loans are not awarded based on need and interest is charged from the time the loan is disbursed until it is paid in full. Unsubsidized loans may not exceed the family contribution or the cost of education, whichever is less, within the limits established by the Program.

For the Federal Direct Loans program, students should apply directly to the University. After the full Free Application for Federal Student Aid (FAFSA) is reviewed the University will inform students of their loan eligibility. Students must be enrolled in an academic load of at least six credits.

Dependent undergraduate students can borrow up to:

- \$2,625.00 if they are first-year students enrolled in a program of study that is at least a full academic year.
- \$3,500.00 if they have completed their first year of study and the remainder of their program is at least a full academic year.
- \$5,500.00 per year if they have completed two years of study, and the remainder of their program is at least a full academic year.

Federal Work-Study Program

The funds provided by the Federal Government to this Program are augmented by funds contributed by Inter American University unless the Institution is exempt from this requirement. Participants are assigned employment for which they receive compensation, which contributes toward payment of their educational expenses. When possible, students are assigned work related to their field of studies.

Commonwealth Funds

Grants for these funds depend upon the annual allocation that the Government of Puerto Rico makes for these

purposes. Several financial aid programs have been created by law for the following postsecondary students: Supplementary Educational Aid Programs and Scholarship Programs. The Financial Aid Office of each campus is prepared to offer information regarding the eligibility requirements of these programs.

State Funds

Supplementary Educational Aid Program

The government of Puerto Rico contributes the funds to this program, which is governed by the eligibility criteria established by the Federal Department of Education that apply to Title IV funds. Students must meet the need requirements as established by the Institution.

Aid Program for Worthy Students

Los fondos asignados se utilizarán prioritariamente para atender estudiantes de nuevo ingreso deben ser provenientes de escuela superior con promedio de 3.00 ó más y que hayan completado su grado durante el año académico anterior al año del otorgamiento de la beca. Además, estar matriculados a tiempo completo con la Universidad Interamericana de Puerto Rico.

The assigned funds will be used primarily to attend to new students, who should be students from high school with a grade point index of at least 3.00 and have completed their degree during the academic year prior to the year of the granting of the scholarship. In addition, they must be enrolled full-time in Inter American University of Puerto Rico.

Scholarship Program for Specific Academic Areas

The funds assigned to this program are directed to students with exceptional academic merit and economic need that are registered in certain disciplines which are identified every year by the Puerto Rico Council of Education.

Institutional Scholarships

Inter American University allocates funds for scholarships each year according to student needs.

Tuition, Fees, and Other Charges

The University reserves the right to change tuition fees and other charges when:

1. There is an increase in educational and general fees and/or mandatory transfers.
2. Budget projections indicate a possible increase in these costs.
3. After careful analysis of any situation, the University administration determines that such changes are reasonable and justified.

Payments

The total cost of tuition fees and other charges is payable at the time of registration.

The difference between the total cost of tuition, fees and other charges and the total amount of financial aid a student receives (except aid received under the Federal Work-Study Program) is payable at the time of registration.

Payments may be made by means of money orders, checks drawn to the order of Inter American University of Puerto Rico or in cash. Payment may also be made by MasterCard, Visa, American Express, Discover and ATH debit cards. In addition, payments may be made through Banco Popular de Puerto Rico by telepago.

Deferred Payment Arrangements

The University grants students the privilege of a deferred payment for 25% of the total cost of registration per semester, trimester or bimester upon signing the deferred payment document 'Pagaré Único.' To be eligible for deferred payment, students must have liquidated any debts from previous academic terms. In no case shall the total amount deferred exceed the balance of the debt after discounting the financial aid benefits or loans.

The chief executive officers of the academic units may, in exceptional cases, increase the percentage of the deferral if it is understood to be beneficial for the Institution after an analysis that indicates, with a reasonable degree of assurance, that the debt will be paid.

The payment of the deferred total cost of tuition, fees and other charges becomes due seventy-five (75) days after the first day of class in a semester calendar, forty-five (45)

days in a trimester calendar, and thirty (30) days in a bimester calendar. The deferred amount for semesters is due in a maximum of three equal installments, two payments in the case of trimesters, and one payment in the case of bimesters.

The award of a deferred payment carries a fee to cover part of the administrative expenses of this service. There will be a charge of 5% on an installment that is not paid by its due date. It is the responsibility of each student to know when payments are due and decide accordingly.

Students who do not meet their financial commitments by the due date may be suspended and will not receive a grade in courses in which they have enrolled. Students who have not met their financial commitment will lose their rights to receive University service until their debts are removed in accordance with the Federal and Puerto Rican regulations.

THERE IS NO DEFERRED PAYMENT PLAN DURING THE SUMMER SESSIONS except by authorization of the Vice-President for Financial Affairs, Administration and Services. This deferred amount must be paid within thirty (30) days from the last day of classes of the summer session in which the aid was awarded.

Other Types of Debts

When students or former students of the University are in debt to the University for any cause other than that of a deferred payment as explained in the Catalog, independently of any payment plan granted or any collection procedure that may be initiated or has been initiated, they lose their rights to receive University services until the debt is paid in full.

Students transferred from another educational institution who have debts with any of the federal financial aid programs will not be eligible for financial aid at this University.

Adjustments and Reimbursements

Partial Withdrawal (except the School of Law and the School of Optometry).

Per Semester, Trimester and Bimester

100% of the cost of the credits and laboratory fees (not including other fees) that are dropped before classes begin.

75% of the cost of the credits and laboratory fees (not including other fees) dropped during the first week of classes.

50% of the cost of the credits and laboratory fees (not including other fees) dropped during the second week of classes.

THERE WILL BE NO REIMBURSEMENT AFTER THE SECOND WEEK OF CLASSES.

These adjustments will apply to students that pay the total cost of registration in cash. Other costs will not be reimbursed after the second week of classes. Students who pay with financial aid will be responsible for the difference resulting from reimbursement to the fund and registration costs. In case a balance remains, this will be returned to the student.

Institutional Policies and Procedures of Return of Funds for Students with Total Withdrawal

The Policy for Return of Funds is applicable to all students that pay their registration in cash, with financial aid under Title IV Programs, or from other state or institutional programs or from health allied programs or with any other payment method and who officially withdraw from all courses, stop attending class, never attended class or are expelled from the University.

Return of Funds to Title IV Programs

Students who officially withdraw: To determine the applicable percentage, the last date of withdrawal up to 60% of the term will be used.

Students who stop attending class: The Policy for Return of Funds will be applied up to 60% of the term with a refund equivalent to 50% of the assigned funds.

Students who never attended class: One hundred percent (100%) will be refunded.

Return of Funds to State or Institutional Programs, Health Allied Programs or for Payments made in Cash or any other method of payment.

For students who officially withdraw from all courses, stop attending class or never attended class the return of funds previously accredited will be as follows:

Per Semester, Trimester and Bimester

100% of the cost of the credits and laboratory fees (not including other fees) that are dropped before classes begin.

75% of the cost of the credits and laboratory fees (not including other fees) dropped during the first week of classes.

50% of the cost of the credits and laboratory fees (not including other fees) dropped during the second week of classes.

Services for Veterans

The University is approved for the training of students under the various GI Bill® programs. "GI Bill® is a registered trademark of the U.S." Veterans intending to enroll and receive VA educational benefits should submit an application through the Office of the Registrar of the campus in which they intend to pursue studies.

The beneficiaries of educational services for veterans, including eligible family relatives, have the right to enjoy these benefits only for the period of time required for completing their academic degree as established in this Catalog and by applicable legislation and regulations.

Study time required for completing an academic program depends on the number of credits required for the program, the nature of the courses and the number of credits the student takes each term. An estimate of the period of time required may be obtained by dividing the total number of credits required for the program by 15, which is the average number of credits taken by a full-time regular student.

Students accumulate semesters of study as indicated below:

Term	Student Classification	Terms of Study (in percent)
Semester	Full-time	100.0
	Part-time	50.0
Trimester	Full-time	66.7
	Part-time	33.3
Bimester	Full-time	50.0
	Part-time	25.0

Students also accumulate study time at the rate of one (1) semester for every twelve (12) transferred credits.

Activities and Other Student Services

Accessibility

Notice of Non-Discrimination and Identification of Section 504 Coordinator

Policy Statement

It is the policy of Inter American University of Puerto Rico that, in accordance with Section 504 of the Rehabilitation Act of 1973 (**Section 504**), no to discriminate on the basis of disability in its programs, services or activities in violation of Section 504.

Policy Document **E-0623-011 Guidelines, Standards and Procedures for Accommodating Requests for Reasonable Accommodation of Students** is the policy that establishes the policies and procedures for students with disabilities attending Inter American University of Puerto Rico.

Contact the campus 504 Coordinator or send an email to zfigueroa@inter.edu with questions or concerns about access to a program, service or activity.

You may direct questions about Section 504 rights or procedures to:

Zulma Figueroa, Ed. D.
 (787)766-1912 Extension 2516
zfigueroa@inter.edu
 399 calle Galileo final
 Urb. Jardines Metropolitanos
 San Juan, Puerto Rico 00927-4518

Student Activities

During the academic year, the University and the Student Council of the various instructional units sponsor a variety of cultural, social, academic, religious and recreational activities in which all students and the University community are invited to participate.

Such participation fosters personal and professional growth and provides leadership training by encouraging mutual understanding and cooperation and by emphasizing the ideals of service, good citizenship and respect for human values. The University, within the limits of its resources, endeavors to provide such activities.

There are many clubs and organizations at the instructional

units. These organizations may be academic, professional, cultural, recreational, social, sports or religious in nature. The Office of the Dean of Student Affairs at the various instructional units will provide, upon request, up-to-date information on clubs and organizations and their current officers and membership.

Religious Activities

Reflecting the commitment of the University to its Christian roots, each campus has a Religious Life Office that responds to the Institutional Pastoral Plan promoting faith experiences from an ecumenical and Christian perspective. Each instructional unit also offers pastoral care services, spiritual enhancement, and reflective experiences, in addition to the established celebrations during the liturgical year. The participation of the University community is encouraged in the different events but is completely voluntary.

Graduation Ceremony

The graduation ceremony of students of the Program, who have fulfilled the requirements for the certification or graduates, will be held annually together with the graduation ceremony of the university students of the campus.

Student Councils

Student councils, as provided by the General Student Regulations, may be organized at all the instructional units of the University. Their members are elected from the student bodies according to the established procedures. These procedures provide for direct participation of the largest number of students possible from all the units, including students of the Technical and Vocational Certificate Program.

The Student Council is given funds for organizing activities promoting student life and academic endeavors of the unit. Students on disciplinary probation are not eligible to hold posts in the Student Council.

Student concerns are canalized through the Student Councils. The Councils meets regularly with University authorities and receive relevant information about University development.

Sports and Recreation

In each unit, according to its individual needs, there is a program of intramural sports, which offers the opportunity to compete to students who cannot aspire to become first rate athletes. These sports and recreational activities offer students the opportunity to establish friendships, to fraternize with the University community and to develop physically, mentally and socially.

Students interested in more independent recreation can use the facilities for ping-pong, pool and tennis or they can participate in chess, dominoes and other games in competition with other universities.

Parking Service and Traffic Rules on Campuses

The Traffic Laws of Puerto Rico are complimented by the campus' internal rules related to on campus traffic. All students interested in access to the campuses with a motor vehicle must obtain a permit to these effects. The permit and the payment for parking should not be interpreted as a guarantee of a parking space.

Students are responsible for observing traffic rules and driving properly. The University is not responsible for damage that vehicles parked on the premises may suffer or for articles left inside the vehicles. Any personal or property damage caused by students while driving inside University installations will be their responsibility.

Orientation Services

The orientation services facilitate the adjustment of students to the university environment. These services include academic advisement and vocational and personal counseling. The advisement and counseling services aim to help students in the development of educational, vocational and personal goals, and in the achievement of greater integration and participation in the university community.

Services for Veterans and Vocational Rehabilitation

The University offers recruitment, orientation, and referral services to veterans of the Armed Forces that wish to study in the Institution. The Office of Professional Counseling of each unit will assist veterans in the solution of their problems and will serve as a link with other offices when necessary. All students with veterans' educational services must submit their request to the Office of the Registrar of

their campus.

The Institution, likewise, attends students who receive assistance through the Office of Vocational Rehabilitation. This service includes reasonable accommodation for handicapped students that apply for it. Among the services are included: student readers, transcriber, as well as ramps and appropriate writing-desks for wheelchairs. The services are coordinated with the dean of students or the person designated by the chancellor.

Information Access Center (Library)

Each academic unit has an adequately staffed and equipped Information Access Center. These Centers are organized to function as a coordinated system. An on-line catalog provides access to all University bibliographical resources as well as audiovisual and electronic resources that are made available for computer-based research.

The Centers provide remote access to electronic databases through the Internet to students, faculty and administrators of the University.

Each Information Access Center has developed as an integral part of the University programs in which a number of activities take place, including the development of library skills for students, faculty and administration.

The system collection contains more than one million volumes of printed, audiovisual and electronic resources.

Audiovisual Center

Each Center offers a variety of audiovisual services to assist in the teaching-learning process. These use the most modern technological resources available. The Audiovisual Center has two main functions: the production of audiovisual and digital materials to complement the educational process and the offering of direct services to faculty and students.

The Centers design and produce their materials in facilities for sound and television recordings and for photography and the graphic arts. Projection services for individuals and groups as well as exhibitions are offered.

In general, these Centers gear their efforts towards facilitating the imparting of knowledge. The Centers contain collections of current materials in all curricular areas.

Educational and Technological

Services

The University stresses the importance of developing educational resources that complement the teaching function. As a result, several programs have been implemented to integrate the latest technological advances to the University's educational services.

Alumni Association

The Alumni Association Poly-Inter is an organization of graduates and former students who attended Inter American University or Polytechnic Institute. The Association keeps its members informed of University activities and involves them in its development. The Association is governed by a Board of Directors composed of 29 members, nine of which correspond to the alumni chapters of the different campuses and two members to the professional schools. In addition, the Association is represented on the Board of Trustees of the University by an Alumni Trustee. Each year the Alumni Association holds two primary activities: the celebration of Founders Day and the honoring of distinguished alumni.

Publications

The University facilitates communications between the components of the university community and keeps professors, students and administrative personnel informed of what occurs in the Institution by means of a variety of publications. In addition, the campuses have their own publications with the same purpose: to keep the general university community informed.

Academic Norms of Compliance

Credit-Hours

In compliance with Federal legislation 34 CFR 668.8(k), the University defines credit/hour policy as indicated below:

1. 30 hours of face-to-face contact or its equivalent in online academic activities equals 1 credit.
2. 30 hours of face-to-face or virtual, closed laboratory equals 1 credit.
3. 30 hours of supervised practice equals 1 credit.

Course Offerings and Scheduling

This Catalog includes the courses that comprise the academic offerings authorized for Inter American University by the Board of Postsecondary Institutions of Puerto Rico. However, for reasons of enrollment, a course may not be offered on one campus, but offered in another. In this case, students have the option of taking it on another campus that has it scheduled for the academic term of their interest or they may take an authorized equivalent course. Also, there are academic programs that include a component of “Prescribed Distributive Requirements” that, generally, require the student to select from among a list of courses or options. In these cases, the student will select among those courses that the campus schedules. However, students also have the option of taking Prescribed Distributive courses in another campus that has scheduled the courses of their interest in accord with the requirements of their study program.

Special Requirements of Practice and Internship Centers

Some academic programs of the University require students to complete a practice or internship in a real work scenario as part of the degree requirements. These external centers may be state and federal agencies, hospitals, and nongovernmental organizations, among others.

It is students’ responsibility to comply with the external center’s requirements to complete their practice or internship. Depending on the practice center, these requirements may be doping tests, HIV tests, an immunization certificate against hepatitis, a health certificate, a negative criminal record, or any other

requirement that the institution or practice center may stipulate. If students refuse or are not able to meet any of the requirements, they will be unable to complete their practice or internship and, therefore, will not pass the practice or internship course or meet the graduation requirements of their academic program.

Compliance with Requirements of Regulated Professions and Employment

Some professions have licensing, certification, or professional association requirements or a combination of these in order for a person to practice the profession. Therefore, students and graduates who hope to practice a regulated profession must meet the current requirements of the organization that confers the license, certification, professional association or combination of these before initiating the corresponding proceedings with the agency or organization that applies to their profession. The licensing, certification, professional association requirements or a combination of these may vary from one jurisdiction to another. Therefore, compliance with the requirements in one area does not imply that the student also complies with the requirements of another region. Students are forewarned that the agencies that regulate the professions may change the requirements to practice these at any time.

Some employers of the private sector or government agencies have revalidation, examination or test requirements in order to choose a job. It is for this reason that, in these cases, students or graduates applying for work must meet the additional requirements beyond the studies or diplomas that Inter American University of Puerto Rico offers and confers.

Research Ethics Committees (IRB, IACUC and IBC)

Research Ethics Committees (IRB, IACUC and IBC)

The Research Ethics Committees of the Inter American University of Puerto Rico are:

1. IRB – Institutional Review Board
2. IACUC – Institutional Animal Care & Use Committee
3. IBC- Institutional Biosafety Committee

These committees are responsible for ensuring that the University complies with state and federal laws and regulations, as well as with the institutional norms and procedures applicable to the protection and rights of human beings, animals, and biospecimens that are part of the research projects.

The Research Ethics Committees respond to research requests that include human subjects, animals or biospecimens developed by:

1. Internal professors or researchers of the Inter American University of Puerto Rico;
2. Researchers from outside the Inter American University of Puerto Rico who wish to carry out research at the Inter American University;
3. Research resulting from externally funded grants;
4. Research resulting from collaborations with third parties in which one of our ethics committees is designated as the lead committee for the review of the protocols through a collaboration agreement.
5. Students enrolled in graduate programs that require the development of a dissertation or research that includes any of the aforementioned groups.

People who require the services of any of the research ethics committees must complete the required training and submit the research protocol to the corresponding ethics committee for review and endorsement before beginning the interaction or research processes with any of these. . . The identification, recruitment or obtaining of information from the subjects may not take place without first having the endorsement of the corresponding ethics committee.

Warning on Compliance with Copyright Laws and Regulations

1. The unauthorized distribution or reproduction, by any means, of material protected by the copyright laws and regulations may entail the imposition of civil and criminal sanctions.
2. The *General Student Regulations* contains provisions on academic honesty that cover the protection of this type of material and the breach of the provision may lead to the imposition of disciplinary sanctions.
3. There are legitimate ways to obtain and distribute protected materials. For more information, click here www.educase.edu/legalcontest.

Discontinuation of Academic Offerings

The University is committed to the renewal of its academic offerings, which includes the expansion, review, modification, or discontinuation of academic programs offerings authorized by the Board of Postsecondary Institutions of Puerto Rico. In case any academic unit of the University decides not to continue offering some academic program, students will have options available to them to complete the degree requirements. Courses on line, study by contract with support of the Web, or other nontraditional modalities may be among the options.

Institutional Codes, CIP Code, and Extension of the Programs

The table below presents the non-university post-secondary technical certificate programs, authorized by the Puerto Rico Council of Education (CEPR) with the code assigned by the University to identify the academic program. It also includes the Classification of Instructional Programs (CIP Code), according to the taxonomy of the Institute of Sciences of the United States Department of Education. In addition, it includes the duration of each academic program. The duration was calculated taking into account a full academic load of 24 credits per academic year, with satisfactory academic progress in the study program.

Code	Program	CIP Code	Hours	Credits	Length of Program
800	Administration of Information and Medical Plan Invoicing	51.0713	900	30	12 months
C011	Agricultural Technology Technician	1.0106	900	30	12 months
832	Barber Shop Technician	12.0402	1020	34	12 months
C010	Child Care Assistant (0-5 years)	19.0709	900	30	12 months
48	Child Care Technician	19.0709	1170	39	18 months
C03D	Computer and Network Repair (distance learning)	47.0104	900	30	12 months
820	Computer Assisted Draftsman	11.0803	1215	40.5	18 months
49	Computer Operator	11.0199	900	30	12 months
C08D	Computer Programming Technician (distance learning)	11.0201	900	30	12 months
40	Computer Repair Technician	47.0104	900	30	12 months
811	Computer Technician	11.0199	900	30	12 months
C03D	Computer and Network Repair (distance learning)	11.0199	900	30	12 months
C003	Confectioners Shop and Commercial Bakery Technician	12.0501	900	30	12 months

2	Construction Technician	46	900	30	12 months
833	Cosmetology Technician	12.0413	1020	34	12 months
844	Culinary Arts Technician	12.0503	930	31	12 months
808B	Eco-tourism Guide	3.0207	900	30	12 months
C02D	Educational Therapy and Evaluation (distance learning)	13.1101	1080	36	18 months
C007	Electricity Technician with PLC and Renewable Energy	46.0301	1185	39.5	18 months
C006	Entrepreneurship Technician	52.0701	900	30	12 months
C004	Fashion Design and Marketing Merchandising	52.1902	900	30	12 months
818	Gerontology Technician	30.1101	900	30	12 months
C01D	Health Services Billing Specialists (distance learning)	51.0713	1080	36	18 months
45	Health Services Invoicing Technician	51.0713	1140	38	18 months
819	Hotel Administration	52.0904	1170	39	18 months
842	Integral Esthetics Technician	31.0504	960	32	12 months
C008	International Cuisine	12.0503	900	30	12 months
838	Invoicing and Collection Systems in Health Services Technician	51.0713	900	30	12 months

23	Laboratory Assistant	51.0802	900	30	12 months
C005	Massage Therapist	51.3501	1020	34	12 months
22	Medical-Paramedical Emergency Technician	51.0904	1290	43	18 months
C012	Nail Technician and Brush-Stroke Art	12.041	900	30	12 months
C009	Network Safety Technician	11.1003	900	30	12 months
C05D	Network Security (distance learning)	11.1003	900	30	12 months
C04D	Networks and Forensics (distance learning)	11.1003	900	30	12 months
835	Personal Trainer	31.0501	1140	38	18 months
042B	Pharmacy Technician	51.0805	1770	59	24 months
817B	Practical Nursing	51.3805	1080	36	18 months
C002	Practical Nursing with Emphasis on Long-Term Care	51.3805	900	30	12 months
839	Repair and Networks Technician	47.0104	960	32	12 months
826	Respiratory Care Technician	51.0812	1560	52	24 months
801	Sales Management Technician	52.1899	900	30	12 months
841	Specialist in Computerized Systems and Networks	11.0901	900	30	12 months
C001	Surgical Technician	51.1012	1440	48	24 months

808	Tour Guide	52.0903	1170	39	18 months
822	Water Systems Administration Technician	15.0506	1170	39	18 months
823	Water Systems Operator	15.0506	1530	51	24 months
814	Web Page Design Technician	11.0801	1080	36	18 months

Programs of Study: Technical Certificate Programs

Administration of Information and Medical Plan Invoicing (CBIL - Code 800)

The technical certificate in Administration of Information and Medical Plan Invoicing aims to prepare students with the knowledge and skills required to work in the invoicing of medical plans in any institution that is a health services provider. In addition, it develops the skills for the compilation of information, administration and analysis of data in the mechanized system and in manual form.

The major courses must be approved with a minimum grade of C. Students will not be able to begin their internship if they have not approved course CBIL 160 and CBIL 130 and/or CBIL 230 (have approved one of the two).

