

# **INTER AMERICAN UNIVERSITY OF PUERTO RICO**

## **Technical and Vocational Certificate Programs Catalog**

**2018-2020**

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PO Box 363255,  
San Juan, Puerto Rico 00936-3255

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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.

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**A publication of the Vice-Presidency for Academic and Student Affairs**

## TABLE OF CONTENTS

<b>Study Program Codes of the Technical and Vocational Certificate Program .....</b>	<b>7</b>
<b>Board of Trustees .....</b>	<b>9</b>
<b>Principal Officers of the Technical and Vocational Certificate Program .....</b>	<b>11</b>
<b>General Information .....</b>	<b>12</b>
History of the University .....	12
Governance .....	12
Institutional Mission .....	12
Goals of the University .....	13
Religious Life Policy .....	13
Technical and Vocational Certificate Program .....	15
Vision of the Technical and Vocational Certificate Program .....	15
Mission of the Technical and Vocational Certificate Program .....	15
Goals of the Technical and Vocational Certificate Program .....	15
<b>Academic Information .....</b>	<b>16</b>
Admission to the Technical and Vocational Certificate Program .....	16
Provisional Admission .....	16
Provisional Admission to the Technical and Vocational Certificate Program .....	16
Admission to University Programs .....	16
Admission Procedures .....	17
Homeschooling .....	17
Admission of Special Students .....	17
Admission of Foreign Students .....	18
Admission of Transfer Students .....	18
Admission of Students from an Undergraduate Program .....	18
Readmission .....	18
Transfers within the University .....	18
<b>Norms and Services Related to the Office of the Registrar .....</b>	<b>19</b>
Services for Veterans .....	19
Academic-Administrative Calendars .....	19
Registration and Changes .....	19
Student Records .....	20
Student Academic and Personal Files .....	20
University Policy Regarding Students and Alumni Directory .....	20
Solomon-Pombo Act .....	21
Change of Address .....	22
Course Codification System .....	22
Declaration of Study Program .....	22
Academic Advisement .....	22
Student Course Load .....	23
Satisfactory Academic Progress (SAP) .....	23
Maximum Time Requirements for Federal Financial Aid .....	25
Class Attendance .....	25
Withdrawal of a Course from the Class Schedule .....	26
Repeating Courses .....	26
Withdrawal from the University .....	26
Grading System .....	26
Change of Grades Request .....	27
Administrative Action Symbols .....	27
Graduation Requirements .....	28
Application for Graduation .....	28
Graduation with Honors .....	28
Academic Excellence Award by Program .....	29

Student Leadership Award .....	29
Certificate Diplomas .....	29
<b>Student Financial Aid.....</b>	<b>30</b>
Federal Funds .....	30
Federal Pell Grant .....	30
Federal Supplemental Educational Opportunity Grant (FSEOG) .....	31
Perkins Federal Student Loan Program.....	31
Federal Direct Loans .....	31
Federal Work-Study Program .....	32
Commonwealth Funds .....	32
State Funds .....	32
Supplementary Educational Aid Program.....	32
Aid Program for Worthy Students .....	32
Scholarship Program for Specific Academic Areas.....	32
Institutional Scholarships.....	32
<b>Tuition, Fees and Other Charges .....</b>	<b>33</b>
Payments.....	33
Deferred Payment Arrangements.....	33
Other Types of Debts.....	33
Adjustments and Reimbursements.....	34
Institutional Policies and Procedures of Return of Funds for Students with Total Withdrawal .....	34
Return of Funds to Title IV Programs .....	34
Services for Veterans .....	34
<b>Activities and Other Student Services .....</b>	<b>35</b>
Student Activities .....	35
Religious Activities .....	35
Graduation Ceremony.....	35
Student Councils.....	36
Sports and Recreation.....	36
Parking Service and Traffic Rules on Campuses.....	36
Orientation Services .....	36
Services for Veterans and Vocational Rehabilitation .....	36
Information Access Center (Library).....	36
Audiovisual Center .....	37
Educational and Technological Services .....	37
Alumni Association .....	37
Publications .....	37
<b>Academic Norms of Compliance .....</b>	<b>38</b>
Credit-Hours .....	38
Course Offerings and Scheduling.....	38
Special Requirements of Practice and Internship Centers .....	38
Compliance with Requirements of Regulated Professions and Employment .....	38
Responsible Conduct in Research Projects.....	39
Institutional Review Board (IRB).....	39
Responsible Conduct in Research Projects (RCR) .....	39
Other Research Projects.....	39
Warning on Compliance with Copyright Laws and Regulations.....	39
Discontinuation of Academic Offerings .....	39
<b>Study Programs .....</b>	<b>40</b>
Administration of Information and Medical Plan Invoicing (CBIL - Code 800) .....	40
Barber Shop Technician (CBAR - Code 832) .....	40
Child Care Technician (CCHC - Code 048).....	41
Computer Operator (CCOP - Code 049) .....	42
Computer Repair Technician (CARM - Code 040).....	42
Computer Technician (CCOM - Code 811).....	43
Computer-assisted Draftsman (CDRA - Code 820) .....	44