The Aguadilla, Barranquitas and Ponce campuses are authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Administration of Information and Medical Plan Invoicing

First Term

CBIL 0120	Basic Medical Terminology	2
CBIL 0160	Invoicing of Medical Plans I	3
CBIL 0170	Codification of ICD 9CM Diagnosis	2
CBIL 230	Codification of Outpatient Procedures with the CPT-4	2
CMED 220	Basic Skills in English	2
CMED 310	Business Communication in Spanish	2
CMED 340	Introduction to Data Processing	2

Second Term

CBIL 211	Invoicing of Medical Plans II	3
CBIL 291	Internship in Administration of Information and Invoicing of Medical Plans	4
CBIL 310	Auditing and Legal Concepts	2
CMED 230	Mathematic Skills Applied to Business	2
CMED 350	Human Relations	2
CMED 360	Development of	2

Entrepreneurship

For students enrolled in or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Agricultural Technology Technician (CAGT - Code C011)

The program offers a basic preparation in agriculture with technological components. It includes general knowledge of the organization and operation of farms. This certificate provides the knowledge for the management and operation in agriculture and the use of land resources, among others. The program has a theoretical-practical content that allows the student to continue studies and develop in the field of agriculture, as well as the management of small businesses.

The San Germán Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Agricultural Technology Technician

First Term

CAGT 110	Introduction to Agricultural and Ornamental Crops	3
CAGT 120	Plant Propagation Methods	3
CAGT 130	Landscape Design	3
CAGT 140	Farming Ecology	3
CAGT 150	Plant Physiology	3

Second Term

CAGT 210	Hydroponic Systems	3
CAGT 220	Fumigation of Green Areas	3
CAGT 230	Business Administration	3
CAGT 291	Internship in Agricultural Technology	6

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Barber Shop Technician (CBAR - Code 832)

The certificate in Barber Shop Technician provides students the knowledge and skills required to perform the functions of a barber in the field of beauty, design, and management of beauty parlors: shaving of the beard and moustache, care of the hair and skin, manicure, haircuts, hairdos, chemistry, electricity, drying of the hair and color techniques.

The knowledge acquired by students will help them to work in places, such as: barber shops or beauty parlors, in the administration of beauty parlors or barber shops and work in homes. This certificate has been designed with the aim of adequately training students in the field of beauty and in compliance with the parameters of the Examining Board of this profession in Puerto Rico. Courses of the major must be passed with a minimum grade of C.

The Aguadilla, Barranquitas, Fajardo, Guayama and San Germán campuses are authorized to offer this Program.

(34 credits / 1,020 hours)

Academic Requirements for the Certificate in Barber Shop Technician

First Term

CBAR 110	Introduction to Barber Shop	3
CBEU 120	Conditioning of the Skin and Face Treatment for Men - Lab	4
CBAR 150	Haircuts, Styles, Shaving of Beard, and Moustache I	3
CBAR 250	Manicure and Nail Care for Men	3
CBEU 140	Hair, its Damages and Conditioning	3

Second Term

CBAR 260	Haircuts, Styles, Shaving of Beard and Moustaches II	4
CBAR 220	Chemical Processes and Color Techniques	4
CBEU 320	Beauty Salon Administration	3
CBAR 291	Barber Shop Practicum	7

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Child Care Technician (CCHC - Code 048)

The certificate in Child Care Technician aims to train people to be employed or for self-employment in positions of child and infant care. It considers the physical, emotional, social, recreational health aspect by offering real experiences and external practice in diverse practice centers.

The major courses must be approved with a minimum grade of C. Students will not be able to begin their internship if they have not approved the following major courses: CCHA 110, CCHC 210 and CCHC 296.

The Arecibo, Metropolitan, Ponce and San Germán campuses are authorized to offer this Program.

(39 credits / 1, 170 hours)

Academic Requirements for the Certificate in Child Care Technician

First Term

CCHC 110	Childhood Development	2
CCHC 120	Literary Activities	2
CCHC 130	Games for Children	2
CMED 150	Health and First Aid	2
CMED 210	Basic Skills in Spanish	2
CMED 340	Introduction to Data Processing	2

Second Term

CCHC 210	Baby and Infant Child Care	3
CCHC 220	Crafts for Children	2
CCHC 297	Seminar in Child Care	3
CCHC 296	Early Interventions in Children with Special Needs	2
CMED 350	Human Relations	2

Third Term

CCHC 291	Internship in Child Care	9
CCHC 310	Administration of Child Care Centers	2
CMED 220	Basic Skills in English	2
CMED 430	Basic Skills in Mathematics	2

For students enrolled in or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Computer Operator (CCOP - Code 049)

The technical certificate in Computer Operator offers students a basic preparation for computer use in technical and professional areas. It includes general knowledge of the organization, architecture and operation of computerized systems. In addition, it allows students to handle and operate computers for the necessary skill development to apply the most used computerized programs in industry, commerce and education. It offers a practical-theoretical background that assists graduates to obtain employment or to continue studying and developing in the field of computer science.

The major courses must be approved with a minimum grade of C.

The Arecibo Campuses is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Computer Operator

First Term

CCOP 110	Application Programs in Microcomputers	4
CCOP 120	Introduction to Computers	4
CCOP 130	Microcomputer Keyboard	2
CMED 320	Business Communication Skills in English	2
CMED 230	Mathematic Skills Applied to Business	2

Second Term

CCOP 210	Computer Programming	3
CCOP 220	Physical and Operating Components of Computers	3
CCOP 230	Database Administration	3
CCOP 240	Telecommunications, Networks and Internet	3
CCOP 297	Seminar in Computer Operator	4

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Computer Repair Technician (CARM - Code 040)

The technical certificate in Computer Repair Technician

aims to develop technical personnel properly trained in the installation, configuration, administration and maintenance of computerized micro-systems and networks, and in the repair of microcomputers and peripheral equipment.

The major courses must be approved with a minimum grade of C.

The Aguadilla Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Computer Repair Technician

First Term

CARM 120	Introduction to Computers	2
CARM 130	Introduction to Microprocessors	2
CARM 140	Introduction to Operating Systems	4
CARM 150	Mathematics Applied to Digital Electronics	2
CARM 210	Introduction to Communication Networks	3

Second Term

CARM 220	Small Business Administration	3
CARM 230	Installation and Configuration of Operating Systems	3
CARM 235	Data Administration and Retrieval	3
CARM 240	Repair Techniques for PC Computers	4
CARM 297	Computer Repair Seminar	4

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Computer Technician (CCOM - Code 811)

The certificate in Computer Technician offers students a basic preparation in the use of computers in technical and professional areas. It includes general knowledge of the organization, architecture, operation and programming of computerized systems. This certificate provides students the knowledge for the administration and operation of the

computer and the development of skills for the application of computerized programs with the greatest demand in industry, business and education, among others. The program has a practical-theoretical content that allows students to continue studies and become prepared in the field of information systems.

The major courses must be approved with a minimum grade of C.

The San Germán Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Computer Technician

First Term

CMED 140	Computer Use and Administration	3
CCOM 110	Computer Assembly, Repair and Maintenance	3
CWEB 220	HTML Codification with CSS	3
CCPT 230	Python	3
CCOM 310	Language C + C #	3

Second Term

CCOM 410	Databases	3
CWEB 310	JAVA Script	3
CCOM 291	Internship in Computers	9

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Confectioner Shop and Commercial Bakery Technician (CBAK - Code C003)

The technical certificate in Confectioner's Shop and Commercial Bakery Technician aims to prepare students with the knowledge and necessary skills for the preparation of bread, classic candies, international desserts, and cakes, among others. With a completely practical approach, students will acquire knowledge in the handling, preparation and presentation of bread and cold and warm sweets for retail as well as for commercial sales.

The major courses must be approved with a minimum grade of C. Students will not be able to begin their

internship if they have not approved all the major courses of the first semester.

The Aguadilla, Barranquitas, Bayamón, Fajardo, Metropolitan, and Ponce campuses and the Extension Center in Coamo are authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Confectioners Shop and Commercial Bakery Technician

First Term

CBAK 110	Bread Preparation I	3
CBAK 111	Hygiene and Good Practices in Food Administration in the Confectioners and Commercial Bakery	2
CBAK 120	Basic Confectioner Shop	3
CBAK 130	Cake Preparation and Decoration	3
CMED 230	Mathematic Skills Applied to Business	2

Second Term

CBAK 210	Introduction to Business Administration	2
CBAK 221	Bread Preparation II	3
CBAK 231	Advanced Confectioners Shop	3
CBAK 240	Plated Desserts for Restaurants	3
CBAK 291	Internship in Confectioners and Commercial Bakery	6

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Construction Technician (CMAC - Code 002)

The program prepares students for occupations in the construction industry. The student will acquire knowledge and develop skills in the areas of carpentry, plumbing, electricity, joinery, welding, masonry, maintenance, remodeling, and residential construction. Emphasis is placed on quality work through safe and productive experiences, including building a special project in the hands-on labs.

The program includes contents regarding safe practices, the use of construction materials, electric and manual tools, safety rules and applicable regulations in the construction processes. The training is oriented to the development of teamwork, which will allow the student to be assertive in planning and solving problems. It is characterized by having a high practical content oriented to the development of competence in the construction industry.

The San Germán Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Construction Technician

First Term

CCAR 110	Principles of Carpentry	3
CCAR 120	Introduction to Construction	2
CCAR 140	Principles of Masonry	2
CCAR 230	Principles of Plumbing	3
CMED 650	Security and Regulations	2
CERE 110	Principles of Electricity	2

Second Term

CMAC 210	Principles of Refrigeration and Air Conditioning	2
CMAC 220	Principles of Welding	2
CMAC 240	Principles of Woodwork	2
CMAC 250	Painting	2
CMAC 260	Landscape Design (Landscaping)	2
CMAC 291	Internship	6

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Cosmetology Technician (CCOS - Code 833)

The certificate in Cosmetology Technician aims to provide students with the knowledge and skills required to perform the functions of cosmetologist in the field of beauty, design and management of a beauty parlor: care of the hair and skin, manicure, pedicure, haircuts, rolling, waves, hair-dos, styles, chemistry, electricity, drying of the hair and color techniques.

The knowledge acquired by students will help them to

perform work in beauty parlors, the administration of the beauty parlor, and work at home. The certificate was designed with the aim to adequately train students in the field of beauty and in compliance with the parameters of the Examining Board of Beauty Specialists in Puerto Rico. Students who participate in this certificate are preparing themselves to work in and administer beauty parlors.

Major courses must be passed with a minimum grade of C.

The Aguadilla, Barranquitas, Bayamón, Fajardo, Guayama and San Germán campuses are authorized to offer this Program.

(34 credits / 1,020 hours)

Academic Requirements for the Certificate in Cosmetology Technician

First Term

CBEU 130	Principles of Esthetic Face with LAB	3
CBEU 140	Hair, its Damages and Conditioning	3
CCOS 110	Introduction to Cosmetology	3
CCOS 210	Hairstyle Design for Women	3
CCOS 240	Haircut Styles for Women	3

Second Term

CBEU 220	Chemical Processes in the Hair	3
CBEU 250	Color Techniques	3
CBEU 320	Beauty Salon Administration	3
CCOS 230	Make-Up, Manicure and Pedicure	3
CCOS 291	Cosmetology Practicum	7

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Culinary Arts Technician (CCOO - Code 844)

The certificate in Culinary Arts Technician provides students the knowledge and skills required in the preparation and serving of foods. From a practical-theoretical approach, students acquire knowledge in the administration, preparation and presentation of cold and hot foods of the Creole kitchen, as well as those of the international kitchen.

The Aguadilla, Barranquitas, Bayamón, Fajardo, Ponce and San Germán campuses and the Extension Center in Coamo are authorized to offer this Program.

(31 credits / 930 hours)

Academic Requirements for the Certificate in Culinary Arts Technician

First Term

CCOO 110	Food Services Hygiene, Health and Safety Procedures	3
CCOO 121	Meat, Poultry and Seafood Cuts	3
CCOO 130	preparation of Breakfast, Soup, Sauces, Salads, and Cereal	3
CCOO 140	Menu Design and Preparation of Banquets (Buffets)	3
CCOO 210	Puerto Rican Gastronomy	3

Second Term

CCOO 150	Creole and International Plated Desserts	3
CCOO 220	International Cuisine	3
CCOO 291	Internship in Cuisine	7
CMED 250	Principles of Management	3

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Electricity with PLC and Renewable Energy (CERE - Code C007)

The certificate in Electricity with PLC and Renewable Energy aims to provide students the knowledge, skills and abilities required in the field of residential, commercial and industrial electricity. The program is designed to meet the job demands in the field of electricity. Students integrate theory and practice, acquire knowledge, develop their talent and apply their skills in understanding the generation, transmission, and distribution of electrical systems.

Students acquire knowledge on basic skills applied to their profession and computer use and operation. The program consists of an integrated curriculum that includes the basic principles of electricity, and the norms and regulations of

different electronic systems.

Admission to this program requires students to present a medical certificate certifying satisfactory health to work in construction projects with equipment and electronic circuits. Program content is designed to provide students with the necessary competencies to apply for the board examination or the certification offered by the Examining Board for Expert Electricians to be able to practice the profession in Puerto Rico.

Major courses must be approved with minimum grade of C.

The Bayamón and San Germán campuses are authorized to offer this Program.

(39.5 credits / 1,185 hours)

Academic Requirements for the Certificate in Electricity with PLC Technician

First Term

CERE 110	Principles of Electricity	2
CMED 140	Computer Use and Administration	3
CMED 210	Basic Skills in Spanish	2
CMED 220	Basic Skills in English	2
CMED 650	Security and Regulations	2
CMED 730	Technical Mathematics	3

Second Term

CERE 140	AC/DC Electricity	2
CERE 150	Construction Electricity	2
CERE 210	Installation of Magnetic and Motor Control	2
CERE 220	Lighting	2
CERE 250	Principles of Electronics	2
CERE 340	Introduction to Electrical Plans	2

Third Term

CERE 240	Fundamentals of Transformers	3
CERE 291	Internship in Electricity with PLC	4.5
CERE 297	Seminar in Electricity with PLC	1
CERE 350	Programmable Logic Controllers PLC	3
CERE 360	introduction to Renewable Energy and Photovoltaic Systems	2

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Entrepreneurship Technician (CEPD-Code C006)

The program provides students with the basic skills to prepare a business plan to develop a company or business. The curriculum that covers the basic principles of state, federal, and international law, accounting, and finance from a business perspective.

The concentration courses must be approved with a minimum grade of C. The internship course must be approved with a minimum grade of B.

The Arecibo Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Entrepreneurship Technician

First Term			
CMED 110	Basic Business Spanish	2	
CMED 130	Basic Business Mathematics	2	
CEPD 110	Foundations of Entrepreneurship	4	
CEPD 120	Introduction to Marketing	4	
CEPD 130	Human Relations in the Business World	3	
Second Term			
CMED 120	Basic Business English	2	
CEPD 210	Accounting and Finance Principles	4	
CEPD 220	Business Design	2	
CEPD 230	Entrepreneurship Legal and International Framework	2	
CEPD 291	Entrepreneurship Internship	5	

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Fashion-Design and Marketing Merchandising-(CFMA-Code-C004)

The Program in Fashion Merchandising Technician is designed to develop the competencies of knowledge, skills and attitudes that will allow students to acquire the theoretical knowledge related to the area of fashion merchandising in harmony with the current local and international industry. Analysis of fashion trends, their promotion, and its importance in fashion merchandising. Use of research to integrate fashion trends and their application in merchandising. Analysis of case studies and identification of opportunities for fashion merchandising.

The San Germán Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Fashion Design and Marketing Merchandising

First Term		
CFMA 110	Introduction to Fashion Industry	2
CFMA 120	Introduction to Fashion Merchandising	2
CFMA 170	Fashion Illustration I	3
CFMA 180	Sewing and Textiles I	2
CFMA 190	Fashion Design I	3
CARM 220	Small Business Administration	3
Second Term		
CFMA 250	Fashion Illustration II	2
CFMA 260	Sewing and Textiles II	2
CFMA 270	Fashion Design II	2
CFMA 280	Patterns	2
CFMA 290	Fashion Marketing and Commercialization	2
CFMA 291	Internship in Fashion Merchandising	5

For students enrolled in or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Gerontology (CGRO - Code 818)

The technical certificate in Gerontology provides students with the knowledge, skills and attitudes necessary to work

with the elderly. It aims to develop new concepts, ideas, values and skills that prepare students to offer an appropriate service to the elderly. It is expected that graduates will have acquired the competencies to be able to serve in public and private agencies that take care of the elderly as well as to offer their services to families on their own. Students will develop a greater sensitivity towards the care of the elderly in an area of increasing demand, meeting, therefore, the needs of the Puerto Rican society.

The major courses must be approved with a minimum grade of C.

The San Germán Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Gerontology

First Term

CGRO 100	Introduction to Gerontology	3
CGRO 120	Institutional Care and Alternative Care	3
CGRO 130	Primary Needs of the Elderly	3
CGRO 140	Programs and Services for the Elderly	3
CGRO 230	Leisure, Free Time, Activities in the Elderly Stage	3

Second Term

CGRO 240	The Family and the Elderly	3
CGRO 250	Assessment of the Elderly	3
CGRO 291	Experience in the Gerontology Field	9

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Health Services Invoicing Technician (CMER - Code 045)

The certificate in Health Services Invoicing Technician offers students the opportunity to begin in the administrative area of medical services. The program aims to provide students with the basic skills to carry out the procedures in the administration of an office of health

service, including medical files. The certificate gives special emphasis on the procedures of invoicing medical plans such as: medical, dental, laboratory and hospital services. Students will also learn the medical and federal terminology associated with these procedures, basic accounting methods, and those of auditing.

The major courses must be approved with a minimum grade of C.

The Arecibo, Fajardo, Guayama and San Germán campuses and the University Center of Humacao are authorized to offer this Program.

(38 credits / 1,140 hours)

Hotel Administration (CHMT - Code 819)

The technical certificate in Hotel Administration provides the opportunity for students to become prepared to carry out tasks related to the main administrative areas of the Tourist Industry: hotels, taverns, inns, condo-hotels, tourist villages or other analogous facilities.

Students will be able to develop the skills necessary to perform administrative services that make up the hotel profession with a special emphasis in the Reception and Reservation areas; Administration in Food and Drinks Services; Administration of Rooms; and Maintenance, in general. It is expected that students will develop the necessary competencies and the basic skills giving special attention to the English language and to the use and operation of the computer.

The San Germán Campus is authorized to offer this Program.

(39 credits / 1,170 hours)

Academic Requirements for the Certificate in Hotel Administration

First Term

CHMT 110	Puerto Rican History and Culture	3
CHMT 130	Foundations of Hotel Industry	3
CMED 210	Basic Skills in Spanish	2
CMED 220	Basic Skills in English	2
CMED 430	Basic Skills in Mathematics	2

Second Term

CACC 0110	Principles of Accounting	3
CMED 140	Computer Use and	3

	Administration		
CMED 720	Conversational English I	2	
CMED 750	Human Resources and Legal Aspects	3	
Third Term			
CHMT 210	Reception and Reservations	3	
CHMT 220	Food and Beverage Management	3	
CHMT 230	Room and Conservation Management	3	
CHMT 291	Internship in Hotel Administration	3	
CMED 821	Conversational English II	3	

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Integral Esthetics (CEST - Code 842)

This certificate prepares students for the development of skills and general knowledge in the health field and skin care. The program aims to prepare students to work with dermatologists, in beauty parlors, Spas or as owners of their own esthetic clinic.

Major courses must be approved with a minimum grade of C. Students will not be able to begin their internship if they have not approved the major courses.

The Aguadilla, Bayamón, Metropolitan and San Germán campuses are authorized to offer this Program.

(32 credits / 960 hours)

Academic Requirements for the Certificate in Integral Esthetics

First Term			
CEST 110	Introduction to Esthetics	3	
CEST 120	Anatomy and Applied Physiology	3	
CEST 130	Foundations of Massage	3	
CEST 140	Hair Removal Techniques	3	
CEST 150	Professional Make-Up	3	
Second Term			
CEST 210	Facial Treatments	4	
CEST 220	Body Treatments	4	
CEST 230	Aromatherapy and Environment Adjustment	3	

CEST 310	Practice	6	
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For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

International Cuisine (CCOO - Code C008)

The International Cuisine technical certificate program allows students to develop skills that benefit the health and nutrition of the population. In turn, it intends to collaborate in the country's economy through entrepreneurship. Currently, renowned entrepreneurs and chefs from the gastronomic and tourism industry move to develop companies, needing to employ trained personnel in this area, representing a great opportunity for employment or self-employment. In the program, students will learn to design international menus, prepare banquets, prepare local and international breakfasts, soups, salads, and sauces, and recipes from different countries.

The students will enjoy their homework by learning how cultures have brought to life different fusions of recipes, adding flavors and ingredients. Gastronomy is the protagonist of cultural festivities, at an international level. In this study program, cooking brings together the best flavors of the world, from healthy fast food to gourmet and international dishes. The student will obtain the skills to obtain a job in the competitive gastronomy industry.

The Metropolitan Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in International Cuisine

First Term			
CCOO 110	Food Services Hygiene, Health and Safety Procedures	3	
CCOO 121	Meat, Poultry and Seafood Cuts	3	
CCOO 145	Menu Design and Cost Planning (Garde Manger)	3	
CCOO 210	Puerto Rican Gastronomy	3	
CMED 230	Mathematic Skills Applied to Business	2	

Second Term			
CCOO 225	Introduction to Confectioner's Shop	3	
CCOO 240	International Cuisine	3	
CCOO 250	Alternative Cuisine	3	
CCOO 291	Internship in Cuisine	7	

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Invoicing and Collection Systems in Health Services Technician (CMER - Code 838)

The certificate in Invoicing and Collection Systems in Health Services Technician allows students to assume responsibilities in the administration of a health service office and demonstrate their understanding in the process of invoicing and collection of different medical plans. Students will use the proper terminology in this field of studies, will know the invoicing cycle and will handle a medical file according to federal and local regulations.

The major courses must be approved with a minimum grade of C. The internship course must be approved with a minimum grade of B.

The Metropolitan Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Invoicing and Collection Systems in Health Services Technician

First Term			
CMER 110	Medical Terminology	4	
CMER 130	Health and Services Invoicing	4	
CMER 140	Health Services Offices Procedures	3	
CMER 230	Diagnoses and Procedures Codifications	4	
CMED 340	Introduction to Data Processing	2	
Second Term			
CMED 120	Basic Business English	2	
CMED 130	Basic Business Mathematics	2	
CMER 220	Administration and Control	3	

	of Medical Records	
CMER 320	Electronic Invoicing	3
CMER 291	Internship in Invoicing and Health Services	3

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Laboratory Assistant (CLAB - Code 023)

The certificate in Laboratory Assistant aims to prepare participants to work as Chemistry and Microbiology laboratory assistants. The program facilitates the development of skills in the use of techniques and instruments for chemical and microbiological analysis. It provides laboratory practice in the application of the skills acquired and permits students to become familiar with aspects of health and occupational safety. The Internship course must be passed with a minimum grade of B.

Admission to this program requires the Hepatitis B (three doses) vaccination certificate.

The Arcibo Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Laboratory Assistant

First Term			
CLAB 111	Basic Concepts of General Chemistry	4	
CLAB 121	Basic Concepts of Modern Biology	3	
CMED 140	Computer Use and Administration	3	
CMED 110	Basic Business Spanish	2	
	Or		
CMED 210	Basic Skills in Spanish	2	
CMED 130	Basic Business Mathematics	2	
	Or		
CMED 430	Basic Skills in Mathematics	2	
Second Term			
CLAB 210	Basic Techniques of Chemical Analysis	4	
CLAB 220	Foundations of Industrial Microbiology	4	

CLAB 291	Internship in Laboratory Assistant	3
CLAB 297	Seminar in Health and Organizational Security	3
CMED 120	Basic Business English Or	2
CMED 220	Basic Skills in English	2

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Massage Therapist (CMTH - Code C005)

The program allows the student to acquire the knowledge and techniques of manipulation, stretching and the application of therapeutic massage according to the various physical or emotional problems presented by the client. In the course of their academic development, the student will learn to develop manual therapy skills aimed at producing a series of controlled physiological reactions, in the musculoskeletal system and/or other body systems, that lead to therapeutic relief of the treated condition. As a graduation requirement, the student must be certified in cardiopulmonary resuscitation techniques, CPR.

The concentration courses must be passed with a minimum grade of C, and in practice a minimum grade of B is required. You will not be able to start the practice if you have not passed the following courses: CMTH 0110, CMTH 0120, CMTH 0130, CMTH 0140 and CMTH 0150.

The Bayamón, Fajardo and Metropolitan campuses are authorized to offer this Program.

(34 credits / 1,020 hours)

Academic Requirements for the Certificate in Massage Therapist

First Term

CMTH 110	Anatomy and Physiology of the Human Body Systems	3
CMTH 120	Clinical Pathology and Medical Terminology	3
CMTH 130	History Fundamentals and Techniques of Swedish Massage	3
CMTH 140	Oriental and Western Massage Techniques	3

CMTH 150	Aromatherapy, Hydrotherapy and Reflexology	4
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Second Term

CMTH 210	Musculoskeletal Anatomy and Kinesiology	3
CMTH 220	Orthopedic, Sports and Special Populations Massage	3
CMTH 230	Clinical Massage: Deep Massage Therapy and Lymphatic Drainage	3
CMTH 240	Ethics and Business Development	3
CMTH 250	Practicum	6

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Nail Technician and Brush-Stroke Art (CNAT - Code C080)

This program prepares the student in the development of skills and general knowledge of nail design. Our hands-on program will instruct students in all areas of nail care; including practical applications, theories, infectious control, and customer service. The student will gain the knowledge to perform basic manicures as well as show their artistic side by creating nail art. It is aimed at students who aspire to become a Nail Technician. Upon program completion, the student will be able to work in beauty salons or as the owner of their own business.

The concentration courses must be passed with a minimum grade of C, and in practice a minimum grade of B is required. You will not be able to start the practice if you have not passed the following courses: CNAT 0110, CNAT 0120, CNAT 0130, CNAT 0140 and CNAT 0150.

The Aguadilla Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Nail Technician and Brush-Stroke Art

First Term

CNAT 110	Introduction to Nail Technique	3
CNAT 120	Art of Design and Caricature for Nails	3

CNAT 130	Manicure and Pedicure	3
CNAT 140	Nail Structure	3
CNAT 150	Nail Techniques	3

Second Term

CNAT 220	Embossed 3D and 4D Nail Techniques	3
CNAT 230	Contemporary Nail Trends	3
CNAT 291	Nail Techniques Practice	6
CBEU 320	Beauty Salon Administration	3

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Network Safety Technician (CRNE - Code C009)

The program trains the student in essential skills for handling security situations in computer networks. Includes general knowledge of operating systems used in networks, discussion of security flaws, cyber-attacks, and computer forensics. The student will be able to address problems related to network security using specialized programs and the development of defense structures against possible cyber threats.

The Metropolitan Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Network Safety Technician

First Term

CCOM 110	Computer Assembly, Repair and Maintenance	3
CMED 140	Computer Use and Administration	3
CRNE 150	Programming Logic	3
CRNE 310	Design and Network Management	3
CRNE 293	Networks and Forensics Practice I	3

Second Term

CRNE 210	Operating Systems	4
CRNE 220	Repair and Networks	4
CADM 231	Page Design I	3
CRNE 320	Telecommunications and	4

CRNE 294	Network Security Networks and Forensics Practice II	3
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For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

ONLINE-Computer and Network Repair (CRNE - Code C03D)

The program trains the student with the essential skills to function as a computer repair specialist, applying the best practices on the use of equipment to reduce operating problems. In addition, the student will have basic skills in programming logic, installation and maintenance of operating systems. The student will develop the basic skills of network repair, administration and security.

The Metropolitan Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Computer and Network Repair

First Term

CCOM 110	Computer Assembly, Repair and Maintenance	3
CMED 140	Computer Use and Administration	3
CMED 150	Health and First Aid	2
CRNE 310	Design and Network Management	3
CRNE 293	Networks and Forensics Practice I	3

Second Term

CRNE 210	Operating Systems	4
CRNE 220	Repair and Networks	4
CRNE 320	Telecommunications and Network Security	4
CADM 231	Page Design I	3
CRNE 294	Networks and Forensics Practice II	3

For students enrolled in or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details

of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

ONLINE - Computer Programming Technician (CCPT - Code C08D)

The program offers the student a basic preparation in computer programming in technical and professional areas. It includes general knowledge of the organization, operation and programming of computerized systems. This certificate provides the student with the knowledge for the management and operation in the application of computerized programming systems of greater demand in industry, commerce and education, among others. It has a practical-theoretical content that allows the student to continue studies and develop in the field of computer programming. This program is offered through the online education modality.

The San Germán Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Computer Programming Technician

First Term			
CCPT 110	Microsoft Office User (MOU)		3
CCPT 210	Office Visual Basic Application (VBA)		3
CCPT 220	Hypertext Preprocessor (PHP)		3
CCPT 230	Python		3
CCOM 220	Visual Basic		3
Second Term			
CCPT 310	Structure Query Language (SQL)		3
CCPT 0291	Internship in Computer Programming		6
CWEB 310	JAVA Script		3
CCOM 310	Language C + C #		3

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

ONLINE-Computer Technician (CCOM - Code 811D)

The certificate in Computer Technician offers students a basic preparation in the use of computers in technical and professional areas. It includes general knowledge of the organization, architecture, operation and programming of computerized systems. This certificate provides students the knowledge for the administration and operation of the computer and the development of skills for the application of computerized programs with the greatest demand in industry, business and education, among others. The program has a practical-theoretical content that allows students to continue studies and become prepared in the field of information systems.

The major courses must be approved with a minimum grade of C.

The San Germán Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Computer Technician

First Term			
CMED 140	Computer Use and Administration		3
CCOM 110	Computer Assembly, Repair and Maintenance		3
CWEB 220	HTML Codification with CSS		3
CCPT 230	Python		3
CCOM 310	Language C + C #		3
Second Term			
CCOM 410	Databases		3
CWEB 310	JAVA Script		3
CCOM 291	Internship in Computers		9

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

ONLINE Educational Therapy and Evaluation (CETE-Code C02D)

The students will acquire knowledge in the areas of educational therapist training and ethics in their practice,

brain function in relation to learning according to neuroscience, sensory integration and its educational implications, preparation of the psychoeducational profile, informal techniques to detect learning difficulties, intervention with technology in educational therapy, assisted technology in educational therapy, educational therapy and intervention strategies, strategies for the development of skills in the administration of formal evaluations in the psychoeducational process and the development of an intervention plan.

The Metropolitan Campus is authorized to offer this Program.

(36 credits / 1,080 hours)

Academic Requirements for the Certificate in Educational Therapy and Evaluation

First Term

CETE 110	Training of the Educational Therapist	3
CETE 120	Neuroscience and Learning	3
CETE 130	Sensory Integration and its Educational Implications	3
CMED 110	Basic Business Spanish	2

Second Term

CETE 210	Design and Preparation of Psychoeducational Profile	3
CETE 220	Basic Concepts of Applied Behavior Analysis	3
CETE 230	Informal Techniques in the Detection of Learning Difficulties	3
CETE 240	Technological Assistance, Strategies and Interventions	3

Third Term

CETE 310	Training in Strategies for the Administration of the Formal Evaluation	3
CETE 320	Educational Therapeutic Intervention Strategies and Development of the Intervention Plan	3
CETE 330	Effective Interventions through the Use of Technology	4
CETE 340	Basic Foundations of Sign Language for Educational Therapy	3

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

ONLINE-Health Services Billing Specialist (CMER - Code-C01D)

The Health Services Billing Specialist program trains the student to perform tasks related to the administration of the medical office, the coding of diagnoses and procedures, billing and auditing.

The student will have the opportunity to use the appropriate technology, programs and specialized programs for information processing, medical records, billing and accounting. The program includes a Practice Internship to reinforce knowledge and gain experience in the medical billing scenario.

The Metropolitan Campus is authorized to offer this Program.

(36 credits / 1,080 hours)

Academic Requirements for the Certificate in Health Services Billing Specialist

First Term

CMER 110	Medical Terminology	4
CMER 130	Health and Services Invoicing	4
CMED 110	Basic Business Spanish	2
CMED 340	Introduction to Data Processing	2

Second Term

CMER 230	Diagnoses and Procedures Codifications	4
CMER 250	Billing for Hospital and Dental Service	3
CMER 140	Health Services Offices Procedures	3
CMED 120	Basic Business English	2

Third Term

CACC 0110	Principles of Accounting	3
CMER 220	Administration and Control of Medical Records	3
CMER 291	Internship in Invoicing and Health Services	3
CMER 320	Electronic Invoicing	3

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

ONLINE-Network and Forensics (CRNE - Code C04D)

The program prepares the student for the proper handling of computer systems, logic, and basic network administration. In addition, the student will be able to handle basic security incidents and forensic investigation. This will allow the student to work as an assistant or entry level security and incident management for any industry. The student will learn the concepts of auditing and databases, which will allow them to generate reports on indications and corrective action plans.

The Metropolitan Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Network and Forensics

First Term

CCOM 110	Computer Assembly, Repair and Maintenance	3
CMED 140	Computer Use and Administration	3
CRNE 150	Programming Logic	3
CRNE 310	Design and Network Management	3
CRNE 291	Computer and Network Repair Practice I	3

Second Term

CRNE 230	Practical Elements of Digital Forensics	3
CRNE 240	Incident Response	3
CRNE 250	Auditing	3
CRNE 320	Telecommunications and Network Security	4
CRNE 292	Computer and Network Repair Practice II	3

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each

course are defined in the course syllabus.

ONLINE-Network Security (CRNE - Code C05D)

The program trains the student in essential skills for handling security situations in computer networks. Includes general knowledge of operating systems used in networks, discussion of security flaws, cyber-attacks, and computer forensics. The student will be able to address problems related to network security through the use of specialized programs and the development of defense structures against possible cyber threats.

The Metropolitan Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Network Security

First Term

CMED 140	Computer Use and Administration	3
CCOM 110	Computer Assembly, Repair and Maintenance	3
CRNE 320	Telecommunications and Network Security	4
CRNE 210	Operating Systems	4
CRNE 293	Networks and Forensics Practice I	3

Second Term

CNST 210	Hacking Techniques	4
CNST 220	Introduction to Databases	4
CNST 230	Principles of Network Auditing	4
CNST 240	Introduction to Network Security	4
CRNE 294	Networks and Forensics Practice II	3

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Personal Trainer (CPTR - Code 835)

The technical certificate in Personal Trainer is designed to develop professional competencies in the field of personal

training. It promotes healthy life styles, free of drugs and alcohol, by means of socialized discussions and other learning activities. The program includes the administrative aspects of the profession. It also includes a practice period in a certified gymnasium during which students will apply the knowledge acquired in the classroom, under the strict supervision of a certified personal trainer. The curriculum is designed following the guides established by the “American College of Sports Medicine” (ACSM) and by the “National Strength and Conditioning Association” (NSCA). The program content aims to provide students with necessary competencies to apply for the board examination or certificate as required to practice the profession in Puerto Rico.

Major courses must be approved with a minimum grade of C.

The Aguadilla, Arecibo, Barranquitas, Bayamón, Fajardo, Metropolitan, Ponce and San Germán campuses are authorized to offer this Program.

(38 credits / 1,140 hours)

Academic Requirements for the Certificate in Personal Trainer

First Term

CPTR 110	First Aid and CPR (Lab)	1
CPTR 120	Health Hazards and Assessment of Physical Conditions	2
CPTR 130	Flexibility Training	2
CPTR 140	Training for Change of Lifestyle and Wellbeing	2
CPTR 150	Weightlifting Techniques	2
CPTR 210	Anatomy, Kinesiology and Biomechanics	3

Second Term

CPTR 160	Nutrition Applied to Sports	3
CPTR 220	Concepts of Training and Cardiovascular Rehabilitation	2
CPTR 230	Prevention and rehabilitation of Muscle and Skeletal Injuries	1
CPTR 240	Training for Special Populations I	2
CPTR 250	Design of Programs for Strength Training	2
CPTR 260	Program of Alternate Exercises for Personal Training	2

Third Term

CPTR 297	Seminar for Trainers	1
CPTR 310	Physiology of Exercise	3
CPTR 320	Training for Special Populations II	3
CPTR 340	Administration in Personal Training	3
CPTR 350	Practice in Personal Trainer	4

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Pharmacy Technician (CPHA - Code 042B)

The certificate in Pharmacy Technician is designed to develop professional competencies in the pharmacy work scenario. It is expected that students master the knowledge and skills that will allow them to assist the pharmacist in prescription preparation and in some administrative tasks in the pharmacy.

The certificate in Pharmacy Technician is divided into two years. During the first year, students are prepared in the knowledge and basic skills of the discipline and in the second year they take the internship. Student, under the supervision of an authorized pharmacist, must complete a minimum of 1,000 hours of practice, which is required to take the board examination, as established by the General Regulation of the Pharmacy Board of Puerto Rico. In order to take the board examination, it is required that students have approved the high school Chemistry course (one year).

The courses of the major must be approved with a minimum grade of C. Students will not be permitted to start the internship if they have not approved the major courses: CPHA 130, CPHA 110, CPHA 221, CPHA 220 and CPHA 250.

The Arecibo, Bayamón, Fajardo, Metropolitan and San Germán campuses are authorized to offer this Program.

(59 credits / 1,770 hours)

Academic Requirements for the Certificate in Pharmacy Technician

First Term		
CPHA 110	Drug Therapy I	3
CPHA 120	Pharmacognosy	2
CPHA 130	Pharmaceutical Mathematics	3
CPHA 150	Theoretical Aspects of Pharmacy	2
CMED 340	Introduction to Data Processing	2
Second Term		
CPHA 220	Pharmacy Administration and Legal Aspects	2
CPHA 221	Drug Therapy II	3
CPHA 230	Pharmaceutical Chemistry	2
CPHA 240	Dosage	2
CPHA 250	Pharmaceutical Practices	3
		Subtotal: 12
Third Term		
CPHA 291	Internship in Pharmacy Technician I	17
Fourth Term		
CPHA 292	Internship in Pharmacy Technician II	17
CPHA 297	Pharmacy Technician Seminar	1

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Practical Nursing (CNUR - Code 817B)

The technical certificate in Practical Nursing aims to form human resources to work in the field of Practical Nursing. They assist the professional nurse and the nurse with an associate degree in activities related to the direct care of patients with acute and chronic diseases in populations of children, adults and the elderly. The program aims to prepare graduates so they can apply for the board examination or certificate as required to practice the profession in Puerto Rico.

Students will be responsible for compliance with any requirement that may be established in the courses or practices. Major courses must be approved with a minimum grade of C.

The Arecibo and San Germán campuses are authorized to offer this Program.

(36 credits / 1,080 hours)

Academic Requirements for the Certificate in Practical Nursing

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

First Term		
CNUR 120	Introduction to Practical Nursing	2
CNUR 160	Scientific Foundation of Practical Nursing	2
CNUR 170	Foundations of Practical Nursing	2
CMED 210	Basic Skills in Spanish	2
CMED 220	Basic Skills in English	2
CMED 430	Basic Skills in Mathematics	2
Second Term		
CNUR 180	Foundations of Pharmacology for Nursing	3
CNUR 190	Care of Patients with Emotional Disturbances	2
CNUR 240	Human Development Throughout the Life Cycle	2
CNUR 360	Promotion of Health Throughout the Life Cycle	2
CMED 140	Computer Use and Administration	3
Third Term		
CNUR 250	Care of the Adult with Acute Medical-Surgical Conditions	3
CNUR 260	Care of the Adult with Chronic Medical-Surgical Conditions	3
CNUR 297	Seminar in Practical Nursing	1
CNUR 340	Mother and Newborn Child Care	3
CNUR 350	Child Care	2

*In compliance with the new regulations, (34 CFR 668.8 (1) (1) the total number of hours stipulates that students complete a minimum number of hours in work outside the

classroom. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Practical Nursing with Emphasis on Long-Term (Care CNUR - Code C002)

The purpose of the program is to train the student to offer nursing care with the competencies required in a practical nurse with an emphasis on the long-term care of the patient at any stage and development of their condition. During their academic development, the students will acquire the knowledge and skills to meet the needs of patients with specific medical conditions.

The concentration courses must be passed with a minimum grade of C, and the practice requires a minimum grade of B. You will not be able to start the practice if you have not passed the following courses: CNUR 0170 and CNUR 0180, CNUR 0251 and CNUR 185.

The Aguadilla and Bayamón campuses are authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Practical Nursing with Emphasis on Long-Term Care

First Term			
CMED 130	Basic Business Mathematics	2	
CNUR 170	Foundations of Practical Nursing	2	
CNUR 180	Foundations of Pharmacology for Nursing	3	
CNUR 185	Basic Principles of Anatomy and Physiology	3	
CNUR 251	Care of the Elderly Patient at Home and in Nursing Centers	3	
Second Term			
CMED 110	Basic Business Spanish	2	
CMED 120	Basic Business English	2	
CNUR 245	Care of the Adult Patient with Medical Surgical Conditions	4	
CNUR 291	Practice in Practical Nursing	5	
CNUR 345	Neonatal Maternal Care	2	
CNUR 355	Pediatric Care	2	

For students enrolled in or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the

classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Repair and Networks Technician (CRNE - Code 839)

At present the technological sector is undergoing fast and constant changes. This forces companies to keep up to date on users' needs and in those of the market. On one hand, the users in the domestic environment require more and more the aid of technicians to solve their problems regarding the use and administration of professional services. On the other hand, companies require employees that are prepared in the areas of programming and networks with skills to diagnose problems and offer support, either directly or by telephone, to the users.

The major courses must be approved with a minimum grade of C.

The Metropolitan Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Repair and Networks Technician

First Term			
CADM 231	Page Design I	3	
CCOM 110	Computer Assembly, Repair and Maintenance	3	
CRNE 150	Programming Logic	3	
CMED 140	Computer Use and Administration	3	
Second Term			
CRNE 210	Operating Systems	4	
CRNE 220	Repair and Networks	4	
CRNE 310	Design and Network Management	3	
CRNE 320	Telecommunications and Network Security	4	

For students enrolled in or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Respiratory Care Technician (CRES - Code 826)

The certificate in Respiratory Care Technician is designed to develop in students the professional competencies in the field of health sciences. It is expected that students will be able to interact in an integrated and effective manner with patients and the work team in the implementation of all therapeutic modalities of the profession. Students will have the opportunity to develop the necessary skills in the processes of diagnosis, evaluation, treatment, and rehabilitation of patients with cardiopulmonary diseases. This program aspires to prepare students, who can apply for the board examination in Puerto Rico for the Profession of Respiratory Care Technician.

The major courses must be approved with a minimum grade of C.

The Arecibo and San Germán campuses are authorized to offer this Program.

(52 credits / 1,560 hours)

Academic Requirements for the Certificate in Respiratory Care Technician

First Term

CRES 110	Human Biology	2
CRES 130	Foundations of Respiratory Care	2
CPHA 111	Basic Concepts of Chemistry	2
CMED 110	Basic Business Spanish Or	2
CMED 210	Basic Skills in Spanish	2
CMED 120	Basic Business English Or	2
CMED 220	Basic Skills in English	2
CMED 130	Basic Business Mathematics Or	2
CMED 430	Basic Skills in Mathematics	2

Second Term

CRES 210	Microbiology and Control of Infections	2
CRES 230	Electrocardiography (EKG)	2
CRES 240	Tests of Pulmonary Function and Arterial Gases	3
CRES 320	Anatomy and Cardiopulmonary Physiology	2

CMED 140	Computer Use and Administration	3
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Third Term

CRES 310	Physics Applied to Health	2
CRES 220	Pharmacology of Respiratory Care	2
CRES 330	Cardiopulmonary Pathophysiology	2
CRES 340	Diagnosis and Adult Advanced Cardiopulmonary Care	2
CRES 350	Respiratory Care	5.5

Fourth Term

CRES 291	Internship in Respiratory Care	7.5
CRES 297	Seminar in Respiratory Care	1
CRES 410	Neonatal and Pediatric Respiratory Care	3
CRES 420	Mechanical Ventilation	3

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Specialist in Computerized Systems and Networks (CNCS - Code 841)

The technical certificate in Specialist in Computerized Systems and Networks offers students basic preparation for the use of computers in technical and professional areas. It includes general knowledge of the organization, repair, page design for Internet, programming of computerized systems and networks.

Major courses must be approved with a minimum grade of C.

The Ponce Campus is authorized to offer this Program.

(30 credits / 900 hours)

Academic Requirements for the Certificate in Specialist in Computerized Systems and Networks

First Term

CARM 120	Introduction to Computers	2
CNCS 120	Installation and Repair of Computerized Systems	3
CNCS 130	Installation of Programs and	3

	Operating Systems		
CNCS 140	Installation and Maintenance of Networks	4	
CNCS 150	Design of Pages for Internet	3	
Second Term			
CARM 220	Small Business Administration	3	
CCOM 220	Visual Basic	3	
CNCS 210	Mathematics for Computer	2	
CNCS 220	Introduction to Electronics	2	
CNCS 290	Practice	5	

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Surgical Technician (CSUR - Code C001)

The program is designed to develop the professional skills to directly assist physicians and nursing staff during surgical procedures. The student will learn to identify the instruments, materials and sterile supplies that are necessary during a surgical operation. The main work setting is hospitals and ambulatory surgery centers.

The courses must be approved with a minimum grade of C, the internship requires a minimum grade of B. The internship may begin once all the courses have been approved.

The Arecibo and Barranquitas campuses are authorized to offer this Program.

(48 credits / 1,440 hours)

Academic Requirements for the Certificate in Surgical Technician

First Term			
CSUR 101	Introduction to Anatomy and Physiology	3	
CSUR 111	Occupational Foundations I	3	
CSUR 115	Occupational Principles of the Surgical Room	3	
CSUR 120	Medical Emergencies and First Aid	3	
Second Term			
CSUR 116	Surgical Laboratory Room	3	
CSUR 130	Disease Study	3	

CSUR 140	Pharmacology and Principles of Anesthesia	3	
CSUR 150	Sterile Laboratory Instrumentation	3	
Third Term			
CSUR 112	Occupational Foundations II	3	
CSUR 201	Instrumentation Cardiovascular Surgery	3	
CSUR 202	Instrumentation Surgery, Orthopedics and Instrumentation Surgery, Orthopedics and Traumatology	3	
CSUR 210	Introduction to Microbiology and Principles of Asepsis	3	
Fourth Term			
CSUR 220	Specialized Techniques: robotics, laparoscopy and laser	3	
CSUR 291	Surgical Technician Internship	6	

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Tour Guide (CTOU - Code 808)

The technical certificate in Tour Guide aims to train students to be hired or to be self-employed in positions related to tourism. This certificate includes the offering of real experiences and external practice in diverse centers associated with tourism. These complement the formal education of the student.

The major courses must be approved with a minimum grade of C.

The San Germán Campus is authorized to offer this Program.