Confectioner's Shop and Commercial Bakery Technician (CBAK - Code 829B).....	45
Cosmetology Technician (CCOS - Code 833).....	45
Culinary Arts Technician (CCOO - Code 844) .....	46
Eco-tourism Guide (CECT - Code 808B).....	47
Electricity with PLC Technician (CELE - Code 003) .....	47
Fashion Merchandising Technician (CFMA - Code 050) .....	48
Gerontology (CGRO - Code 818).....	49
Health Services Invoicing Technician (CMER - Code 045).....	50
Hotel Administration (CHMT - Code 819) .....	50
Integral Esthetics (CEST – Code 842).....	51
Invoicing and Collection Systems in Health Services Technician (CMER - Code 838).....	52
Laboratory Assistant (CLAB - Code 023).....	53
Medical-Paramedical Emergency Technician (CEME - Code 022).....	53
Personal Trainer (CPTR – Code 835).....	54
Pharmacy Technician (CPHA - Code 042B).....	55
Practical Nursing (CNUR - Code 817B) .....	56
Production of Artistic Events Technician (CPAE - Code 843).....	57
Repair and Networks Technician (CRNE - Code 839).....	57
Respiratory Care Technician (CRES - Code 826).....	58
Specialist in Computerized Systems and Networks (CNCS – Code 841) .....	59
Specialist in Technical Support of Networks and Systems (CNSS - Code 830) .....	60
Tour Guide (CTOU - Code 808).....	60
Webpage Design Technician (CWEB - Code 814) .....	61
<b>Course Descriptions.....</b>	<b>63</b>
Core Courses.....	63
<b>Description of Programs Courses .....</b>	<b>65</b>
Courses in Administration of Information and Medical Plan Invoicing (CBIL) .....	65
Courses in Barber Shop Technician (CBAR and CBEU) .....	66
Cursos de Child Care Technician (CCHC).....	67
Courses in Computer Operator (CCOP) .....	68
Courses in Computer Repair Technician (CARM).....	69
Courses in Computer Technician (CCOM) .....	70
Courses in Computer Assisted Draftsman (CDRA) .....	71
Cursos in Confectioner’s Shop and Commercial Bakery Technician (CBAK) .....	72
Courses in Cosmetology Technician (CCOS) .....	74
Courses in Culinary Arts Technician (CCOO).....	74
Courses in Eco-touristic Guide (CECT) .....	75
Courses in Electricity with PLC Technician (CELE) .....	76
Courses in Fashion Merchandising Technician (CFMA) .....	77
Courses in Gerontology (CGRO) .....	78
Courses in Invoicing and Collection Systems in Health Services (CMER) .....	79
Courses in Hotel Administration (CHMT) .....	80
Courses in Integral Esthetics (CEST).....	81
Courses in Laboratory Assistant (CLAB).....	82
Courses in Medical-Paramedical Emergency Technician (CMEM).....	83
Courses in Personal Trainer (CPTR) .....	84
Courses in Pharmacy Technician (CPHA) .....	86
Courses in Practical Nursing (CNUR).....	87
Courses in Production of Artistic Events Technician (CPAE) .....	89
Courses in Repair and Networks Technician (CRNE).....	90
Courses in Respiratory Care Technician (CRES) .....	91
Courses in Specialist in Computerized Systems and Networks (CNCS).....	92
Courses in Tour Guide (CTOU) .....	93
Courses in Specialist in Technical Support of Networks and Systems (CNSS) .....	94
Courses in Webpage Design Technician (CWEB) .....	95