(39 credits / 1,170 hours)

Academic Requirements for the Certificate in Tour Guide

First Term			
CTOU 110	Foundations in Tourism	2	
CTOU 120	Puerto Rican Historical Process	2	

CTOU 140	Puerto Rican Personality and Culture	2	CMED 140	Computer Use and Administration	3
CMED 150	Health and First Aid	2	Second Term		
CMED 210	Basic Skills in Spanish	2	CWEB 110	Internet Page Creation	3
CMED 220	Basic Skills in English	2	CWEB 220	HTML Codification with CSS	3
Second Term			CWEB 230	Electronic Page Design	3
CTOU 220	Geography and Eco-tourism	2	CWEB 240	Internet Databases	3
CTOU 240	Tourism in Puerto Rico	2	Third Term		
CTOU 250	Museology	1	CWEB 297	Seminar in Internet Page Design	3
CTOU 260	Excursion Planning	2	CWEB 310	JAVA Script	3
CMED 350	Human Relations	2	CWEB 320	Integration of Media	3
CMED 720	Conversational English I	2	CWEB 330	Self-Employment and Internet Page Design	3
Third Term					
CTOU 291	Internship in Tour Guide	9			
CTOU 310	Administration of Small Businesses in Tourism	3			
CMED 821	Conversational English II	3			

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

For students enrolled on or before August 2021, in compliance with the past regulations, (34 CFR 668.8 (1) (1) a minimum number of hours in work outside the classroom will be added to the specified hours. The details of the number of hours and the appropriate tasks for each course are defined in the course syllabus.

Webpage Design Technician (CWEB - Code 814)

The certificate in Webpage Design Technician offers students technical preparation in the use of the most common programs in the electronic environment for the creation, design, and use of electronic pages in Internet. The program aims to give graduates the competencies to prepare them for work in the creation of electronic pages for personal, informative, and commercial use.

Major courses must be approved with minimum grade of C.

The San Germán Campus are authorized to offer this Program.

(36 credits / 1080 hours)

Academic Requirements for the Certificate in Webpage Design Technician

First Term

CWEB 210	Artistic Design (Photoshop)	3
CMED 110	Basic Business Spanish	2
CMED 120	Basic Business English	2
CMED 130	Basic Business Mathematics	2

Courses

CACC - Accounting

CACC 0110 - Principles of Accounting (3)

Study of the fundamentals of accounting, such as the accounting cycle, the worksheet, and basic financial reports.

CADM - Invoicing and Collection Systems in Health Services Technician

CADM 220 - ADMINISTRATION AND CONTROL OF MEDICAL RECORD (3)

Develop the skills of using the computer keyboard. Know the basic functions of the operating system and the word processing program in use. Develop basic skills of speed, accuracy and apply them in the production of documents, such as letters, memos, tables, and simple reports. Emphasize basic techniques and collation. It requires 60 hours of laboratory work.

CADM 231 - Page Design I (3)

Know the theoretical concepts in page design. Develop strategies for the analysis and design of pages. Study the existing pages on the Internet. Design pages using code generators for HTML. It requires 60 hours of laboratory work.

CAGT - Agricultural Technology Technician

CAGT 110 - Introduction to Agricultural and Ornamental Crops (3)

It will train the student with the necessary basic and advanced skills to manage planting projects and crop management from the planning stage to the project operation stage. Requires 45 hours of laboratory.

CAGT 120 - Plant Propagation Methods (3)

It will train the student to provide the necessary basic and advanced skills to manage the different forms and methods of propagation from the sowing and germination stage to the plant transplant stage. The parallels between the reproduction of plants in their natural environment and the propagation techniques used in gardening and modern

agriculture are described, as well as the technological advances that will revolutionize the cultivation of plant species in the future. Requires 45 hours of laboratory.

CAGT 130 - Landscape Design (3)

It will train the student with the necessary basic and advanced skills to handle gardening and landscape design projects from the planning stage to the project operation stage. Requires 45 hours of laboratory.

CAGT 140 - Farming Ecology (3)

The student will learn the concepts of ecological agriculture, showing the need for and importance of different types of crops, through specific techniques aimed at minimizing the environmental problems that occur in the most vulnerable productive sectors of modern agriculture. Requires 45 hours of laboratory.

CAGT 150 - Plant Physiology (3)

The student will learn the basic and advanced skills necessary to understand the physiological processes of plants and their functions. It aims to offer a current and synthetic image of phenomena such as: acquisition of water and nutrients by the plant, its transport, distribution and storage, and its incorporation into metabolism, presenting the general basic processes that regulate them. It also teaches the general parts of plants and their functions. Requires 45 hours of laboratory.

CAGT 210 - Hydroponic Systems (3)

It will train the student with the necessary basic and advanced skills to manage hydroponics projects and specialized propagation without substrate. The student will learn to build from a basic project to a commercial hydroponic system. Requires 45 hours of laboratory.

CAGT 220 - Fumigation of Green Areas (3)

It will provide the necessary basic and advanced skills to manage the use of pesticides in gardening, farmhouses or area related to agriculture. It deals with the recognition of symptoms, identification of the causative agent and non-chemical pest prevention measures. In addition, it goes into the study of the nature of chemicals and their function in the control of pests and diseases such as: fungi, bacteria, viruses, worms, and insects that cause bad appearance, weakening or death of ornamental plants only. Requires 45 hours of laboratory.

CAGT 230 - Business Administration (3)

It will train the student with necessary skills to manage the planning, organization, direction and control of human, financial, material, technological and knowledge resources in gardening and agriculture projects. The student will be able to obtain the maximum social and economic benefit for a company, visualizing the administrative processes of a business.

CAGT 291 - Internship in Agricultural Technology (6)

It will provide the necessary basic and advanced skills to manage gardening and agriculture projects from the planning stage to the project operation stage. In addition, it will allow the student to obtain better opportunities for jobs in technological agriculture at a commercial level, to progress in their respective jobs or simply to subtly respond to demands for services that are faced in the industries and businesses of modern agriculture and in their respective communities. The internship is the practice of the course, offering the student real work experience and the opportunity to demonstrate what they have learned. The dynamic is established by the mentor employer, the intern student and the institution to facilitate the teaching and training process in the different learning areas. Students will have varied schedules to carry out their practice.

CARM - Computer Repair Technician**CARM 120 - Introduction to Computers (2)**

Study of the basic computer fundamentals, and their role today. Identification of the physical components of computers and the application programs available in the market. Projection of the basic knowledge for the use and maintenance of the operating system.

CARM 130 - Introduction to Microprocessors (2)

Review of the generations of microprocessors available to date. Contrast of the architecture of microprocessors based on their set of instructions, programming, and interconnection capacity. Recognition of time diagrams, interruptions and exceptions, administration of entrance and exit memory, and some support devices. Requires 30 hours of workshop.

CARM 140 - Introduction to Operating Systems (4)

Identification of the main operating systems. Study of the qualities of each operating system. The course aims to prepare students to recommend the most appropriate

system for each situation. Analysis of the relation of the operating system with the other computer components and applications. Understanding of the principles of the operation of the systems of: data processing, multiprogramming, timesharing, memory management, pagination, segmentation, virtual memory, extended memory, expanded memory, filing system and entrance and exit operations. Requires 45 hours of workshop.

CARM 150 - Mathematics Applied to Digital Electronics (2)

Study of boolean algebra, the veracity tables, numerical systems (decimal, binary, octals and hexadecimal). Application of the arithmetical operations of each numerical system. Use of the knowledge acquired in the information field. Presentation of symbolic characters by means of the use of the ASCII code.

CARM 210 - Introduction to Communication Networks (3)

Review of the adequate concepts and terminology of the industry and the dynamics of data communication. Identification of the diverse types of computerized communication, data communication component, architecture of data network. Study of strategies of communication and interconnection of networks. Analysis of work trends in communications networks. Requires 45 hours of workshop.

CARM 220 - Small Business Administration (3)

Identification of the diverse operations in a business. Emphasis on the varied functions of planning, organization, and marketing. Analysis of the policies and regulations that govern self-owned businesses.

CARM 230 - Installation and Configuration of Operating Systems (3)

Installation of different operating systems and personal computer applications. Evaluation and diagnosis of problems related to operating systems and applications. Optimization of the functioning of the operating system to adapt it to the specific needs of each client. Use and evaluation of computer programs of wide acceptance in the market such as word processors, spreadsheet, database, desktop publishing and graphs. Requires 30 hours of lab.

CARM 235 - Data Administration and Retrieval (3)

Study of the different strategies of backup and prevention to avoid the loss of data. Analysis of the operation of the disk drives. Implementation of different techniques for data retrieval. Study of the different types of viruses and

how they attack. Determination of the best way to avoid virus infection, and in case of infection, how the system can be cleaned. Use of tools available in the market to diagnose system errors.

CARM 240 - Repair Techniques for PC Computers (4)

Study of the main symptoms of computer problems by means of the assembly of a computer including cards, power suppliers, processors, memories, discs, cables, operating systems and peripherals. Handling of equipment and diagnostic programs for computer repair. Requires 45 hours of workshop.

CARM 297 - Computer Repair Seminar (4)

Repair of personal computers. Application of students' knowledge and skills for local area network management. Appraisal computerized systems, the application of discounts, applicable IVU and other taxes in the invoicing of services and equipment. Basic knowledge in Systems Analysis & Design of information systems. Use of students' knowledge and skills in the disassembly, assembly, diagnosis and repair of portable personal computers.

CBAK-Confectioner-s-Shop-and-Commercial-Bakery-Technician

CBAK 110 - Bread Preparation I (3)

Development of the basic skills for the preparation of fast breads and related products. Identification of the methods, utensils, equipment, materials and ingredients. Application of mathematics in standard recipe preparation. Integration of health and safety norms in food preparation. Requires 45 hours of lab.

CBAK 111 - Hygiene and Good Practices in Food Administration in the Confectioners and Commercial Bakery (2)

Identification of the correct procedures in the use, handling and storage of foods, with the purpose of avoiding cross-contamination. Description of the agencies that certify good practices in the administration and control of foods in businesses. Discussion of the requirements established in the state and federal laws for food management. Strategies regarding income from foods: costs, inventories and control of plagues. Analysis of diseases transmitted through foods.

CBAK 120 - Basic Confectioner Shop (3)

Study of the confectioner's concepts. Practice in the basic structure of the operation of bakeries and the use of

equipment and existing tools. Development of the knowledge and the skills the preparation of different types of desserts, their classification and general characteristics, including ingredients, procedure and the different techniques of decorating them. Application of the basic norms for handling food in a bakery. Requires 60 hours of lab.

CBAK 130 - Cake Preparation and Decoration (3)

Development of skills to prepare different types of cakes, including ingredients, procedures and the different techniques for their decoration, presentation and adornment. Requires 60 hours of lab.

CBAK 210 - Introduction to Business Administration (2)

Analysis of the operations and administration of a bakery, with emphasis on the diverse functions of planning, organization, direction and control. Study of the permissions, policies and regulations that govern this business in Puerto Rico. Acquisition of basic knowledge in marketing and accounting to make a business plan as a self-employment tool.

CBAK 221 - Bread Preparation II (3)

Development of the basic skills for the preparation of weighed breads and derived products. Practice in the different methods and the use of utensils. Application of mathematics in the preparation of standardized recipes. Application of health and safety norms in food preparation. Requires hours of integrated laboratory. Requires 60 hours of lab.

Prerequisite: CBAK 0110.

CBAK 231 - Advanced Confectioners Shop (3)

Application of standards of quality in the elaboration of the different products prepared in a pastry shop. Development of knowledge and skills for the preparation of different types of desserts, their classification and characteristics. Identification of the appropriate uses of ingredients, the procedures and the different techniques for decorating and presenting dessert. Application of the basic norms for handling of foods and safety in the work environment. Application of mathematics in the preparation of the recipe. Application of y the conversion factor in recipes (RCF=N/O) in standardized recipes. Requires 60 hours of integrated laboratory.

Prerequisite: CBAK 0120.

CBAK 240 - Plated Desserts for Restaurants (3)

Design of the preparation of Creole and international desserts. Preparation of different desserts and modification of the servings for food service in a restaurant. Requires 60 hours of lab

Prerequisite: CBAK 0130.

CBAK 291 - Internship in Confectioners and Commercial Bakery (6)

Direct practice in pastry shops, bakeries, restaurants and in the catering industry by means of the performance of specific tasks in the making of different classes of bread, cakes, cookies and pastries. Application of the knowledge and skills acquired throughout the study program. The practice will be supervised by the person designated by the employer and by a practice coordinator designated by the University. Students will not be able to begin their internship if they have not approved the following courses: CBAK 0110, CBAK 0120 and CBAK 0130. Students are required to complete a minimum of 180 hours. This internship course must be approved with a minimum grade of B.

CBAR - Barber Shop Technician**CBAR 110 - Introduction to Barber Shop (3)**

Study of the historical background of the Barber Shop, its evolutionary processes until the present and the topics related to its professional image, which are: clothing, makeup, appropriate conduct and attitudes of the future professional, all of which are widely discussed. Likewise, the different specializations in the field of beauty and the possible options of employment for future graduates are discussed. Study of the materials and instruments most used and their methods of sterilization for prevention of bacteria and infections. Emphasis on the importance of personal hygiene to work in a beauty parlor.

CBAR 150 - Haircuts, Styles, Shaving of Beard and Moustache I (3)

Acquisition of knowledge and development of skills necessary to perform the art of cutting hair using techniques designed to obtain mastery in the use of sharp instruments such as: scissors, razors and combs as auxiliary instruments. Development of skills for haircuts of children, adolescents and men from 0 to 180 degrees. Requires 90 hours of lab. Prerequisite: CBAR 0150.

CBAR 220 - Chemical Processes and Color Techniques (4)

Learning to identify hair texture in dealing with undulation, textured hair, permanent smoothing, reverse and hair straightening to obtain its transformation. Requires 90 hours of lab.

CBAR 250 - Manicure and Nail Care for Men (3)

Study of the muscular and skeletal system and that of the arm to correctly perform the massages that go with a good manicure. Demonstration of carrying out a basic professional manicure and the correct use of the instruments and materials, considering the time involved without neglecting hygiene and safety measures. Requires 60 hours of lab.

CBAR 260 - Haircuts, Styles, Shaving of Beard and Moustaches II (4)

Acquisition of knowledge and development of skills necessary to perform the art of cutting hair using techniques designed to obtain mastery in the use of sharp instruments such as: scissors, razors and combs as auxiliary instruments. Development of skills for haircuts of children, adolescents, and men from 0 to 180 degrees. Requires 90 hours of lab.

Prerequisite: CBAR 0150.

CBAR 291 - Barber Shop Practicum (7)

Work experience in a real scenario where what was learned can be applied in a practice period. The model establishes a work team made up of the employer mentor, the practicing student, and the institution to facilitate the teaching and learning process, and the transition of the student from a school to a work environment. Experiences in the areas of shampoo, rinsing, treatment of the scalp, hair rolling, blowers, hairdos, manicures, application of chemicals, haircuts and reception.

CBEU - Barber Shop Technician**CBEU 120 - Conditioning of the Skin and Face Treatment for Men - Lab (4)**

Acquisition of knowledge of the skin and its care, blemishes, treatment and products recommended for these, depending on their nature. Requires 60 hours of lab.

CBEU 130 - Principles of Esthetic Face with LAB (3)

Learn the techniques of facials and manipulations according to the condition of the skin and its physiological effect, as well as the removal of unwanted hair. It will

emphasize hygiene and safety; in addition to the application of products and the handling of equipment and materials. Requires 60 hours

CBEU 140 - Hair, its Damages and Conditioning (3)

Study of the hair: its growth, what affects its development, its loss, diseases and flaws, as well as the possible treatments for each condition.

CBEU 220 - Chemical Processes in the Hair (3)

Study of the textures and handling of waving, texturing, straightening, perms, reverse and lacerations for different types of hair to achieve its transformation. It requires 60 hours of laboratory.

CBEU 250 - Color Techniques (3)

Learn the basic fundamentals of theory for color formulation, blending and correction, as well as hair preparation before, during and after coloring, as well as techniques for creating special effects. It requires 60 hours of laboratory.

CBEU 320 - Beauty Salon Administration (3)

Study of the development of strategies to secure a job and the basic aspects that should be known to develop a beauty parlor and advertise it.

CBIL - Administration of Information and Medical Plan Invoicing

CBIL 0120 - Basic Medical Terminology (2)

Study of invoicing of medical plans in health services. Study of the concepts applied to the process of contracts and how to use medical plan formats manually and by computerized systems. Development of knowledge, abilities and skills required for the correct invoicing of medical plans for the services offered to patients in the different work scenarios. Requires 30 hours of workshop.

CBIL 0160 - Invoicing of Medical Plans I (3)

Study of basic and general knowledge on the process of codification of diagnosis with the international classification system of diseases (ICD-9CM). Learning how to carry out, with accuracy and precision, the selection of the diagnosis code and how to use the tools necessary to obtain the exact code of a diagnostic description. Study of the different types of classifications and nomenclature to be able to distinguish the diagnoses. Requires 30 hours of workshop.

CBIL 0170 - Codification of ICD 9CM Diagnosis (2)

Study of basic and general knowledge on the process of codification of diagnosis with the international classification system of diseases (ICD-9CM). Learning how to carry out, with accuracy and precision, the selection of the diagnosis code and how to use the tools necessary to obtain the exact code of a diagnostic description. Study of the different types of classifications and nomenclature to be able to distinguish the diagnoses. Requires 30 hours of workshop.

CBIL 211 - Invoicing of Medical Plans II (3)

Development of the invoicing skills of doctor-hospital services in an electronic manner. Requires 30 hours of lab.

Prerequisite: CBIL 0160.

CBIL 230 - Codification of Out Patient Procedures with the CPT-4 (2)

Recognition and selection of codes with the system of codification of the terminology of the up-to-date procedures (CPT-4). Practice through exercises in class and study of the theoretical frame to know the importance of the system in the invoicing of medical plans and the preparation of statistical information. Study of the terminology and procedures performed in outpatient health service facilities, such as Diagnosis and Treatment Centers, External Clinics, Centers of outpatient Surgery. Study of assessment codification, handling of patients in different outpatient scenarios, and of the changes in this millennium of the most recent edition of the CPT-5. Requires 30 hours of

CBIL 291 - Internship in Administration of Information and Invoicing of Medical Plans (4)

Application of the skills acquired throughout the study program. Requires 135 hours of supervised practice in outpatient health service facilities. Students will not be able to begin their internship if they have not approved the following major courses: CBIL 0170 or CBIL 0230 and CBIL 0160 (required). The internship must be approved with minimum grade of B.

Prerequisite: CBIL 0170 or CBIL 0230 and CBIL 0160.

CBIL 310 - Auditing and Legal Concepts (2)

Development of the skills to analyze, audit and investigate in order to obtain the correct payment when invoicing Health Services. Presentation of the correct review formats offered by the different medical plans in accord with state and federal laws. Determining the importance of

identifying contracts of the providers and the insurance companies, as well as their payment policies.

CCAS - Child Care Assistant

CCAS 110 - Health, Nutrition and First Aid (3)

Discuss concepts and principles related to health, nutrition and first aid with emphasis on the levels of prevention and health promotion. Study infectious and chronic diseases and common health aspects in childhood. Identify the relationship between health and nutrition, the benefits of breastfeeding and good nutrition. Apply proper first aid practices attending to common accidents, emphasizing emergency planning and planning for a safe and healthy environment.

CCAS 120 - Language Stimulation (2)

Discuss theories and approaches to early childhood language acquisition and development. Analyze the factors that affect language development, roles of the child support assistant (0-5 years) and the family in creating an environment that promotes language development. Discuss the characteristics of the child with speech and language problems and their etiology. Plan activities for the development of listening skills, oral expression, comprehension and interpretation, and vocabulary enrichment.

CCAS 130 - Developmental Disabilities and Early Intervention (3)

Introduce the concept of early intervention. Recognize and evaluate the different diseases, disorders or syndromes, whether congenital or acquired, that children may present. Compare and contrast the theory with the real experiences necessary to work with the population that presents conditions that adversely affect their health, socialization and learning.

CCAS 140 - Assessment and Provision of Services to Children with Special Needs and their Family (3)

Use screening techniques and questionnaires to assess the development of infants and preschool children who are suspected of having some delay. Students will have the opportunity to use existing questionnaires and participate in field activities to learn about existing services and service models. Discuss the role of the family in the development of the individualized family service plan, the role of the family in early intervention, and appropriate practices.

CCAS 210 - Recreational Games and Activities (3)

Learn about fun and recreational activities for children. It will select the games according to the age range and needs of people with disabilities. Know the means and rules for directing and animating games. Select games of rounds with Puerto Rican children's songs.

CCAS 220 - Behavior Management and Modification (3)

Analyze the principles and theories focused on behavior management and modification. Apply methods, strategies, intervention and prevention techniques. Emphasis will be placed on writing work plans to collaborate with the teacher and the family in behavior modification. Discuss the rights and responsibilities of families and special education students. Discuss the importance of consultation and collaboration with the specialist, teacher, family or primary caregiver.

CCAS 230 - Explore Creativity and Art (2)

Determine different methods and materials that can be used to develop the ability of artistic expression in children. Develop spontaneity through the arts, design and development of simple and appropriate crafts, according to the abilities of the children. Use techniques and strategies to stimulate the five pillars of development through art.

CCAS 291 - Internship in Child Care Assistant (0-5 years) (5)

Apply the basic skills acquired in the real environment of a care and learning center. Prepare appropriate educational and socialization material for children. Integrate various professional improvement workshops in your area and direct support to achieve success in your career.

CCAR - Construction Technician

CCAR 110 - Principles of Carpentry (3)

The student will learn to use the materials, electrical and manual equipment used in carpentry. They will carry out notions of basic drawing, reading of simple plans and installation and repair of doors, windows, locks, decorative panels, prepare material cost estimates for projects, among other tasks. It requires 60 hours of laboratory.

CCAR 120 - Introduction to Construction (2)

The student will learn about the different branches that make up the field of construction, safety principles (OSHA), job security (State Insurance Fund), the laws and regulations that govern it, and the government offices that

apply to it. This component includes topics such as: the construction industry, units and definitions, floors and foundations, heavy equipment, asphalt materials, cements and concrete, masonry (wood), and the construction process. It requires 30 hours of laboratory.

CCAR 140 - Principles of Masonry (2)

The students will acquire the skills to use the tools and materials necessary in the different masonry tasks. In addition, they will learn how to perform the tasks of plastering, setting blocks, making mixtures, correcting flaws in concrete and masonry related areas. It requires 30 hours of laboratory.

CCAR 230 - Principles of Plumbing (3)

The student will learn the basic skills of installing and maintaining all types of plumbing in residential and commercial areas.

CCHC - Child Care Technician

CCHC 110 - Childhood Development (2)

Study of the different approaches, the stages of growth and the learning theories; and their application to teaching in the classroom, especially in classrooms that promote independent, interdependent, constructivist, reflective and critical learning. Evaluation of the teaching strategies and techniques that are derived from these diverse approaches, stages and theories and their relation with the goals of formal education.

CCHC 120 - Literary Activities (2)

Description of the necessary tools to help students to develop their responsibility to begin to promote their knowledge of the mother tongue as a vehicle of the communication. Synthesis and focus on the evolution of the Spanish language from its beginnings to the new trends in literature for children, including stories, legends, and poetry, among others. Creation of a representative critical selection of literature and activities that help the cognitive, physical, emotional and social development, of the children. Requires 30 hours of lab.

CCHC 130 - Games for Children (2)

Use of appropriate games for early childhood and the theories that support them. Explanation of games from their beginnings, their classification and their benefit for children in cognitive, emotional, social, physical and sensorial terms. Includes an ample selection of childhood songs and the benefit of instrumental, classic and infantile music for children.

CCHC 210 - Baby and Infant Child Care (3)

Description and application of the basic concepts on nutrition and feeding during the first twelve months of life; as well as the elimination of these. Identification of deontological problems and skin care with an emphasis on the different health conditions that affect child development, integration and socialization. Presentation of an educational chat to other youth on responsible parenthood.