## **Directory**

### **ACADEMIC UNITS**

#### **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**

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Bo. San Daniel, Sector Las Canelas  
Arecibo, Puerto Rico  
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Tel. (787) 878-5475  
<http://arecibo.inter.edu>

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Tel. (787) 857-3600  
<http://br.inter.edu>

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Bayamón, Puerto Rico 00957-6257  
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<http://bayamon.inter.edu>

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

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Carr. 744, Km 1.2  
Guayama, Puerto Rico  
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Guayama, Puerto Rico 00785-4004  
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<http://guayama.inter.edu>

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

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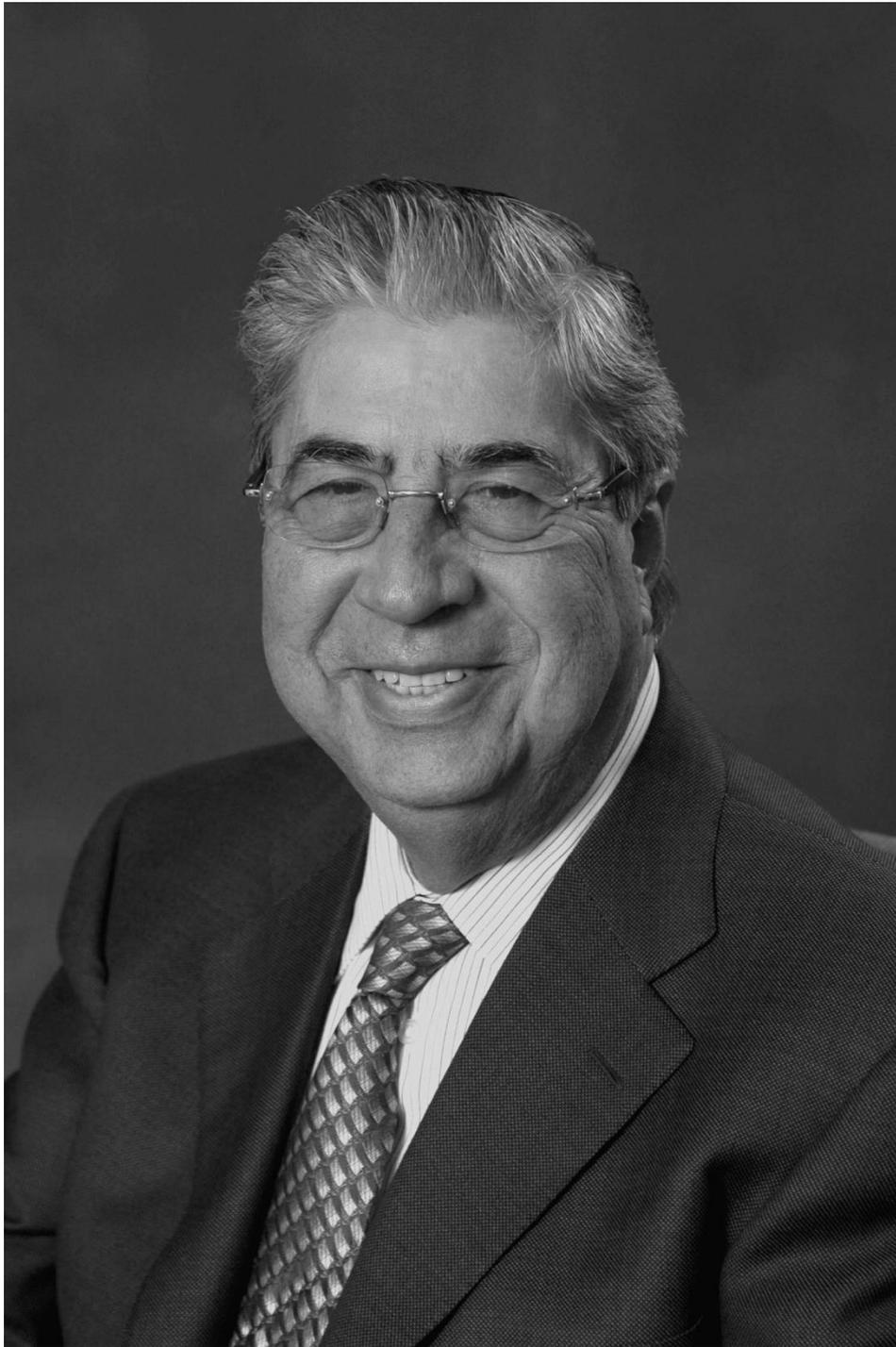
Inter American University  
104 Turpeaux Ind. Park  
Mercedita, Puerto Rico 00715-1602  
Tel. (787) 284-1912  
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Carretera #102  
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San Germán, Puerto Rico 00683-9801  
Tel. (787) 264-1912 <http://sg.inter.edu>