CCHC 220 - Crafts for Children (2)

Study of different methods and materials that can be used to develop the ability of artistic expression in children. Development of spontaneity through the arts; design and elaboration of simple and appropriate crafts according to the capacities of the children. Requires thirty hours of workshop for the preparation of materials. Requires 30 hours of lab.

CCHC 291 - Internship in Child Care (9)

Application of the acquired basic skills in the real environment of a child care center. Preparation of educational material and of appropriate socialization for children from zero to five years of age. Integration of diverse workshops of professional improvement in the student's area and direct support to achieve success in his career. Requires two hundred seventy (270) hours of practice.

CCHC 296 - Early Interventions in Children with Special Needs (2)

Assessment of the different conditions, either congenital or acquired, which children may get. Comparison and contrast of theory with the real experiences necessary to work with pre-school children that may present conditions that adversely affect their health, socialization or learning.

CCHC 297 - Seminar in Child Care (3)

Identification of the critical events and situations of a child care center. Study of the functions of the employees and the laws that protect them. Handling unexpected situations in children between zero and five years of age. Analysis and application of the acquired skills and procedures by visiting a child care center.

CCHC 310 - Administration of Child Care Centers (2)

Study of the operations and administration of a childcare center, in agreement with the diverse managerial functions. Knowledge of the policies, permissions and regulations that govern childcare centers in Puerto Rico. Basic knowledge in marketing and accounting to draw up a

business plan as a tool for self-employment. Visits to several childcare centers and their evaluation.

CCOM - Computer Technician

CCOM 110 - Computer Assembly, Repair and Maintenance (3)

Identification, evaluation and solution of the most common problems in the assembly, preventive maintenance and repair of computer equipment. Requires 60 hours of lab.

CCOM 220 - Visual Basic (3)

Study of the techniques the logic that should be followed for the elaboration of programs designed to solve problems. These are: flow charts, pseudo codes and codification in the language BASIC (Visual Basic). Study of the rules of the language, arithmetical expressions, cycles, decision making, special symbols, tables and archives. Requires 60 hours of lab.

CCOM 230 - APPLIED PROGRAMS IN MICROCOMPUTERS I (3)

Study of technical applications and use of these to evaluate and obtain practical experience with generally used software, which has obtained acceptance in the programs market. Emphasis on word processors and spreadsheets. Requires 60 hours of lab.

CCOM 240 - INTRODUCTION TO NETWORKS (3)

Study of the basic concepts of telecommunications, data communication and computer networks, topology, operating systems, protocols, security, operation and local network management. Requires 60 hours of lab.

CCOM 291 - Internship in Computers (9)

Completion of a supervised experience of 270 hours in the computer sciences area where the skills and knowledge developed during the study program are put into practice. The internship course must be approved with a minimum grade of B.

CCOM 310 - Language C + C # (3)

Application of the knowledge acquired in class. Definition of problems, flow charts and codification of programs in Language C. Requires 60 hours of lab.

CCOM 331 - APPLIED PROGRAMS IN MICROCOMPUTERS II (3)

Study of technical applications with emphasis on the use of programs for the administration of databases, graphs, and presentations. Requires 60 hours of lab.

Prerequisite: CCOM 0230.

CCOM 410 - Databases (3)

Technical applications with emphasis on the use of programs for handling databases, tables and SQL (Structure Query Language). Includes 60 hours of laboratory.

CCOO - Culinary Arts Technician

CCOO 110 - Food Services Hygiene, Health and Safety Procedures (3)

Study of cleaning techniques and products for utensils and equipment. This includes the handling of foods when they are received and in the storage of products. Recognition of appropriate temperatures to freeze, to refrigerate and for dry storage. Identification and control of plagues, diseases and chemical products, which are toxic or injurious to health.

CCOO 121 - Meat, Poultry and Seafood Cuts (3)

Recognition of quality grades according to the United States Department of Agriculture (USDA). Identification of the different cuts in Beef, Lamb, Seafood, Poultry and Fish, as well as the identification and handling of different knives. Requires 30 hours of lab.

CCOO 130 - preparation of Breakfast, Soup, Sauces, Salads, and Cereal (3)

Identification of the methods used to make local and international breakfasts. Preparation of soups, salads, basic sauces and their spin-offs. Requires 45 hours of lab.

CCOO 140 - Menu Design and Preparation of Banquets (Buffets) (3)

Preparation of hot and cold hors d'oeuvres. Development of techniques to make recipes and prepare foods. Acquisition of knowledge for the preparation of a menu. Requires 30 hours of lab.

CCOO 145 - Menu Design and Cost Planning (Garde Manger) (3)

The student will learn the techniques and methods of cooking cold meals, as well as its history and vocabulary, including dressings, salads, sandwiches and cold soups. The student will understand the basics of art and graphics in menu development, and will analyze cost, market trends, and nutritional considerations.

CCOO 150 - Creole and International Plated Desserts (3)

Making of diverse typical dishes of the Puerto Rican cuisine. Identification of dishes recognized by specialists in the cooking art of our country. Requires 45 hours of lab.

CCOO 210 - Puerto Rican Gastronomy (3)

Design and preparation of Creole and international desserts. Serving sizes for presentation of dessert in the restaurant. Planning recipes for the preparation of desserts. Requires 45 hours of lab.

CCOO 220 - International Cuisine (3)

Association of the world gastronomy with the Puerto Rican gastronomy in order to combine dishes of different cultures. Comparison of the gastronomy of the twentieth century with that of the 21st century. Requires 45 hours of lab.

CCOO 225 - Introduction to Confectioner's Shop (3)

The student will acquire the skills for the preparation of different types of desserts and their classifications. The student will learn the basic procedures in the preparation of breads and pastries; perform different techniques for decorating desserts and sweets; and make breads and confections from different parts of the world.

CCOO 240 - International Cuisine (3)

The student will learn the procedures in the preparation of alternative menus for a healthy diet including: preparation of various vegetarian and vegan dishes from international and Puerto Rican cuisine; learn the history of vegetarian cuisine; learn to do analysis of calories, carbohydrates, lipids, proteins, minerals, water and vitamins; and confection desserts appropriate to nutritional concepts.

CCOO 250 - Alternative Cuisine (3)

The student will learn the procedures in the preparation of alternative menus for a healthy diet including: preparation of various vegetarian and vegan dishes from international and Puerto Rican cuisine; learn the history of vegetarian cuisine; learn to do analysis of calories, carbohydrates, lipids, proteins, minerals, water and vitamins; and confection desserts appropriate to nutritional concepts.

CCOO 291 - Internship in Cuisine (7)

Application of the skills acquired throughout the study program. Requires 225 hours of supervised practices in the food preparation industry. This course requires as a prerequisite to have approved the major courses of the first

semester. The internship course must be approved with a minimum grade of B.

CCOP - Computer Operator

CCOP 110 - Application Programs in Microcomputers (4)

Acquisition of the knowledge to handle the most important applications used nowadays in businesses in the information field through an operating system, word processor, spreadsheets and graphical design. Requires 60 hours of lab.

CCOP 120 - Introduction to Computers (4)

Study of the social impact of computer use. Study of its basic components, applications and use of the computer in problem solving, its capacities and limitations. Use in the laboratory application programs, such as word processors, spreadsheets and databases. Requires 60 hours of lab.

CCOP 130 - Microcomputer Keyboard (2)

Study of the terminology, equipment and the cycle for processing written information. Study of the components of a computer unit. Acquisition of mastery of the alphabetical, numerical and symbols on a keyboard. Application of the basic skills for writing simple exercises and data entry. Requires 30 hours of lab.

CCOP 210 - Computer Programming (3)

Study of computer programming methods and the techniques and application of logic for the construction of programs that solve problems, such as: flow charts, pseudo-codes and codification in a programming language. Study of language rules, arithmetical expressions, cycles and decision making. Designing and developing programs to apply the acquired knowledge of the language. Requires 30 hours of workshop.

CCOP 220 - Physical and Operating Components of Computers (3)

Detailed explanation of the physical and peripheral components, and programming regarding the routine operation of computers. Diagnosis of operational errors, logical design and manipulation of equipment. Requires 30 hours of workshop.

CCOP 230 - Database Administration (3)

Study of computerized database management and the programming of elements related to the creation, administration, use and removal of databases using the application program MS-ACCESS. Requires 45 hours of

lab.

CCOP 240 - Telecommunications, Networks and Internet (3)

Study of the concepts and terminology of data communication, and the development of computerized communications, components of data communications, network architecture of data networks, job trends in communication networks, Internet and its trends. Requires 30 hours of workshop.

CCOP 297 - Seminar in Computer Operator (4)

Study and conduct of research in excellent topics in the area of computer sciences where the skills and knowledge (CARM) developed throughout the training program are put into practice, including programming, text creation, graphs, data bases and spreadsheets, among others. Requires 45 additional hours of lab.

CCOS - Cosmetology Technician

CCOS 110 - Introduction to Cosmetology (3)

Study of the historical background of Cosmetology, its evolutionary processes up to the present and the topics related to its professional image, which are: clothing, makeup, appropriate conduct and attitudes of the future professional, all of which are widely discussed. Likewise, the different specializations in the field of beauty and the possible options of employment for future graduates are discussed. Study of the materials and instruments most used and their methods of sterilization for prevention of bacteria and infections. Emphasis on the importance of personal hygiene to work in a beauty parlor.

CCOS 210 - Hairstyle Design for Women (3)

Acquisition of knowledge on the making of the different types of rolling according to the desired hairdo style. Study of the techniques to make curling and curls in different diameters according to the facial characteristics of the client; as well as the selection and handling of products, materials and equipment to make casual and elaborate hairdos. Requires 60 hours of lab.

CCOS 230 - Make-Up, Manicure and Pedicure (3)

Study of the muscular and skeletal system of the arm and legs to correctly perform the massages that go with a good manicure and pedicure. Study of carrying out the art of a professional manicure and pedicure and the correct use of the instruments and materials, taking into account the time involved without neglecting hygiene and safety measures. Requires 60 hours of lab.

CCOS 240 - Haircut Styles for Women (3)

Acquisition of knowledge and development of skills to perform basic techniques of cutting and design from 0 to 90 degrees, the distribution of hair and sectioned hair, as well as the theory of studying the client's facial features. Emphasis on the mastery of the sharp instruments and their ancillaries. Requires 60 hours of lab.

CCOS 291 - Cosmetology Practicum (7)

A practice experience in a real scenario where what was learned can be applied. Our model establishes a work team made up of the employer mentor, the practicing student, and the institution to facilitate the teaching and learning process, and the transition of the student from a school to a work environment. Demonstration of abilities in the areas of shampoo, rinsing, treatment of the scalp, hair rolling, blowers, hairdos, manicures, pedicures, application of chemicals, haircuts and reception.

CCPT - Computer Programming Technician

CCPT 110 - Microsoft Office User (MOU) (3)

Basic concepts in the use of the main Microsoft Office programs. Emphasis is placed on keyboarding, operating systems, word processing, spreadsheets, and electronic presentation. Includes 60 hours of virtual laboratory.

CCPT 210 - Office Visual Basic Application (VBA) (3)

Technical applications, use, evaluation, and hands-on experience with general-purpose software that has achieved acceptance in the software market. Emphasis is placed on word processors and spreadsheets. Includes 60 hours of virtual laboratory.

CCPT 220 - Hypertext Preprocessor (PHP) (3)

Unstructured language used to create Internet pages. Basic concepts, use and application of HTML formats. Includes 60 hours of virtual laboratory.

CCPT 230 - Python (3)

Logic techniques that must be followed for the elaboration of programs that solve problems such as flowgrams, pseudocodes and coding in the Python language. Language rules, arithmetic expressions, cycles, decision making, special symbols, tables and files. Includes 60 hours of laboratory.

CCPT 0291 - Internship in Computer Programming (6)

Supervised experience of 135 hours in the area of

computer science where the skills and knowledge developed during the study program are put into practice.

CCPT 310 - Structure Query Language (SQL) (3)

Technical applications with emphasis on the use of programs for handling databases, tables and SQL (Structure Query Language). Includes 60 hours of virtual laboratory.

CDRA - Computer Assisted Draftsman

CDRA 110 - Introduction to Draft and Orthographic Views (2)

Introduction to manual drafting equipment, the use of the architect scale, drawing instruments, drawing of lines, text patterns, title margins, edges and labeling. Study of orthographic drawings and two point perspectives. Application of the glass box method, the natural method and the projection in various views. Study of figures in isometric, oblique and axonometric views for a better visualization of the objects.

CDRA 120 - Symbols, Laws and Regulations (2)

Study of the laws and regulations that govern the rulings and practice of construction design in our system of government. Study of the international symbols used in construction drawings.

CDRA 130 - Sectional Views, Auxiliary and Construction Geometry (2)

Study of the concept of graphical language, sectional and auxiliary views, and the geometric forms, as well as their application in different mechanical drawings. Solution of problems that require the application of geometric principles in engineering, such as: lines, straight lines, circles, curves, polygons and ellipses. Requires 30 hours of lab.

CDRA 150 - Distribution of Electricity, Plumbing and Details (2)

Study of the drawings of lines and the symbols required in the legend of residential and industrial construction plans. Emphasis on the drawing and use of lines and symbols of the distribution of the electronic and plumbing systems in architectonic plans. Requires 30 hours of lab.

CDRA 160 - Structural Drawing, Floor and Roof (2)

Study of the basics of the components of a structure, the vocabulary used for this and the types of structures that can

be represented in architectonic drawings, depending on their characteristics. Development of structural plans for foundation and roof structures. Requires 30 hours of lab.

CDRA 170 - Accounts and Budget (2)

Application of mathematical skills in the preparation of estimates and costs of materials of a construction project. Study of procedures in the calculation of estimates of construction, labor costs and sources of funding.

CDRA 180 - CAD Applications (Autocad) (2)

Study and use of the drawing program called "AUTOCAD". Application of computer assisted drawing skills. Study of the basic concepts of the program such as: drawing lines, curves, circles, polygons, location of sheet sizes, determine the scale to use and other basic elements. Requires 30 hours of lab.

CDRA 181 - CAD Application (Autocad with Tri-D) (3)

Study of the most advanced commands of the AUTOCAD program such as: to work by layers and colors to determine thicknesses of lines. In addition, work with the model space, paper space, and external reference systems. Requires 60 hours of lab.

CDRA 190 - Civil Drawing and As-Built Computers (3)

Use and design of the different types of plans and maps, as well as the introduction to the terminology, civil and as-built drawings. Study of the information that contains a Survey Plan, a Plot Plan, distances, contours, points of reference, maps contour and how to identify them according to their characteristics. Study of the concepts of urban zoning and its regulations by the Regulations and Permits Administration (ARPE for its abbreviation in Spanish). Requires 60 hours of lab.

CDRA 210 - Scale Design (3)

Application of manufacturing processes and of different techniques in the construction of residential and industrial scale models. Study of the different materials used for these works. Requires 60 hours of lab.

CDRA 220 - Architectonic Drawing (2)

Production and design of sketches for a family residence. Use of architectonic language and the different types of symbols applied to architecture drawings. Application of what was studied in the development of facades, section cuts, completion tables, blow-ups of bathrooms and kitchens. Requires 30 hours of lab.

CDRA 291 - Internship in Computer-Assisted Draftsman (4.5)

Completion of a supervised practice period of 135 hours in a real work scenario, applying the knowledge acquired in the different areas of architectonic design as computer-assisted draftsman, in commercial, institutional or industrial facilities, with the supervision of professionals in the field who certify the work and the knowledge of the practicing student.

CDRA 297 - Seminar in Computer-Assisted Draftsman (1)

Integration of the knowledge acquired in preparation for the board Draftsman Examination.

CECT - Eco-touristic Guide**CECT 110 - Foundation of Eco-Tourism (2)**

Study of the fundamental concepts of eco-tourism. Analysis of the importance of tourism in countries' economy. Comparison of the models used in different countries and application of the concepts and models to the eco-tourism industry in Puerto Rico.

CECT 220 - Geography and Tropical Ecosystems (2)

Identification of the main geographic and ecological characteristics that characterize tropical ecosystems, with emphasis on the Antilles and the Caribbean. Ability to describe some representative ecosystems in Puerto Rico. Make interpretative visits to value the importance of ecosystems in social, cultural and economic activities in Puerto Rico.

CECT 240 - Eco-Tourism in Puerto Rico (1)

Study of the historical and natural patrimony of touristic interest as instruments of socio-cultural and economic development. Study and analysis of the main historical monuments, natural resources, popular arts, illustrious persons, and the folklore of the Island. Visits to the main tourist attractions. Application of the current laws on tourism.

CECT 291 - Internship in Eco-Tourism (10)

Completion of one hundred eighty (180) hours of learning experiences by means of a supervised practice in an authorized center. Make a critical analysis of events and situations in the framework of tourism work

CECT 310 - Administration of Small Businesses in the Eco-tourism (2)

Study of the principles of operating a business, by giving emphasis to the different functions of planning, organization and marketing. Study of the policies and regulations that govern one's own business.

CEPD - Entrepreneurship Technician**CEPD 110 - Foundations of Entrepreneurship (4)**

Introduction to the basic knowledge of entrepreneurship. Develop business skills and basic tools. Identify the needs in the market to satisfy them through innovative goods or services.

CEPD 120 - Introduction to Marketing (4)

Introduction to the marketing basic concepts to apply them for an innovative product or service. Identify a target market and life cycle of the asset to implement strategies and processes to market your product or service. Approach to link your product or service in the competitive world of globalization.

CEPD 130 - Human Relations in the Business World (3)

Analysis of human relations within a business approach. Train and motivate human resources. Management of diversity and labor conflicts. Basic knowledge of the labor legal framework.

CEPD 210 - Accounting and Finance Principles (4)

Introduction to accounting and finance from a business perspective. Apply basic knowledge about business entities and accounting cycle processes. Financial statements training and presentation. Analyze the financial statements to determine business real financial scenario. Use of complementary computer programs for the study and analysis of financial and accounting information.

CEPD 220 - Business Design (2)

Design of a business plan based on the fundamentals of entrepreneurship, accounting and finance principles, marketing principles and legal framework.

CEPD 230 - Entrepreneurship Legal and International Framework (2)

Labor framework study of state, federal and international laws. The analysis of permissions and processes for the establishment of a business in the legal jurisdiction of Puerto Rico. Identify other permitting processes according

to the business industry.

CEPD 291 - Entrepreneurship Internship (5)

Application of knowledge, skills and business attitudes in the practice setting.

CERE-Electricity-with-PLC-and Renewable Energy

CERE 110 - Principles of Electricity (2)

Study of the historical background of electricity and the electrical systems, the world of modern electricians, their work and the laws that regulate their profession. Study of the principles of safety, equipment, tools, electrical equipments and their properties, electrical theory and its applications, instruments, skills of measurement and principle of troubleshooting. Requires 30 hours of lab.

CERE 140 - AC/DC Electricity (2)

Study of the most important points of AC/DC circuits. Application of knowledge directly to the mastery and understanding of AC/DC voltages. Understanding of the difference that exists between both voltages and their differences according to the different components. Requires 30 hours of workshop.

CERE 150 - Construction Electricity (2)

Study of the transmission and distribution systems of electrical energy produced in Puerto Rico, facilities of secondary voltages, different bases for electric meters in relation to the connected load, connections and combinations in an electrical facility and electrical load distribution in a panel. Study of the use of control and protective devices in circuit branches. Interpretation of electrical diagrams and plans to correctly install conduits and conductors. Requires 30 hours of workshop.

CERE 210 - Installation of Magnetic and Motor Control (2)

Study of the theoretical and practical aspects of the different controls for electrical devices that one wants to put into operation. Interpretation of schemes and diagrams to obtain a correct and sequential installation of the machinery. Study of the structural and functional parts of electric motors, as well as how to determine or to select their capacity for the work to be performed. Requires time in a workshop.

CERE 220 - Lighting (2)

Acquisition of the basic knowledge of lighting. Emphasis

on the existing modern technology regarding lamps, lights and illumination systems. Students will acquire the knowledge necessary and the essential skills to work with residential, commercial and industrial lighting system. Requires 30 hours of workshop.

CERE 240 - Fundamentals of Transformers (3)

Study related to coils and the effects with direct AC and DC current. Development of the necessary skills for the use and application of transformers in banks and the use of the measurement systems of power and current transformers. Development of skills to select, apply and recognize the different types of construction of dry or oil transformers. Requires 45 hours of workshop.

CERE 250 - Principles of Electronics (2)

Study of the basic and fundamental concepts of the components and systems that electricians will find in their work. Knowledge of how the devices work and their use in the circuits. Study of schematic and pictorial circuits, troubleshooting and the basic instruments used in electronics work. Requires 30 hours of workshop.

CERE 291 - Internship in Electricity with PLC (4.5)

Development of the skills required of the modern electrician. Study of and exposure to the most recent technology and the most sophisticated methods of work in the field of electricity, under the supervision of a certified expert. Completion of 135 hours of internship and participation in an exchange of knowledge that contributes to professional growth and work competence.

CERE 297 - Seminar in Electricity with PLC (1)

Integration of the knowledge acquired in preparation for taking the board Examination for Expert Electricians.

CERE 340 - Introduction to Electrical Plans (2)

Learning to use electrical plans correctly to carry out the different tasks in the electricity field. Emphasis on learning the different kinds of plans and their respective applications. Technical knowledge and skills in working with equipment and materials for the production of the drawing. Requires 30 hours of workshop.

CERE 350 - Programmable Logic Controllers PLC (3)

Study of the basic principles of operation of the PLC and its maintenance, troubleshooting, its I/O system and preventive maintenance. Knowledge of the numerical systems and codes, logical concepts and programming, the memory system and the interaction of points I/O and interfacing, as well as operation of the PLC in automated

systems, their components, application and programming, data manipulation and programmable logic circuits. Requires 45 hours of lab.

CERE 360 - introduction to Renewable Energy and Photovoltaic Systems (2)

Introduction to renewable energy and its potential application and development as permitted by the current laws and regulations. The course will help the student to understand and learn the basic concepts of renewable energy, mainly photovoltaic energy. The course includes 20 laboratory hours.

CEST - Integral Esthetics

CEST 110 - Introduction to Esthetics (3)

Study of the history of personal embellishment and skin care, the professional opportunities and the development and future of esthetics. Understanding the elements of professional ethics, the vital skills and the basic habits of hygiene.

CEST 120 - Anatomy and Applied Physiology (3)

Study of the cell, basic unit of all living organisms, and the operation of the principal systems of the body.

CEST 130 - Foundations of Massage (3)

Study of the different massage techniques, their benefits and physiological effects, as well as the contraindications. Requires 60 hours of lab.

CEST 140 - Hair Removal Techniques (3)

Study of the different methods of hair removal, as well as their contraindications. Requires 60 hours of lab.

CEST 150 - Professional Make-Up (3)

Development of knowledge and skills in the different techniques of professional make-up according to the occasion, the facial characteristics, and the condition of each client's skin, the application of detachable eyelashes, the curve of eyebrows, as well as the administration of equipment, instruments and beauty products. Requires 60 hours of lab.

CEST 210 - Facial Treatments (4)

Study of the different massage techniques, their benefits and physiological effects, as well as their contraindications. Requires 120 hours of lab.

CEST 220 - Body Treatments (4)

Learning to perform diverse body treatments to enable students to work professionally in beauty parlors, beauty institutes, laboratories and clinics by assisting doctors or independently. Requires 120 hours of lab.

CEST 230 - Aromatherapy and Environment Adjustment (3)

Study of the history of personal embellishment and skin care, the professional opportunities and the development and future of esthetics. Understanding the elements of professional ethics, the vital skills and the basic habits of hygiene. Requires 30 hours of lab

CEST 310 - Practice (6)

Apply the skills acquired in the real environment of a beauty or skin care center. In addition, it will be required to complete 180 hours of supervised practice. Students will not be able to start their practice if they have not passed the concentration courses.

CETE - Educational Therapy and Evaluation

CETE 110 - Training of the Educational Therapist (3)

Course aimed at developing knowledge of basic concepts related to the profession of Educational Therapy, its theoretical framework, beginning and development, purposes of the profession, qualifications, areas of work, population to be served, types of interventions to be carried out and laws that cover the population with special educational needs served in Puerto Rico and the United States.

CETE 120 - Neuroscience and Learning (3)

Course aimed at developing knowledge of basic concepts related to the profession of Educational Therapy, its theoretical framework, beginning and development, purposes of the profession, qualifications, areas of work, population to be served, types of interventions to be carried out and laws that cover the population with special educational needs served in Puerto Rico and the United States.

CETE 130 - Sensory Integration and its Educational Implications (3)

Course aimed at training the student in the basic knowledge necessary to understand sensory processing, distinguish problems of sensory origin and their educational implications.

CETE 210 - Design and Preparation of Psychoeducational Profile (3)

The psychoeducational profile as an evaluation tool in intervention. Structure of the psychoeducational profile, advantages and caregiver report management.

CETE 220 - Basic Concepts of Applied Behavior Analysis (3)

Students will learn the concepts of Applied Behavior Analysis, ABA; fundamentals of Applied Behavior Analysis; proactive strategies; reactive strategies and how to develop new skills.

CETE 230 - Informal Techniques in the Detection of Learning Difficulties (3)

Students will learn about development, use and application of various techniques to detect situations or problems in learning; screening tests (concept and application work by the student); diagnostic tests; placement tests and other evaluation alternatives.

CETE 240 - Technological Assistance, Strategies and Interventions (3)

Students will learn about assistive technology, assistive technology laws and conditions that qualify for assistive technology for the following: physical functioning; communication; social skills; academic performance; vocational performance; recreation and leisure. They will know the rights of people who require technological assistance; intervention with technological assistance in educational therapy, including high technology and low technologies. Technological assistance methods for difficulties of: reading, writing, mathematics, behavior modification, attention deficit, memory, communication among others will be discussed.

CETE 310 - Training in Strategies for the Administration of the Formal Evaluation (3)

Strategies for the development of skills in the administration of formal evaluations in the psychoeducational process. Formal evaluations aimed at detecting learning difficulties.

CETE 320 - Educational Therapeutic Intervention Strategies and Development of the Intervention Plan (3)

Preparation of the intervention plan in educational therapy based on the evaluations, including: writing the goals and objectives in the intervention plan, selection of strategies for effective intervention; suggested activities taking into consideration some conditions that affect academic achievement; recommendations for managing the behavior

of the subject receiving educational therapy; among other considerations to have when writing the intervention plan.

CETE 330 - Effective Interventions through the Use of Technology (4)

Study and practice in the use of various computer programs for educational therapy; research and identification of different places (sites) that can be used in the intervention according to various cases studied. Students will create an intervention plan for an assigned case with particular conditions using the computer and the internet. Students will apply what has been learned in the design of material for effective intervention, using the computer.

CETE 340 - Basic Foundations of Sign Language for Educational Therapy (3)

This course includes foundations in inclusion and hearing disability, including models and approaches to hearing impairment; the social model of hearing impairment; introduction to sign language; basic vocabulary of sign language; sign language lexicon; tenses in sign language; rules and manners, and other related concepts and recommendations.

CFMA - Fashion Merchandising Technician

CFMA 110 - Introduction to Fashion Industry (2)

This course studies the form in which the manufacturers of clothing, fibers and textiles market their products until they reach the end-user. In addition, it explores history, characteristics and the interrelation between the different segments of the fashion industry. Students will visit a trade show to learn the process of wholesale sales.

CFMA 120 - Introduction to Fashion Merchandising (2)

This course studies the integration of the concepts of fashion marketing, with its practice and application to the industry. In addition, it focuses on the development of a marketing plan. The use of case studies allows the student to analyze and develop solutions regarding positioning, brand name image, market goals and product segmentation related to fashion. Students will visit a publicity agency with the purpose of learning to create an advertising campaign.

CFMA 170 - Fashion Illustration I (3)

Fashion Illustration

CFMA 180 - Sewing and Textiles I (2)

Sewing and Textiles I

CFMA 190 - Fashion Design I (3)

Fashion Design I

CFMA 250 - Fashion Illustration II (2)

Fashion Illustration II

CFMA 260 - Sewing and Textiles II (2)

Sewing and Textiles II

CFMA 270 - Fashion Design II (2)

Fashion Design II

CFMA 291 - Internship in Fashion Merchandising (5)

In this course students will experience the work environment for which they have been preparing. They will have the opportunity to apply the knowledge acquired in the classroom. The experiences will be acquired through the practice: directed and supervised activities in fashion merchandising in a store for selling fashion products. This internship also offers the opportunity to local businesses to work with university students and to benefit from their enthusiasm while they share their knowledge.

CFMA 280 - Patterns (2)

Patterns

CFMA 290 - Fashion Marketing and Commercialization (2)

Fashion Marketing and Commercialization

CGRO - Gerontology**CGRO 100 - Introduction to Gerontology (3)**

The technical certificate in Gerontology provides students the knowledge, skills and attitudes necessary to work with the elderly. It aims to develop new concepts, ideas, values and skills that prepare students to offer an appropriate service to the elderly. It is expected that graduates will have acquired the competencies to be able to serve in public and private agencies that take care of the elderly as well as to offer their services to families on their own. Students will develop a greater sensitivity towards the care of the elderly in an area of increasing demand, meeting, therefore, the needs of the Puerto Rican society.

CGRO 120 - Institutional Care and Alternative Care (3)

Study of the different types of care institutions for aged people and the aspects associated with them. Study of the care of residents and their rights, rehabilitation, social life, psychological effects and alternatives to the institutionalization of the elderly.

CGRO 130 - Primary Needs of the Elderly (3)

Study of the needs of the elderly, such as: health, housing, income, interpersonal relations, transportation, and others. Analysis of the environmental factors that impact their longevity. In addition, study of the concept of quality of life and its relation to old age.

CGRO 140 - Programs and Services for the Elderly (3)

Study of the historical development of service programs for the elderly and their contributions to this population. Review of the programs and services, eligibility criteria and application procedure. Study of the social policy and the legislation that gave *raison d'être* to each one in particular.

CGRO 230 - Leisure, Free Time, Activities in the Elderly Stage (3)

Study of how exercise and mental activity help to slow down the physical and mental deterioration of the elderly person. Emphasis on the need to maintain the elderly occupied. Familiarization with specific materials and needs for the well-being of the elderly. In the course, students will relate to Care Centers for the elderly that offer multiple activities. Students will plan and develop a program of activities for this population.

CGRO 240 - The Family and the Elderly (3)

Study of the family from a general perspective. Study of the problems with the parent-children relationship, and family difficulties in the elderly stage. Study of the needs of the elderly person and the family, family relations, retirement, the role of grandparents, diseases and incapability of the elderly, and widowhood.

CGRO 250 - Assessment of the Elderly (3)

Development of skills for the assessment of the capacities of the aged, assessment areas, assessment techniques and processes, the work process and the process of interviewing the elderly.

CGRO 291 - Experience in the Gerontology Field (9)

Integration of the knowledge, development and refinement

of skills for care of the elderly in the gerontology field. Performance of work in a public or private agency that serves the elderly, and work directly with the elderly. Includes 270 hours of practice.

CHMT - Hotel Administration

CHMT 110 - Puerto Rican History and Culture (3)

Acquisition of knowledge on economic, political, social and cultural events that define the profile of the Puerto Rican society and its geographic surroundings.

CHMT 130 - Foundations of Hotel Industry (3)

Knowledge of the principles that govern the tourist industry, giving emphasis to the business of Hospitality. Understanding of the origins and evolution of the hotel industry for a better performance in the work field.

CHMT 210 - Reception and Reservations (3)

Learning the processes of reception and reservation in a hostelry, as well as the essential elements to achieve effectiveness in these areas. Acquisition of knowledge and development of skills in the use of electronic reservation systems.

CHMT 220 - Food and Beverage Management (3)

Study of the operation of the food and beverage service area. Knowledge of the basic concepts of kitchen organization, as well as the administration and control of foods, health and security norms, purchase process and use of equipment. Study of the basic principles of personnel management.

CHMT 230 - Room and Conservation Management (3)

Acquisition of basic knowledge on the operation and administration of rooms and maintenance of a lodging in its different areas. Preparing students in the planning of guest services, conservation and maintenance tasks, control of operational costs and administration of inventory. Study of the basic principles of personnel management.

CHMT 291 - Internship in Hotel Administration (3)

Placement of students in lodgings or inns where they can demonstrate their knowledge and sharpen their skills related to the administration of the reception, room maintenance, and food and drink services departments. Ninety (90) hours of practice in a typical scenario of the hotel industry.

CINF - Informatics

CINF 110 - Use of the Keyboard (3)

The student will develop basic skills in handling the keyboard. It will emphasize the correct operation of the parts related to the alphabetic and numeric keyboard. The student will use the techniques for the development of speed in writing. Requires 60 hours in a laboratory.

CLAB - Laboratory Assistant

CLAB 111 - Basic Concepts of General Chemistry (4)

Study of the basic concepts of the subject, its structure and composition. Includes measurement systems chemical bond, the Periodic Table, balance of reactions and preparation of solutions.

CLAB 121 - Basic Concepts of Modern Biology (3)

Study of the basic concepts of Biology including zoology, botany and microbiology. The use of common terms that apply to biological sciences is introduced.

CLAB 210 - Basic Techniques of Chemical Analysis (4)

Recognition of the basic techniques and procedures of chemical analyzes used in a chemistry laboratory. Includes the volumetric methods of chromatography and spectrophotometry.

Prerequisite: CLAB 0111.

CLAB 220 - Foundations of Industrial Microbiology (4)

Study of the important micro organisms in the majority of industrial processes. Emphasis on the techniques of culture and the microbiological analysis of foods, waters and soils. Requires 30 hours of lab.

Prerequisite: CLAB 0220.

CLAB 291 - Internship in Laboratory Assistant (3)

Completion of ninety (90) hours of supervised experience in chemistry or microbiology laboratory scenarios. Application of the concepts learned to real situations related to the study program.

CLAB 297 - Seminar in Health and Organizational Security (3)

Analysis and discussion of situations related to the environmental laws and regulations that apply to laboratories. Application of the technical vocabulary learned.

CMAC - Construction Technician

CMAC 210 - Principles of Refrigeration and Air Conditioning (2)

The students will learn the basic terms, definitions, most used equipment, installation, maintenance and repair of refrigeration equipment and air conditioners. It requires 30 hours of laboratory.

CMAC 220 - Principles of Welding (2)

The students will get training in metal joining by welding, and will become familiar with the basic knowledge and acquire the necessary skills to develop in the world of welding.

CMAC 240 - Principles of Woodwork (2)

The student will learn the different types of furniture, mostly those that are made of wood; will gain the knowledge and apply basic math skills to measure, mark, and cut materials; and will acquire experience in the preparation of freehand sketches to interpret and satisfy the demand for the services that are requested in the workshop. They will make appropriate use of the particular tools and machinery of their trade and master the construction and assembly of the pieces that make up a piece of furniture. The student will also gain experience finishing laminate furniture, painting, mounting hardware, and mirrors. It requires 30 hours of laboratory.

CMAC 250 - Painting (2)

The student will acquire the knowledge and develop the skills to work with the techniques and effective use of paint to achieve harmony in construction.

CMAC 260 - Landscape Design (Landscaping) (2)

The course will train the student with the topics that provide the necessary basic and advanced skills to handle gardening and landscape design projects from the planning stage to the project operation stage. It requires 35 hours of laboratory.

CMAC 291 - Internship (6)

The students will apply the skills and competencies acquired in the areas that contain construction in a typical scenario of the construction industry.

CMED - Core Courses

CMED 110 - Basic Business Spanish (2)

Development and perfecting the basic oral and written

communication skills through enrichment of the lexicon. Application of the correct use of grammar and morph syntactic structures and the systematic practice of writing in page design of Internet.

CMED 120 - Basic Business English (2)

Development of skills related to writing techniques of business communications in English. Emphasis on the correct use of grammar structures.

CMED 130 - Basic Business Mathematics (2)

Development of skills related to the use of percents, decimals, fractions in the calculation of interests, averages, business calculations and interpretation of graphs. Practice in exercises making use of different types of calculators available in modern business offices.

CMED 140 - Computer Use and Administration (3)

Study of basic concepts in computer use and operation. Emphasis on knowledge of the keyboard, operating systems, word processors and spreadsheet. Requires time in a laboratory.

CMED 150 - Health and First Aid (2)

Knowledge of the basic concepts of growth and development of children focusing on the different types of diseases and situations that affect them from birth to the pre-school stage. Analysis of etiology, symptoms, diagnosis and treatment of the diverse diseases that afflict children. Evaluation of action plans, prevention topics and education on these diseases. Requires 60 hours of lab.

CMED 210 - Basic Skills in Spanish (2)

Development and perfecting the basic oral and written communication skills through enrichment of the lexicon. Application of the correct use of grammar and morph syntactic structures and the systematic practice of writing in page design of Internet.

CMED 220 - Basic Skills in English (2)

Development of skills related to writing techniques of business communications in English. Emphasis on the correct use of grammar structures.

CMED 230 - Mathematic Skills Applied to Business (2)

Study and application of the basic mathematical aspects applied to businesses. Practice in arithmetical operations, decimal, purchase and sale transactions, banking reconciliation, checking accounts, inventory, payroll, organization and presentation of statistical information.

CMED 250 - Principles of Management (3)

Study of the fundamental concepts and principles used in the planning and organization of a company. Study of the principles of authority, responsibility and delegation of administrative functions, emphasizing the procedures used when establishing hierarchy levels.

CMED 310 - Business Communication in Spanish (2)

Expression and organization of ideas with fluency and precision in oral and written communication by means of the enrichment of vocabulary, the correct use of grammar structures and the systematic practice of the written expression. Study of the correct writing of business documents.

CMED 320 - Business Communication Skills in English (2)

The principal aim of the course is to teach students how to communicate with conciseness and precision. To achieve this purpose they will review and analyze the fundamentals of grammar, sentence structure, punctuation, spelling and vocabulary building.

CMED 340 - Introduction to Data Processing (2)

Understanding of a current perception of the basic foundations of computers, adapted to data processing. Recognition of the physical components of computers and application programs. Review of the basic knowledge for the use of the operating system and the keyboard. Discussion of the terminology, equipment, the cycle to process written information, and the impact of computers in modern society. Requires 30 hours of lab.

CMED 350 - Human Relations (2)

Study of the basic principles, terminology and dynamics of human relations applied to the entrepreneurial and organizational environment. Study of communication methods, and emphasis on their role or function in the development of human relations.

CMED 360 - Development of Entrepreneurship (2)

Identification of the operation and management of a business for invoicing health services; with emphasis on the diverse managerial functions. Recognition of the policies, permits and regulations that govern businesses in Puerto Rico. Analysis of basic concepts in the planning, marketing and accounting for the development of a business plan and preparation for self-employment.

CMED 430 - Basic Skills in Mathematics (2)

Study of the basic concepts of arithmetic, such as simple operations of mathematics, decimals, percents, proportion and others.

CMED 520 - Technical English (2)

Technical English

CMED 650 - Security and Regulations (2)

Study of the basic aspects of legislation on security, regulations, the appropriate use of tools and their potential dangers. Study of current legislation on security in Puerto Rico to change the patterns of conduct in work for safer ones. Study of the ways to prevent accidents and how to proceed when they occur.

CMED 720 - Conversational English I (2)

Development of skills in the English language. Emphasis on the understanding of simple text, the development of vocabulary and the basic skills of communication through interaction, dictation, videos and other class activities. Requires additional time in an open laboratory.

CMED 730 - Technical Mathematics (3)

Study of mathematics applied to the technology and the fundamental concepts of trigonometry, the straight triangle, graphs, solution of trigonometric equations, oblique triangle and logarithms. Emphasis on the solving of numerical problems applied to technology, as well as the knowledge of algebra and geometry.

CMED 750 - Human Resources and Legal Aspects (3)

Study of the norms and basic practices related to personnel, giving emphasis on recruitment, selection, hiring and development of human resources. Discussion of the legal organization and the applicable regulations and laws.

CMED 821 - Conversational English II (3)

Development of skills of the English language in pronunciation, syntax and intonation through oral practice and laboratories assignments. Requires additional time in an open laboratory.

CMEM - Medical-Paramedical

Emergency Technician

CMEM 111 - PARAMEDICS ROLE AND RESPONSIBILITIES (3)

Study of the basic principles of Medical Emergencies techniques, the preparation of the medical file, its terminology, physical examination, as well as the procedures for evaluation and analysis of the patient. Emphasis on the function, responsibility and laws that regulate the practice and operation of the Medical Emergencies Technician in Puerto Rico and the United States.

CMEM 120 - RESPIRATORY SYSTEM EMERGENCIES (3)

By means of this course respiratory system emergencies are identified and how they are stabilized with the efficient administration of the treatment techniques. The specific anatomical structures that involve the normal respiratory function are presented, as well as the mechanism of breathing, evaluation and counseling of patients with respiratory problems, and the techniques to identify their emergency. Requires hours of workshop.

CMEM 130 - ANATOMY, PHYSIOLOGY AND EVALUATION OF PATIENTS (3)

Discussion of the importance of anatomy and the human physiology related to the paramedic profession. Includes, in addition, the therapeutic communication with patients and their families, preparation of the medical file, primary and secondary evaluation, as well as the final clinical decision taken regarding the patient. Requires hours of workshop.

CMEM 141 - GYNECOLOGICAL, OBSTETRIC, NEWBORN AND PEDIATRIC EMERGENCIES (3)

By means of this course anatomy and path-physiology are identified during pregnancy, as well as the factors associated with neonatal resuscitation and the functions of the medical emergencies system in the pediatric patient. Includes, in addition, the handling, treatment and complications of the pregnant patient, the newborn and pediatric child, with their different signs and symptoms. Requires hours of workshop.

CMEM 151 - HUMAN RELATIONS IN THE HEALTH FIELD (1)

Study and analysis of the basic principles of human relations applied to situations related to the health field. Includes the study of the public relations as a professional activity, the importance of leadership, control of the group

and communication in private or public scenarios in which patients are attended to.

CMEM 160 - Basic Foundations of Sign Language (1)

This course includes the basic skills of sign language so that there may be interaction with the persons that have hearing problems.

CMEM 210 - GENERAL PHARMACOLOGY, SHOCK AND FLUID THERAPY (4)

Discussion of the term drugs, identification of the four names of drugs; also discussion of the laws and the security agencies that regulate drugs and the matters pertinent to the paramedical profession. Study of the characteristics of the administration, the reaction and the interaction of drugs. The source of medicines is identified, correct use of pharmacology with the indications, contraindications, therapeutic use, side effects and dosage by conditions. Includes the aspects related to the concept of shock, the factors that cause this, early identification and pre-hospital treatment. Requires hours of workshop.

CMEM 220 - CARDIOVASCULAR SYSTEM EMERGENCIES (3)

Study of the risks factors and strategies of prevention associated with cardiovascular diseases. Description of the anatomy, physiology and function of the circulatory system, including its electrical and mechanical system. Study of path physiology and cardiovascular problems, dysrhythmia, cardiac arrest and basic elements related to techniques of monitoring and interpretation of electrocardiograms. Requires hours of workshop.

CMEM 231 - TRAUMA (3)

The different traumatic injuries that they can lead to death are described, and the different patterns of injuries and the knowledge of the physical laws of trauma are identified. Includes the study of specific injuries and their effects in patients with trauma caused by burns, car accidents and penetrating trauma. Requires hours of workshop.

CMEM 241 - OPERATION TECHNIQUES (2)

In this course the specialized equipment in rescue operations is studied and described, the necessary skills are applied during the rescue operation and the personal protective equipment used during the rescue operation is identified. In addition, the role of the paramedic within the rescue operation is recognized. Study of emergencies and the that involve dangerous materials, bioterrorism and arms of massive destruction. Study of the procedure for selecting victims (Triage) in situations that involve

multiple victims. Requires hours of workshop

CMEM 291 - INTERNSHIP IN MEDICAL EMERGENCIES (9)

Application of skills related to the professional field, learned in the classroom. Preparation of students of the Medical Emergencies program to confront any situation of medical emergency in the pre-hospital environment, by means of the adequate use of strategies, knowledge and mastery of the appropriate instrumentation within the different types of emergencies. This course requires a total of 405 hours of clinical practice. The students will not be able to begin their internship if they have not approved the courses of the first and second semesters. The internship course must be approved with minimum grade of B.

CMEM 311 - INTERNAL MEDICINE (3)

This course aims to enable students to recognize, identify and handle possible diseases of all the internal systems of the body that includes: diseases of the eyes, ears, nose and throat, respiratory diseases, neurological conditions, endocrinological conditions, disorders of the immunological system; infectious diseases and diseases of sexual transmission; gastrointestinal disorders, abdomen disorders, disorders of the genito-urinary and renal system; gynecology; hematology; muscle and skeletal disorders; environmental toxicology and environmental emergencies. Requires hours of workshop.

CMER - Health Services Invoicing Technician

CMER 110 - Medical Terminology (4)

Study of the roots, the prefixes and suffixes of essential terms, abbreviations and symbols established by the American Medical Association and used in allied health sciences. Application of the knowledge acquired by means of practice exercises.

CMER 130 - Health and Services Invoicing (4)

Study of the processes of invoicing health services for the medical plans in Puerto Rico. Knowledge of the complete cycle of the invoicing process in medical, dental or institutional offices. Study of the audit processes for claims submitted for payment.

CMER 140 - Health Services Offices Procedures (3)

Acquisition of the knowledge necessary to establish the administrative procedures according to the laws of privacy,

safety and the correct administration of the files and the medical information. Development of skills for the effective administration of a health service office.

CMER 210 - Procedures in Health Services Offices (3)

Study of the modern medical environment and the verbal and written communications of a health service office. Emphasis on the functions of administrative support such as: client services, procedures in the administration of the services of: mail, telephone, banking, and postal. Attention to the preparation of administrative documents, the use of technology and interpersonal relations.

CMER 220 - Administration and Control of Medical Records (3)

Study of the diverse filing systems that include alphabetical numerical and thematic, among others. Application of the principles of administration and document control in health service offices. Theories and concepts related to the operation of electronic systems in document administration. Identification of the content of medical files, their functions and management, controls and safety measures. Necessary documentation in accord with current regulations.

CMER 230 - Diagnoses and Procedures Codifications (4)

Study of the classification systems of diseases, diagnoses and procedures using the guides established by the health insurances.

CMER 240 - Medical Invoicing (3)

Study of the terms related to invoicing in medical plans, suppliers, coverage, etc. Processes of invoicing of the main public and private medical plans and in Medicare. Identification of the variations of invoicing procedures when they are applied to the different services: hospital, dental, laboratories, etc

Prerequisite: CMER 0230.

CMER 250 - Billing for Hospital and Dental Service (3)

The course trains the student to process claims for the services offered in the different areas of a hospital and in dental offices. The various rules and policies established by federal agencies and health insurance are discussed. The student learns to use the ICD-10 PCS, HCPCS manuals to codify institutional diagnoses and procedures, and the CDT for dental procedures. The course emphasizes the various services offered in a hospital and medical office and the claim process using the CMS 1450 (UB-04) bill and the ADA dental bill.