## Study Program Codes of the Technical and Vocational Certificate Program

	<i>Codes</i>
Administration of Information and Medical Plan Invoicing (CBIL) .....	800
Barber's Shop Technician (CBAR, CBEU).....	832
Child Care Technician (CCHC) .....	048
Computer Operator (CCOP).....	049
Computer Repair Technician (CARM) .....	040
Computer Technician (CCOM).....	811
Computer-assisted Draftsman (CDRA).....	820
Confectioner's Shop and Commercial Bakery Technician (CBAK).....	829B
Cosmetology Technician (CCOS).....	833
Culinary Arts Technician (CCOO).....	025
Ecotouristic Guide (CECT).....	808B
Electricity with PLC Technician (CELE) .....	003
Fashion Merchandising Technician (CFMA).....	050
Gerontology (CGRO) .....	818
Health Services Invoicing Technician (CMER).....	045
Hotel Administration (CHMT).....	819
Integral Esthetics (CCEST).....	835
Internet Page Design Technician (CWEB) .....	814
Invoicing and Collection Systems in Health Services Technician (CMER).....	838
Laboratory Assistant (CLAB) .....	023
Medical-Paramedical Emergency Technician (CEME).....	022
Personal Trainer (CPTR).....	835
Pharmacy Technician (CPHA).....	042B
Practical Nursing (CNUR) .....	817B
Production of Artistic Events Technician (CPAE).....	843
Repair and Networks Technician (CRNE) .....	839
Respiratory Care Technician (CRES) .....	826
Specialist in Computerized Systems and Networks (CNCS).....	841
Specialist in Technical Support and Networks (CNSS).....	830
Tour Guide (CTOU).....	808



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\*The Executive Director is not a Trustee of the Institution.



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## **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 persons 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 Council on Education of the Commonwealth of Puerto Rico approved by the Veterans Administration, and recognized by the Commonwealth's Department of Education, which certifies teachers for the public school system of Puerto Rico.