CMER 291 - Internship in Invoicing and Health Services (3)

Supervised practice in health service scenarios. Application of concepts to real situations related to the student's training program. Requires 90 hours of internship. Students will not be able to begin their internship if they have not approved the major courses of the first one and second semesters.

CMER 310 - Auditing and Legal Aspects (3)

Analysis of the administration of clinical files and invoicing, which are protected in the laws and current regulations, with the purpose of improving the quality of services to guarantee the rights and responsibilities of clients, as well as to detect fraud and abuse.

CMER 320 - Electronic Invoicing (3)

Development of the skills in the invoicing of doctor-hospital services in electronic form. Requires 60 hours of lab.

Prerequisite: CMER 0240.

CMTH - Massage Therapist**CMTH 110 - Anatomy and Physiology of the Human Body Systems (3)**

Learn the basic fundamentals of anatomy and physiology with clinical applications for massage therapists and other professionals dedicated to movement and body manipulation.

CMTH 120 - Clinical Pathology and Medical Terminology (3)

The student will learn the relation to the pathology of the human body and the terminology used in this field. The student will be certified in first aid and cardiopulmonary resuscitation (CPR), in the event that an emergency arises. As part of the course, the student will obtain the First Aid and CPR license.

CMTH 130 - History Fundamentals and Techniques of Swedish Massage (3)

Learn the history and fundamentals of therapeutic massage. Swedish massage is the best known massage in the Western world and very effective in relaxing and conditioning the muscles. It is based on active and passive hand movements, with calming, analgesic and relaxing purposes. These movements are always against the circulation, in order to stimulate circulation.

CMTH 140 - Oriental and Western Massage Techniques (3)

Learn about the various techniques of oriental and occidental massage, such as: acupressure, shiatsu and Thai massage.

CMTH 150 - Aromatherapy, Hydrotherapy and Reflexology (4)

Know and apply the different techniques of aromatherapy, hydrotherapy and reflexology. Aromatherapy is a particular branch of herbalism, which uses concentrated vegetable oils called essential oils. These oils are optimal for improving physical and mental health. Hydrotherapy emphasizes the use and application of water as a therapeutic agent, varying its shape and temperature. Likewise, reflexology is the application of pressure techniques on the hands and feet to impact another part of the body. This technique stimulates specific areas of the skin, of the mucous membranes, called reflex zones, which acts therapeutically on the organs and body functions associated with those via the reflex-nervous pathway and causes relaxation throughout the body.

CMTH 210 - Musculoskeletal Anatomy and Kinesiology (3)

Present and discuss the basic fundamentals of musculoskeletal anatomy and structural kinesiology with clinical applications for massage therapists and other professionals dedicated to movement and body manipulation.

CMTH 220 - Orthopedic, Sports and Special Populations Massage (3)

Orthopedic massage is a massage that reaches deep structures, located under the skin and subcutaneous cellular tissue, reaching muscles, tendons and injured ligaments. Sports massage is a massage to prepare the tissues for sports effort, keeping them in an optimal state, also covering the prevention of injuries both in training and in competition and their recovery. Expose the student to various massage techniques focused on special populations, including: pregnant women, people with physical disabilities, the elderly and children.

CMTH 230 - Clinical Massage: Deep Massage Therapy and Lymphatic Drainage (3)

Deep tissue massage is a technique that is designed to get into the connective tissue of the body. A variety of techniques are used to penetrate deep into the muscles in order to loosen them and release tension. Lymphatic drainage is a therapeutic technique of soft and painless

massage that aims to treat disorders of the lymphatic system. It is performed in order to drain or displace the lymph that for any pathological cause, which is stopped and promotes normal evacuation towards the venous stream.

CMTH 240 - Ethics and Business Development (3)

Emphasize the professional and legal responsibility of the massage therapist. Design the proposal for the development of a business.

CMTH 250 - Practicum (6)

Practice in a health establishment that offers relaxation treatments or systems (spa). Apply the concepts and knowledge acquired in previous courses. You will need to practice each massage technique. The student will be evaluated by the internship supervisor and by the certified massage therapist offering the internship course.

CNAT - Nail Technician and Brush-Stroke Art

CNAT 110 - Introduction to Nail Technique (3)

Discussion of the history of anatomy and distinctive features throughout history. Identify the elements of professional ethics, life skills and basic hygiene habits.

CNAT 120 - Art of Design and Caricature for Nails (3)

Recognize the basic knowledge to become a highly trained professional in the growing nail painting service industry. Practice the necessary skills of design and its elaboration. Demonstrate the techniques of different styles of nail coloring and preparing your own arts. It requires 60 hours of laboratory.

CNAT 130 - Manicure and Pedicure (3)

Study of the basic principles of the muscular and skeletal system of the arm, hands and feet to correctly perform the massages that accompany a good manicure and pedicure. Demonstrate basic professional manicure and pedicure and the correct use of instruments and materials, taking into account production time without neglecting safety and hygiene measures. It requires 60 hours of laboratory.

CNAT 140 - Nail Structure (3)

Discussion of the basic concepts of the structure and disorders that nails present, both aesthetic and organic. Identify the characteristics of a perfect structure with different types of materials. It requires 60 hours of laboratory.

CNAT 150 - Nail Techniques (3)

Development of application, arrangement and removal skills, as well as the maintenance of nail care. Apply the different forms of false nails, such as: gel, fiber silk, acrylic gel and organic resin. It requires 60 hours of laboratory.

CNAT 220 - Embossed 3D and 4D Nail Techniques (3)

Discuss the basic knowledge for the new innovative techniques, as well as the use of the appropriate equipment and material in the creation of embossed designs in 3D and 4D. Demonstrate the skills acquired in the art of 3D and 4D designs on different types of nails. It requires 60 hours of laboratory.

CNAT 230 - Contemporary Nail Trends (3)

Apply the basic concepts of contemporary trends and acquire the latest changes that have emerged in this highly competitive world. Discuss trends that are seasonal and change every year. It requires 60 hours of laboratory.

CNAT 291 - Nail Techniques Practice (6)

Apply the skills acquired in the real environment in a beauty salon. Demonstrate various nail techniques, in all areas of nail care, perform manicures and pedicures, as well as show off your artistic side by creating nail art.

CNCS - Specialist in Computerized Systems and Networks

CNCS 120 - Installation and Repair of Computerized Systems (3)

Inspection, identification and problem solving in computerized systems. Assembly, preventive maintenance, and repair of computerized equipment. Requires 60 hours of lab.

CNCS 130 - Installation of Programs and Operating Systems (3)

Understanding the concepts and operations of different operating systems. Installation of different application programs and operating systems. Mastery of the communication processes, synchronization, security and protection of the different programs and operating systems. Requires 30 hours of lab.

CNCS 140 - Installation and Maintenance of Networks (4)

Understanding the concepts of telecommunications, data communication and computer networks. Application of

protocols; operation, administration, installation, and maintenance of networks. Requires 60 hours of lab.

CNCS 150 - Design of Pages for Internet (3)

Mastery and implementation of the program Dreamweaver and Flash for the creation and design of pages for Internet. Understanding the different codifications when creating a webpage and identifying their strengths and limitations in the different navigators. Requires 30 hours of lab.

CNCS 210 - Mathematics for Computer (2)

Study of boolean algebra, the binary table of veracity, the numerical systems, octals, hexadecimals, their arithmetical operations, and applications in informatics. Also, the representation of symbolic characters by means of the ASCII code.

CNCS 220 - Introduction to Electronics (2)

Understanding of the principles and fundamental laws of electricity, electronic devices, their operation and general knowledge of the branches of electronics. Understanding of the constant changes in electronic technology. Requires 30 hours of lab.

CNCS 290 - Practice (5)

Practice of the skills and knowledge acquired during the study program, such as: the installation and repair of computerized systems. Application of the installation skills for programs and operating systems. Also, the installation, configuration and maintenance of communication networks. Students will not be able to begin their internship if they have not approved the first semester courses.

CNST - Network Security

CNST 210 - Hacking Techniques (4)

Hacking Techniques

CNST 220 - Introduction to Databases (4)

Introduction to Databases

CNST 230 - Principles of Network Auditing (4)

Principles of Network Auditing

CNST 240 - Introduction to Network Security (4)

Introduction to Network Security

CNUR - Practical Nursing

CNUR 120 - Introduction to Practical Nursing (2)

Discussion of the evolution of practical nursing, including the roles. Introduction to ethical-legal controversies and provisions of the Law HIPPA. Study of the skills needed for successful performance in the work place, including planning skills in daily life, study, use of technology, thought, reasoning, and problem solving, among others. Requires 15 hours of lab.

CNUR 160 - Scientific Foundation of Practical Nursing (2)

Study of the general aspects of the structure and function of the body using the system approach. Introduction to the basic concepts of microbiology, chemistry, cellular structure and transportation or circulatory mechanisms. Basic related terminology and a view of the disease processes.

CNUR 170 - Foundations of Practical Nursing (2)

Study of the principles of surgical medical nursing by means of nursing process. Application of theoretical principles of the nurse as a member of a health team. Theory and practice in dealing with patients with common health problems and the convalescent person. Requires 30 hours of clinical practice.

CNUR 180 - Foundations of Pharmacology for Nursing (3)

Study of the basic system for the classification of medicines. Principles of drug dynamics, administration techniques and terminology are discussed. Practice in the calculation of dosage by using basic mathematical principles, and in the preparation of several medicine classifications.

CNUR 185 - Basic Principles of Anatomy and Physiology (3)

Know the human body and the different levels of organization of the systems. Also, it includes the processes required for the maintenance of homeostasis.

CNUR 190 - Care of Patients with Emotional Disturbances (2)

Recognition of the patterns of conduct, case history, recent trends, therapies, ethical-legal implications, and community resources related to clients with emotional disturbances within the context of the nursing process and throughout the life cycle. Basic care of patients with emotional disturbances, in different scenarios. Requires 15

hours of clinical practice.

CNUR 240 - Human Development Throughout the Life Cycle (2)

Study of the concepts of growth and development throughout the life cycle. Theories of growth and development, including terms and definitions beginning with the principles of basic genetics. Emphasis on the stage of late adulthood.

CNUR 245 - Care of the Adult Patient with Medical Surgical Conditions (4)

Adquirir destrezas para intervenir con adultos que presentan patologías agudas y crónicas que requieren cuidado directo. Discutir la responsabilidad ética y legal en el cuidado del paciente. Desarrollar las destrezas de comunicación de manera que se pueda integrar a la familia en el cuidado del paciente en colaboración con el equipo de trabajo.

CNUR 250 - Care of the Adult with Acute Medical-Surgical Conditions (3)

Study of the nature, incidence, medical management, and nursing care of clients who experience a variety of chronic health problems. Theoretical concepts and clinical practice for the development of the appropriate role conduct, including assessment, communication, and technical skills needed to provide safe care of individuals experiencing chronic disease. Requires 30 hours of clinical practice.

CNUR 251 - Care of the Elderly Patient at Home and in Nursing Centers (3)

Develop skills to intervene with the elderly who present acute and chronic pathologies that require direct care. Discuss ethical and legal responsibility in patient care. Develop communication skills so that you can integrate the family in patient care in collaboration with the work team at home and in care centers.

CNUR 260 - Care of the Adult with Chronic Medical-Surgical Conditions (3)

Study of the nature, incidence, medical management and nursing care of clients who experience a variety of chronic health problems. Theoretical concepts and clinical practice for the development of the appropriate role conduct, including assessment, communication, and technical skills needed to provide safe care of individuals experiencing chronic disease. Requires 30 hours of clinical practice.

CNUR 291 - Practice in Practical Nursing (5)

Integrate knowledge, skills and attitudes in the selection of

strategies for solving problems in different work areas. It includes the demonstration of different interventions in safe and effective care to maintain and promote the health of patients.

CNUR 297 - Seminar in Practical Nursing (1)

Study of the transition from the role of student to that of employee. Introduction to the concept of basic supervision and the techniques of employee management, such as delegation, controversies related to personal development, writing of résumé and techniques in seeking employment. Strategies are discussed to face the board examination in order to practice in the practical nursing profession.

CNUR 340 - Mother and Newborn Child Care (3)

Study of the basic principles of prenatal, intra-partum and postpartum care of mothers and the newborn during the period of reproduction and rearing, and within the context of the nursing process. Intervention focused on care during the normal childbirth process and in severe situations that affect pregnancy, childbirth, and the newborn. Requires 15 hours of clinical practice.

CNUR 345 - Neonatal Maternal Care (2)

Know the neonatal maternal care; discuss anatomical, physiological, and pathological changes that affect the pregnancy process. Discuss care for women during the prenatal period, stages of labor, puerperium, and immediate care of the newborn.

CNUR 350 - Child Care (2)

Review of the stages of growth and development of children for assessment and the appropriate implementation of nursing care. Concepts of basic nursing intervention with children who have common health problems, including handicapped children.

CNUR 355 - Pediatric Care (2)

Discuss and describe the stages of growth and development from the neonatal stage through adolescence, also pediatric pathologies and direct care of the patient with these pathologies. Develop communication skills so that the family can be integrated into the care of the pediatric patient in collaboration with the work team.

CNUR 360 - Promotion of Health Throughout the Life Cycle (2)

Definition of the concept of well-being. Role of practical nursing in the promotion of health. Information related to the availability and access to health care: personal, cultural and environmental factors that affect health practices:

normal nutrition; and practices of health care recommended throughout the life cycle.

CPHA - Pharmacy Technician

CPHA 110 - Drug Therapy I (3)

Recognition of the effect of drugs or medicines in the organism. Analysis of the action mechanism, adverse effects and interactions. Presentation of the basic concepts of microbiology and the different microorganisms for human beings and animals. Description of the fundamental concepts of the structure and the functioning of the human body, as well as diseases or conditions associated with each system and their respective treatment and medicines by categories.

CPHA 111 - Basic Concepts of Chemistry (2)

Introduces basic chemistry in a theoretical and descriptive form with emphasis on inorganic chemistry.

CPHA 120 - Pharmacognosy (2)

The origin of drugs and their classification in accord with their chemical properties and uses. Recognition of the biological products and medicinal plants of Puerto Rico.

CPHA 130 - Pharmaceutical Mathematics (3)

Identification of the operations of pharmaceutical mathematics. Use of the calculations of rate and proportion, the metric systems in medical prescriptions, apothecary, avoirdupois, dilution, concentration, and intravenous solutions.

CPHA 150 - Theoretical Aspects of Pharmacy (2)

Study of the historical development of pharmacy from its beginnings to modern times. The function of the pharmacy technician. Study of the terminology of the profession. Analysis of the medical prescription and its parts, and the form in which medicines are presented.

CPHA 220 - Pharmacy Administration and Legal Aspects (2)

Study of the basic principles of administration, marketing and accounting needed to operate a pharmacy in Puerto Rico, as well as the laws, regulations and ethics that regulate the practice of the pharmacy profession in Puerto Rico, especially those that apply to the Pharmacy Technician.

CPHA 221 - Drug Therapy II (3)

Understanding the effect of drugs or medicines in the organism. Identification of the reaction, adverse effects

and interactions between drugs and the organism. Identification of the parts of the human body and their function as well as the diseases or conditions associated to each system with their respective treatment and medicines, by categories.

Prerequisite: CPHA 0110.

CPHA 230 - Pharmaceutical Chemistry (2)

Identification of the biochemistry and the processes by which the drugs act.

CPHA 240 - Dosage (2)

Identification of the different forms of dosage and the routes of medicines. Interpretation of the parts of a medical prescription and the abbreviations commonly used

Prerequisite: CPHA 0130.

CPHA 250 - Pharmaceutical Practices (3)

Use of the theoretical knowledge of pharmacy in the preparation of some medical formulas, in dispensing prescriptions and in pharmaceutical calculations. Requires 45 hours of workshop

CPHA 291 - Internship in Pharmacy Technician I (17)

Practice of the acquired basic skills in a typical scenario of a pharmacy in Puerto Rico, which is properly authorized by the Pharmacy Board, under the supervision of a licensed pharmacist. The beginning of the accumulation of the minimum of 1,000 hours required to take the Board Examination. Students will not be able to begin their internship if they have not approved the following major courses: CPHA 0130, CPHA 0220, CPHA 0110, CPHA 0221, and CPHA 0250. The internship must be approved with a minimum grade of B.

CPHA 292 - Internship in Pharmacy Technician II (17)

Refinement of the skills of the students' professional performance in a typical scenario of the practice of pharmacy in Puerto Rico, under the supervision of a licensed pharmacist and in a pharmacy properly authorized by the Pharmacy Board. Completion of the 1,000 hours required to take the board examination of the Pharmacy Board of Puerto Rico. The internship must be approved with a minimum grade of B.

CPHA 297 - Pharmacy Technician Seminar (1)

Analysis of topics and concepts that will be evaluated in the board examination for the Certification of Pharmacy Technician, as stipulated in the Table of Specifications provided by the Examining Board of Puerto Rico and Law

#247 of September 3 of 2004. Emphasis on the basic skills that students must master when they take the board examination. Performance of administrative exercises and concepts. Integration of the language of the core courses required for the training.

CPTR - Personal Trainer

CPTR 110 - First Aid and CPR (Lab) (1)

Study and application of the basic techniques of first aid. Topics include, basic anatomy, immediate treatment, assessment of the conscious or unconscious athlete, signs of heart attack, burns, open and closed injuries, skeletal-muscular injuries, poisoning and fractures for all type of persons. Students must take the examination for their certification in first aid and CPR. Requires 15 hours of lab.

CPTR 120 - Health Hazards and Assessment of Physical Conditions (2)

Analysis of the components of the physical fitness of the clients to prescribe exercises. Development of the skills needed to interview clients during the evaluation and advisement processes. Identification of clients who need medical authorization before beginning an exercise program.

CPTR 130 - Flexibility Training (2)

Knowledge of flexibility training, its benefits and the factors that affect it. Student exposure to programs of yoga, active and passive stretching exercises, warm-ups, and elasticity. Requires 30 hours of lab.

CPTR 140 - Training for Change of Lifestyle and Wellbeing (2)

Study to identify the fundamental concepts related to well-being, as well as the factors that affect health. Information related to the components of health, hypo-kinetic diseases, dealing with stress and healthful lifestyles.

CPTR 150 - Weightlifting Techniques (2)

Identification of weightlifting programs using free weights and machines. Information related to gaining strength, hypertrophy, muscular atrophy, resistance exercises, supervision of resistance exercises and the rule basic rules on exercise techniques. Study of the correct mechanics for joint movement. Requires 30 hours of lab.

CPTR 160 - Nutrition Applied to Sports (3)

Description of the power nutrients and their relationship to physical exercise. Study of the function of the essential groups of nutrients, the guides for a good diet, hydration

before, during and after exercise. Explanation of the concepts: Basal Metabolism, Metabolic Resistance, Calorimeter and assessment of nutrients.

CPTR 210 - Anatomy, Kinesiology and Biomechanics (3)

Study of the human body, analysis and observation of the mechanics of movement. Knowledge of the skeletal, muscular and nervous systems, and how these influence the movements of the joints and the leverage systems.

CPTR 220 - Concepts of Training and Cardiovascular Rehabilitation (2)

Study of the scientific concepts of cardiovascular training. Discussion of the concepts of Aerobic Glucolysis, De Krebs Cycle, prescription of exercises, variation and progression in training. Description and discussion of the different types of training and their benefits.

CPTR 230 - Prevention and rehabilitation of Muscle and Skeletal Injuries (1)

Study of the most frequent injuries associated with training programs. Knowledge of sport bandage. Description of muscular flexibility, identification of injuries, rehabilitation programs and how to refer clients so they receive medical assistance.

CPTR 240 - Training for Special Populations I (2)

Study of the basic physiological principles to design safe and effective exercise programs for people with metabolism problems such as: obesity, high blood pressure, diabetes, metabolic syndrome, and others. Includes identification and prevention.

CPTR 250 - Design of Programs for Strength Training (2)

Knowledge and description of training scheduling, micro-cycles, meso-cycles, macro-cycles, and super sets. Students have the opportunity to work with the training variables such as: sequence, muscular balance, load determination, intervals, sets, rest, recovery and frequency of the exercises. Requires 30 hours of lab.

CPTR 260 - Program of Alternate Exercises for Personal Training (2)

Provide knowledge to students of the different exercises that can be performed to increase muscular strength, cardiovascular resistance, agility, flexibility, balance, speed and explosiveness. Demonstrations of training with stretch bands, medical balls, balance training, and plyometric exercises.

CPTR 297 - Seminar for Trainers (1)

Provide students the opportunity to share the experiences they had with other students and professors. Evaluation of the professional impressions of each student with the purpose of improving the quality of the training programs.

CPTR 310 - Physiology of Exercise (3)

Study of the physiological changes, responses and adaptations that occur in the human organism as a result of physical activity. Knowledge of the concepts of: Biochemistry of muscular contraction, energy production systems, cardiovascular system and its function in sport performance applied to different individuals. Requires 60 hours of lab.

CPTR 320 - Training for Special Populations II (3)

Knowledge of the basic physiological principles to design safe and effective exercise programs for special populations such as: the elderly, children, people with joint conditions, lower back conditions, osteoporoses, pregnant women and persons with asthma.

CPTR 330 - Administration in Personal Training (3)

Knowledge on information related to administration of businesses, personnel supervision, safety, legal concepts and negligence. Design a proposal on the administration and organization of one's own business.

CPTR 340 - Administration in Personal Training (3)

Students will learn the knowledge and skills necessary for business administration, personnel supervision, security, legal concepts and negligence regarding personal training business. Students will design a proposal about the management and organization of a business.

CPTR 350 - Practice in Personal Trainer (4)

Provides students the opportunity to do their practice in a gymnasium. Application of the concepts and knowledge acquired in previous courses. Assessment of health hazards, physical condition, design of exercise programs, and their implementation during the training sessions. Students will be evaluated by the practice supervisor and the certified personal trainer where they perform the practice. Requires 100 hours of supervised internship. Students will not be able to begin their internship if they have not approved the major courses.

CRES - Respiratory Care Technician**CRES 110 - Human Biology (2)**

Study of the basic concepts of human biology and the natural sciences. Emphasis on the knowledge of vocabulary related to the health field.

CRES 130 - Foundations of Respiratory Care (2)

Study of the primary aspects of respiratory care: history, ethics, patient rights, responsibilities of the therapist, structure, function of the related professional associations, and procedures to obtain the license in Puerto Rico and Nationally (NBRC). The student will develop and apply the necessary skills for patient evaluation, the appropriate administration of oxygen, humidity and aerosol therapies.

CRES 210 - Microbiology and Control of Infections (2)

Knowledge and identification of the methodology and terminology related to the control of infections. Knowledge and documentation on the study guarantee of quality control in infections related to the health field.

Prerequisite: CRES 0110.

CRES 220 - Pharmacology of Respiratory Care (2)

Development of skills in the pharmacy field and their relation to respiratory care. Knowledge of nomenclature, indicators, contraindications and the side effects of drugs. Study of the different pharmacological modalities of treatment and handling of cardiopulmonary conditions. Development of the necessary knowledge for its application in dealing with patients. Emphasis on the methods of administration, dosage and frequency of drugs used to treat respiratory conditions.

Prerequisite: CRES 0320.

CRES 230 - Electrocardiography (EKG) (2)

Performance, reading and interpretation of electrocardiographic drawings. Preparation to recognize normal drawings, as well as the most common patterns of arrhythmias. Knowledge to be able to take and to be certified in the course of basic cardiopulmonary resuscitation and information of advanced courses of pediatric, neonatal and adult cardiac support. Requires 30 hours of lab.