Inter American University is the largest private university in Puerto Rico. Enrollment, in recent years, has been maintained at approximately 43,000 students. At the present time, about 21 percent of all the Island's college students and 35 percent of the students who go to the Island's private colleges attend Inter American University.

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.

Taking into account 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 persons 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 are able to 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 presential 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.
7. Cultivar el liderazgo de la comunidad universitaria para que contribuya al enriquecimiento social y cultural de nuestro país y a su desarrollo económico, mediante la participación en proyectos comunitarios, empresariales y profesionales

## 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 look 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 an 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 in order 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 in order 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 of 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 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 of 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 document to meet the regulations of the relevant agencies.*

## **Provisional Admission**

### **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 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 submit an admissions application 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

A. Students of homeschooling may apply for admission to the University in two ways:

1. 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.
2. If certification is not available from the Department of Education of Puerto Rico, a parent or tutor of the student will present:
  - a. A sworn statement declaring that the student culminated his studies by homeschooling.
  - b. The 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.

B. 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.

C. 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 of the DEPR indicating the courses they must take will be required;
4. high school students authorized to take advanced courses as part from 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 submit an application 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 in 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.

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.

## **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

The University is approved for the training of students under the various GI Bill® programs. 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.

### 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 in 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. Student 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 Office of Basic Education of the Council of Education of Puerto Rico (CEPR).

## 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. The cost of each transcript is \$3.00.

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 are 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 of time 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, persons 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. In order 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 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:

- a. 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.
- b. 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.
- c. 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 particular 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 potentials 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)**

This institutional norm has been created in harmony with the Regulations of the Council of Education of Puerto Rico, the provisions of the federal law “Higher Education Act of 2008”, as amended, and in compliance with the eligibility requirements to participate in federal, state and institutional financial aid.

The norm has the purpose of establishing the academic norms and the evaluation criteria to determine the academic achievement of technical and vocational certificate programs students. In addition, it establishes the measures that will be taken when students do not achieve satisfactory academic progress to help them regain their progress towards the fulfillment of the requirements of their study program. The norm applies to all students registered in technical and vocational programs in the academic units of the university.

### **Requirements to achieve satisfactory academic progress: qualitative and quantitative components**

Inter American University of Puerto Rico requires that all students of the Technical and Vocational Certificate programs, demonstrate satisfactory academic progress while taking their study program. The University will measure the academic progress of the students upon completion of each academic term. For this, the number of approved credits, the academic index and the total number of credits of the study program will be considered. The University will notify students by means of letter or e-mail, their academic status and their eligibility to receive federal and state academic aid, as the case may be.

The requirements to achieve satisfactory academic progress are divided in two components: qualitative and quantitative.

#### **Qualitative Component**

1. To comply with this component, students must attain a minimum academic index of 1.80 during the first term of studies. Afterwards, student must approve the total number of credits of their study program with a minimum academic index of 2.00.

#### **Quantitative Component**

1. To comply with this component students must:
  - a. approve 66.67% of the credits attempted upon completion of the first academic term.
  - b. complete the requirements of the study program in 150% of the time (measured in credit hours) required by the program.

### ***First academic probation and financial aid warning***

1. All students who do not meet the required minimum of general average of 1.80, or do not approve the 66.67% of the attempted credits, upon completion of the first term of studies, will be classified in first academic probation. In case of receiving federal or state financial aid, they will be classified, in addition, as students with a Financial Aid warning. Under this status students maintain eligibility to receive federal and state financial aid during one term.
2. If, upon completion of the first academic probation period and the financial aid warning, students meeting the provisions stipulated in this document will be considered to be in compliance with the of satisfactory academic progress norm and will be so classified.
3. Student, who upon completion of the financial aid warning, do not attain the general academic index of 2.00, or who do not approve 66.67% of the attempted credits, will not be making satisfactory academic progress and will be suspended for the first time from the Certificate Program for one academic term. In addition, they will lose the eligibility to receive federal and state financial aid. This suspension may be appealed.