CRES 240 - Tests of Pulmonary Function and Arterial Gases (3)

Study of the advanced aspects of respiratory care, specifically in the performance and interpretation of tests

of pulmonary and arterial gases, the acid-basic balance, calibration techniques, maintenance and quality control of the pulmonary function. Indications, techniques and interpretation of spirometry, DLCO, dilution of helium, nitrogen washing, flow graphs, volume and other specific tests. Requires 45 hours of lab.

CRES 291 - Internship in Respiratory Care (7.5)

Requires 225 hours of practice in the clinical area directed to intervention with real patients with regard to basic and advanced techniques of therapeutic procedures and diagnosis. Includes the basic and advanced handling of patient evaluation, oxygen therapy, humidity and other topics seen from the framework of the adult, pediatric and neonatal patient. Methods of administration, dosage and frequency of drugs used to treat respiratory conditions.

CRES 297 - Seminar in Respiratory Care (1)

Application of the basic concepts of the study program with practice exercises focused on the contents of the board examination to practice the respiratory therapy profession.

CRES 310 - Physics Applied to Health (2)

Study of the basic concepts of physics applied to health. Emphasis on the solution of formulas, derivations, interpretation of graphs, application and analysis of theorems related to the health field.

CRES 320 - Anatomy and Cardiopulmonary Physiology (2)

Study of the anatomy and physiology of the cardiopulmonary system, its identifying signs and the description of the functions of the organs of this system. Study of the defense and operating mechanisms of the respiratory system, sanguineous gas transfer and neurological control of breathing.

CRES 330 - Cardiopulmonary Pathophysiology (2)

Recognition of the signs, history, diagnosis, and treatment of the most common cardiopulmonary conditions. Development of recognition skills and therapeutic applications in different conditions. Emphasis on the comparison of acute pulmonary disease versus chronic ones, and restrictive problems versus obstructive problems.

CRES 340 - Diagnosis and Adult Advanced Cardiopulmonary Care (2)

Study of the existing techniques to perform the diagnosis of cardiopulmonary conditions. Analysis of the advanced diagnostic measures so that students can evaluate the

patients who are critically or medially ill. Knowledge based on the Manual of Advanced Cardiopulmonary Resuscitation of the American Heart Association, to assist students to recognize and take care of critical patients who require advanced measures of resuscitation in intensive care rooms, coronary rooms, multidisciplinary and emergency rooms. Foundations of the processing and care of artificial breathing routes. Emphasis on tracheal casing, tracheal care, nasotracheal and endotracheal suction, and quality control in this service.

Prerequisite: CRES 0240.

CRES 350 - Respiratory Care (5.5)

Integration of the basic and advanced techniques of hyperinflation therapy, its uses, indications, contraindications and dangers of the techniques of chest physical therapy (CPT) and administration of breathing routes. Emphasis on the proper handling of critically ill patients. Basic concepts and techniques of cardiopulmonary rehabilitation of hospitalized patients, as well as those confined to their home. Uses, indications, contraindications, dangers and administration of therapy with medical gases, humidity and aerosols in patients. Knowledge of the proper handling of central infection equipment and documentation of these therapeutic modalities. Includes 30 hours of class and 135 hours of practice.

CRES 410 - Neonatal and Pediatric Respiratory Care (3)

Study and application of pediatric and neonatal respiratory care, the normal development, as well as the physiological diseases of the newborn and the child. Includes the study of evaluation techniques and respiratory care treatment of the newborn and the child. Training in mechanical ventilation for this population. Requires 45 hours of lab.

CRES 420 - Mechanical Ventilation (3)

Study of the basic and advanced aspects of ventilation respiration. Emphasis on the aspects dealing with the beginning, monitoring and weaning of the patient on mechanical ventilation. Requires 60 hours of lab.

CRNE - Repair and Networks Technician

CRNE 150 - Programming Logic (3)

Knowledge of the basic concepts of programming. Study of the methods of logic to do algorithms. Design and development of program algorithms by means of flow

charts and pseudo-codes. Work with the binary numerical system and carry out operations of logic. Application of the techniques learned to the codification of any programming language. Requires 60 hours of lab.

CRNE 150 - Programming Logic (4)

Knowledge of the basic concepts of programming. Study of the methods of logic to do algorithms. Design and development of program algorithms by means of flow charts and pseudo-codes. Work with the binary numerical system and carry out operations of logic. Application of the techniques learned to the codification of any programming language. Requires 60 hours of lab.

CRNE 210 - Operating Systems (4)

Study of the theoretical concepts and functions of operating systems used in networks. Use of general operations by means of DCL. Description and use of the different resources of the existing operating systems. Requires 60 hours of lab.

CRNE 220 - Repair and Networks (4)

Learning to install and configure the physical components for a network. Solution of the most common problems in assembly, preventive maintenance and the repair of network equipment. Study of the basic concepts and preparation of the physical mechanisms for data transmission. Requires 60 hours of lab.

CRNE 230 - Practical Elements of Digital Forensics (3)

Practical Elements of Digital Forensics

CRNE 240 - Incident Response (3)

Incident Response

CRNE 250 - Auditing (3)

Auditing

CRNE 291 - Computer and Network Repair Practice I (3)

Computer and Network Repair Practice I

CRNE 292 - Computer and Network Repair Practice II (3)

Computer and Network Repair Practice II

CRNE 293 - Networks and Forensics Practice I (3)

Networks and Forensics Practice I

CRNE 294 - Networks and Forensics Practice II (3)

Networks and Forensics Practice II

CRNE 295 - Network Security Practice I (3)

Network Security Practice I

CRNE 296 - Network Security Practice II (3)

Network Security Practice II

CRNE 310 - Design and Network Management (3)

Identification of the basic functions needed to plan, organize, direct and control a computer network. Knowledge of the structure and procedures to evaluate and select the equipment and software necessary to implement a network. Requires 60 hours of lab.

CRNE 320 - Telecommunications and Network Security (4)

Study of the concepts of communications, classification, topology, design, implementation and safety of networks for data and communication architecture, including the model OSI. Study of communication protocol and distributed processing. Evaluation of network equipment and programs of high acceptance in the market. Requires 60 hours of lab.

CRNE 310 - Design and Network Management (5)

Identification of the basic functions needed to plan, organize, direct and control a computer network. Knowledge of the structure and procedures to evaluate and select the equipment and software necessary to implement a network. Requires 60 hours of lab.

CSAL - Sales Management Technician

CSAL 110 - Sales Workshop I (4)

Student will study the basics of marketing as a tool for sales. Student will learn the basics of the market and sales strategies including market segmentation and consumer behavior (individuals and organizations, among others).

CSAL 121 - Computer Software Applied to Business I (3)

You will use the computer in administrative business processes such as the use of word processing programs, Internet browsing, among others. It requires hours of laboratory.

CSAL 131 - Management Workshop I (4)

It will study the fundamental principles, concepts and theories of administration in accordance with the changes produced by the globalization of the economy.

CSAL 210 - Sales Workshop II (3)

It will design and apply sales skills, as well as design and evaluation of basic aspects of promotion and advertising. You will know and evaluate the basic aspects of promotion and advertising.

CSAL 210 - Computer Software Applied to Business II (3)

It will integrate the functions of different computerized programs to operate businesses, as well as create and maintain databases and electronic spreadsheets. You will use the computer to make presentations. It requires hours of laboratory.

CSAL 230 - Management Workshop II (3)

You will study the four functions of the managerial process, the importance of ethics in business, decision making, change management, the diversity of cultures, and information technology for the achievement of organizational goals and objectives.

CSAL 291 - Internship in Administration and Sales (6)

You will apply the skills acquired through the program of study. In addition, you will be required to complete 180 hours of supervised internship in work settings related to the world of business.

CSUR - Surgical Technician**CSUR 101 - Introduction to Anatomy and Physiology (3)**

Acquire theoretical knowledge about the structure and functioning of the human body. Study the organs and systems of the body in a structured and integrated way. Assess the normal function of all body systems and how the level of function can be determined. Identify conditions related to each system.

CSUR 111 - Occupational Foundations I (3)

Introduce the history and advances in surgery, the surgical environment, legal aspects, precautions and safety measures. It will emphasize the presentation and description of the instrument tray for minor surgery, basic surgery, laparotomy, sutures and injectable needles and materials for skin closure. Study pre-operative and post-

operative care and assistance.

CSUR 112 - Occupational Foundations II (3)

Study the surgical techniques and instrumentation used in different types of surgery in the Operating Room. The presentation, description and proper handling of the instrument tray of Obstetrics and Gynecology Surgery will be emphasized. In addition, other types of surgeries will be discussed and the difference between specialized surgical instruments in trays will be discussed. It requires 60 hours of laboratory.

Prerequisite: CSUR 0130, CSUR 0140, CSUR 0150 y CSUR 0116.

CSUR 115 - Occupational Principles of the Surgical Room (3)

Presents a general introduction on the important aspects that influence the profession of Surgical Technician. Evaluate the philosophical concepts, theory and conceptual models of care with a socio-cultural basis. Emphasize the aspects of administration and hospital organization.

CSUR 116 - Surgical Laboratory Room (3)

Apply the instructional component based on the practice and simulation of procedures that includes basic techniques of handling instruments, equipment and preparation of the operating room before, during and after a surgical procedure. It will integrate the exercises of application of safety, hygiene and health measures. Laboratory activities are focused on strengthening manipulative skills in the transport, preparation and handling of the instrument trays required by the medical team and surgery. It requires 60 laboratory hours.

Prerequisite: CSUR 0101, CSUR 0111, CSUR 0120 y CSUR 011.

CSUR 120 - Medical Emergencies and First Aid (3)

The student will learn the basics of the different techniques for diagnosing cardiopulmonary conditions. Advanced diagnostic measures will be studied and the student can evaluate the moderately and critically ill patient. Knowledge based on the Advanced Cardiopulmonary Resuscitation Manual of the American Heart Association will be offered, leading to training the student for the recognition and management of critical patients that require advanced resuscitation measures, both in intensive care rooms, coronary, multidisciplinary and of emergencies. In addition, the fundamentals in the management and care of artificial airways will be provided. Emphasis will be placed on tracheal intubation,

tracheostomy care, naso and orotracheal suction, and service quality control.

CSUR 130 - Disease Study (3)

Concepts study of health and disease, identification of the main disorders that affect the body's systems and their treatments. It will argue about the definitions, classifications and etiology of different diseases and the body's defense mechanisms to combat them.

Prerequisite: CSUR 0101, CSUR 0111, CSUR 0120 and CSUR 0115.

CSUR 140 - Pharmacology and Principles of Anesthesia (3)

Study the effect of drugs on the body, the mechanism of action and its adverse effects and interactions. Evaluate surgical pharmacology. Analyze the physiology of the central nervous system and anesthetic agents.

Prerequisite: CSUR 0101, CSUR 0111, CSUR 0120 y CSUR 0115.

CSUR 150 - Sterile Laboratory Instrumentation (3)

Evaluate the aseptic procedures used in hospital and medical institutions to sterilize medical products (surgical equipment, materials, and instruments). In the theoretical component (10 hours) the basic principles of medical-surgical asepsis, structure and functions of the Department of Sterile Supplies, regulation and the process of sterilization of medical products will be discussed. In the practical component (50 hours) of the laboratory, practical exercises will be carried out to demonstrate and apply the concepts and principles learned from the Surgical Instrument Sterilization Process.

Prerequisite: CUSR 0101, CSUR 0111, CSUR 0120 y CSUR 011.

CSUR 201 - Instrumentation Cardiovascular Surgery (3)

Analyze current medical and surgical disorders and treatments in Cardiology. Study the description and symptomatology of the most common heart diseases, pharmacological treatments, new types of surgery and the use of highly technological artifacts (robotics) to restore the function of the cardiovascular system. It will emphasize the presentation, description and handling of surgical instruments used in cardiovascular surgeries and pre-operative, intra-operative and post-operative assistance techniques. It requires laboratory hours.

Prerequisite: CSUR 0130, CSUR 0140, CSUR 0150 y

CSUR 011.

CSUR 202 - Instrumentation Surgery, Orthopedics and Instrumentation Surgery, Orthopedics and Traumatology (3)

Introduce theoretical knowledge and clinical skills to identify, describe and assist the medical team in medical-surgical treatments for most common diseases in Traumatology and Orthopedics. Emphasize the presentation, description and handling of surgical instruments used in the following surgeries: general, orthopedic, shoulder, elbow, hand, pelvis and hip, knee, foot and spine. Application of pre-operative, intra-operative and post-operative assistance techniques. It requires laboratory hours.

Prerequisite: CSUR 0210, CSUR 0112, CSUR 0201 y CSUR 0116.

CSUR 203 - Plastic Instrumentation and Reconstruction (3)

Plastic Instrumentation and Reconstruction

CSUR 210 - Introduction to Microbiology and Principles of Asepsis (3)

Introduce the basic concepts of microbiology, methodology, and terminology as it relates to infection control. Establish awareness of aseptic techniques to maintain infection quality control in the surgical area.

Prerequisite: CSUR 0101, CSUR 0111, CSUR 0120 y CSUR 0115.

CSUR 220 - Specialized Techniques: robotics, laparoscopy and laser (3)

Study the basic foundations and application methods of robotic technology in modern medicine and surgery. In addition, the following topics will be evaluated: endoscopy, Da Vinci robotic system, robotic surgery, laparoscopy, and laser. The course requires 60 hours of laboratory.

Prerequisite: CSUR 0210, CSUR 0112, CSUR 0201 y CSUR 0202.

CSUR 230 - Plastic and Reconstructive Instrumentation (3)

Introduction to the knowledge and clinical skills to assist the medical team in treatments and surgical of Plastic and Reconstructive Surgery. In addition, the presentation, description and handling of surgical instruments used in the following surgeries will be emphasized: Plastic Facial,

Corporal Aesthetics, Surgery in men and Reconstructive Surgery. Application of pre-operative, intra-operative and post-operative assistance techniques. It requires laboratory hours.

Prerequisite: CSUR 0130, CSUR 0140, CSUR 0150 y CSUR 0116.

CSUR 291 - Surgical Technician Internship (6)

Integration of concepts and theories that support the surgical technical process. Emphasis will be placed on the different tasks of sterilization and preparation of instruments for the different surgical procedures.

CTOU - Eco-touristic Guide

CTOU 110 - Foundations in Tourism (2)

Study of the basic concepts of tourism. Analysis of the importance of tourism in the economy of countries. Ability to describe the different perspective and options in the tourism industry.

CTOU 120 - Puerto Rican Historical Process (2)

Panoramic view of the historical processes in the development of Puerto Rican people. Includes social, cultural, political and economic topics.

CTOU 140 - Puerto Rican Personality and Culture (2)

Study of the origin and cultural characteristics of Puerto Ricans. Analysis of Puerto Rican customs and traditions developed throughout the centuries.

CTOU 220 - Geography and Eco-tourism (2)

Study of the different geographic elements and characteristics that characterize the Island: Puerto Rican topography, flora and fauna. Visits to tourist attractions, related directly or indirectly to the island's natural surroundings. Review of the list of natural and environmental resources of Puerto Rico. Analysis of the possibilities of the eco-touristic industry in Puerto Rico, within the framework of geographic conservationism.

CTOU 230 - Human Relations in Tourism (1)

Study of the basic principles and analysis of the dynamics of human relationships applied to situations associated with tourism. Study public relations as a professional activity, the importance of leadership, group dominance, and communication in the tourism industry.

CTOU 240 - Tourism in Puerto Rico (2)

Study of the historical and natural patrimony of touristic

interest as instruments of socio-cultural and economic development. Study and analysis of the main historical monuments, natural resources, popular arts, illustrious persons, and the folklore of the Island. Visits to the main tourist attractions. Application of the current laws on tourism.

CTOU 250 - Museology (1)

General vision of the principal museums of the world. Study of the exhibitions and collections of art work, historical objects or objects of interest in the buildings and museums of Puerto Rico.

CTOU 260 - Excursion Planning (2)

Knowledge on the planning and development of excursions. Training on how to guide, escort and plan excursions.

CTOU 291 - Internship in Tour Guide (9)

Completion of two hundred seventy (270) hours of learning experiences by means of a supervised practice in an authorized center. Critical analysis of events and situations in the framework of tourism work.

CTOU 310 - Administration of Small Businesses in Tourism (3)

Study of the principles of operating a business, by giving emphasis to the different functions of planning, organization and marketing. Study of the policies and regulations that govern one's own business.

CWEB - Computer Technician

CWEB 110 - Internet Page Creation (3)

Design, publication and use of pages for Internet. Emphasis on the characteristics, operation, similarities and differences between the different Internet navigators available on the market. Development of strategies for page design and study of existing pages in Internet. Requires 45 hours of lab.

CWEB 210 - Artistic Design (Photoshop) (3)

Interpretation and application of graphical designs in computers by means of modern programs, the manipulation of images together with the appropriate typography. By means of exercises and projects, the computer as a fundamental tool in visual and digital communication, as well as expressive elements of the design will be integrated. Proposals for solutions to pages created in class. Requires 45 hours of lab.

CWEB 220 - HTML Codification with CSS (3)

Study of the basic concepts of the language for the creation of pages in Internet, interpretation and application of the HTML language. Creation and organization of the different areas of codification. Identification and modification of a language already written to correct possible errors. Development of a page with the acquired knowledge. Requires 45 hours of lab.

CWEB 230 - Electronic Page Design (3)

Construction of electronic pages by means of programs or applications available in Internet. Emphasis on the analysis and diagnosis of solutions to comply with the exigencies in the creation of electronic pages. Requires 45 hours of lab

CWEB 240 - Internet Databases (3)

Application of basic concepts to create, edit, and design databases with the necessary elements in the design of pages in Internet. Analysis of the characteristics, operation and differences between the different database formats. Requires 45 hours of lab.

CWEB 297 - Seminar in Internet Page Design (3)

Study and investigation of outstanding topics in the area of page design where the skills and knowledge acquired during the training program are put into practice. Requires 45 hours of programming, creation of text, graphs and databases.

CWEB 310 - JAVA Script (3)

Study of the basic concepts the language JAVA for the design of pages for Internet. Experiment with and interpret applications of the language for the dynamic and interactive design in a WEB page. Requires 45 hours of lab.

CWEB 320 - Integration of Media (3)

Analysis of the theoretical and practical concepts on communications and integration of the media in WebPages. Study of the different formats and capacities of the media for a page. Evaluation of programs and applications that are used for the development of multimedia for their use in electronic pages. Requires 45 hours of lab.

CWEB 330 - Self-Employment and Internet Page Design (3)

Analysis, planning and organization of one's own business in Internet page design. Specification of the type of

marketing administration and the hiring of services. Study of the factors that contribute to the success of this kind of business.

CWSA - Water System Administrator**CWSA 130 - Document Management (3)**

It will introduce the various filing systems including alphabetic, numeric, and thematic, among others. It will apply the principles of management and control of documents in the offices of services of water systems.

CWSA 210 - Information Processing in Water Systems Management I (2)

Apply computer keyboard skills. You will develop basic skills. It will apply a text program in the production of documents in the area of administration of drinking water systems.

Prerequisite: CINF 0110 or CMED 0140.

CWSA 220 - Water Systems Management I (2)

Student will master administrative procedures and their application to drinking water systems. It will analyze the tasks and responsibilities of the manager of drinking water systems. In addition, it will discuss the different concepts such as communal water system, the role of the water system administrator, organizational structure of the private aqueduct, effective communication, effective time management, work organization, correspondence processing, and management of financial procedures.

CWSA 291 - Practicum in Water Systems Management I (4)

Student will experience hands-on practice in drinking water system management scenarios. Student will perform simple administrative tasks. 135 Hours of practice are required during Term.

CWSA 292 - Practicum in Water Systems Management II (4)

You will experience hands-on practice in drinking water system management scenarios. You will perform simple and complex administrative tasks.

Prerequisite: CWSA 0291.

CWSA 310 - Information Processing in the Administration of Water Systems II (2)

You will design and produce letterheads, bulletins,

announcements, announcements, loose sheets, invitations, and agendas with the use of computer application programs. It will enhance the artistic appearance and final appearance of documents that fulfill the function of disseminating important information while reducing office printing costs for water systems.

Prerequisite: CWSA 220.

CWSO - Water Systems Operator

CWSO 110 - Environmental Health (3)

You will study environmental health issues and their relationship to the production of safe drinking water and the protection of water supplies. It will relate to water contamination and the need for proper management of the resource as a protection barrier between human beings and water-borne diseases. It will link the external ecological universe, with its biological, physical and social components. In addition, the application of water treatment technologies in the adjustment and control of external factors that promote the health and well-being of mankind will be emphasized.

CWSO 120 - Introduction to Water Systems Regulations (3)

It will study the laws that apply to the management of water resources and the supply of drinking water. In addition, you will learn about environmental problems and legal limitations related to environmental issues and the production of safe drinking water.

CWSO 130 - Mathematics for Water Systems Operators (3)

You will study measurement systems, geometry (length, area, and volume), and operations with algebraic equations. It will emphasize applications in the environmental area that include ratios, proportions, and mathematical formulas.

Prerequisite: CMED 130.

CWSO 140 - Biology (3)

It will study living beings with an emphasis on man's relationship with them and their environment. It will use technology as the use of knowledge to improve the quality of life. It will identify functions and activities of living beings that depend on the environment and the quality of natural resources.

CWSO 210 - Physics (2)

You will know the fundamental principles of physics. It

will emphasize applications in the environmental area that include mathematical formulas to describe conditions, dynamics, and electricity.

Prerequisite: CWSO 0130.

CWSO 220 - Chemistry (2)

You will learn about the fundamental principles of chemistry. You will use applications in the environmental area that include nomenclature of chemical compounds, solutions, and chemical reactions.

Prerequisite: CWSO 0130.

CWSO 230 - Potable Water Treatment I (3)

It will study the technology to make water drinkable and treatment systems as a barrier for consumer protection against contamination. It will identify the functions and activities of the treatment that are established in relation to the conditions of the environment, the quality of natural resources and the participation of man in the contamination or conservation of natural waters as a supply for purification.

Prerequisite: CWSO 0130.

CWSO 231 - Water Treatment II (3)

It will study the technology to make water drinkable and treatment systems as a barrier for consumer protection against contamination. It will identify the functions and activities of the treatment that are established in relation to the conditions of the environment, the quality of natural resources and the participation of man in the contamination or conservation of natural waters as a supply for purification.

Prerequisite: CWSO 230.

CWSO 240 - Operation of Water Plants I (2)

It will study the operation and management of technology to make water drinkable: treatment, storage, distribution, costs, income and its control. In addition, it will relate to the operation requirements of drinking water systems for human consumption.

Prerequisite: CWSO 0130.

CWSO 291 - Water Systems Operator Practicum I (4.5)

Will perform one hundred thirty-five (135) hours of practical work in a water production system, such as the small private water systems in Puerto Rico, under the supervision of industry and Program personnel.

CWSO 292 - Water Systems Operator Practicum II (4.5)

Will perform one hundred thirty-five (135) hours of practical work in a water production system, such as the small private water systems in Puerto Rico, under the supervision of industry and Program personnel.

Prerequisite: CWSO 291.

CWSO 293 - Water Systems Operator Practicum III (3)

Will perform one hundred thirty-five (135) hours of practical work in a water production system, such as the small private water systems in Puerto Rico, under the supervision of industry and Program personnel.

Prerequisite: CWSO 292.

CWSO 297 - Water System Operator Seminar (3)

It will integrate the knowledge acquired through the oral and written presentation of a topic in the field of the operation of drinking water plants.

CWSO 320 - Water Plant Operation II (3)

The study of the purposes of operation and management of the technology to make water drinkable will continue: treatment, storage, distribution, costs, income and its control. In addition, it will deal with aspects related to the operation requirements of drinking water systems for human consumption.

Prerequisite: CWSO 2