### ***Academic Agreement, appeal process of the first academic suspension and appeal process of the loss of financial aid eligibility***

1. All students suspended academically, must draw up, together with the Director of the Technical and Vocational Certificate Program and a Professional Adviser, an Academic Agreement that may have a maximum effective term of two (2) consecutive semesters.
2. Students interested in appealing the loss of their eligibility to receive financial aid, and the academic suspension must submit a completed Appeal Request to the dean of studies or the person the dean designates. The Appeal Request must be submitted together with the Academic Agreement.
3. If students decide not to appeal the loss of federal or state financial aid eligibility they will not receive this aid.
4. If students only appeal the academic suspension and this is considered favorably, they will be able to continue studies without federal and state financial aid, under a second academic probationary status.
5. Students must base their appeal on a meritorious cause to justify their request.
6. In each campus there will be an Appeals Committee named by the chancellor to evaluate the appeal requests that students present.
7. If the Committee concludes that the students will be able to attain satisfactory academic progress during the next academic term in which they registered, or will be able to reasonably fulfill the provisions of the Academic Agreement, their appeal will be approved, and they may be granted a second academic probation and financial aid probation, for the next academic term in which they register.
8. If, upon completion of the term under the *financial aid probationary period* and the *academic probationary period*, the students manage to attain satisfactory academic progress, the status or condition of probation will be removed (the academic one as well as the one of financial aid) and they will be considered in compliance with the academic progress norm.
9. If, upon completion of the term under the financial aid probationary period and the academic probationary period, students do not manage to attain satisfactory academic progress, but they have complied with the provisions stipulated in the Academic Agreement for that term, the students will maintain their second academic probation, as well as their eligibility to receive federal and state financial aid for the next term.

10. If, upon the completion of the term under the financial aid probationary period and the academic probationary period, the students do not manage to attain satisfactory academic progress and have not complied with the provisions of the Academic Agreement for this term, the students will be suspended for the second time.

### ***Second suspension***

1. If, upon completion of the time to fulfill the terms of the Academic Agreement, in their first academic probation, the students do not manage to attain satisfactory academic progress, they will be suspended academically during a period of one (1) academic year and they may not appeal this determination.
2. Once this suspension period is finished, students may request readmission, and if the dean of studies or his representative concludes that there is a possibility that the students may attain satisfactory academic progress, in the period of one (1) academic year, they may be re-admitted under the status of a third academic probation.
3. Being re-admitted under the status of a third academic probation does not imply that the students will be eligible to receive federal or state funds.
4. Students with a suspended status, who have not appealed and have completed the registration process for the next academic term (with payment), will be dropped with a 100% reimbursement.

## **Maximum Time Requirements for Federal Financial Aid**

The period of time 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 time period that does not exceed 150% of its duration in credit hours. The courses considered in this percentage are those required by the selected program. Students accumulate time for transferred credits.

### **Maximum Time for Study Benefits for Veterans and Beneficiaries**

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 study program as established in this Catalog and by applicable legislation and regulations.

## **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. Student 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 and Systemic Planning. 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 in regard to 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 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 or not 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 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 in 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 of 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 Internet by accessing [www.fafsa.ed.gov](http://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](http://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 of time 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 time 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 percent 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](http://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](http://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](http://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 economically disadvantaged students. The Financial Aid Office determines the eligibility of the student based on an analysis of economic need. The aid is granted to students who have not completed any bachelor 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 on the basis of 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 on the basis of 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 particular 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 make arrangements 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. 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:

<b>Term</b>	<b>Student Classification</b>	<b>Terms of Study (in percent)</b>
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**

### **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 meet 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 a 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 particular 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 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 maintains 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**

The University defines one (1) credit for an academic term, as indicated below:

1. 15 hours of presential contact and 30 hours of academic, course related activities, which the student carries out outside the classroom; or their equivalent in academic, online activities
2. 15 hours of presential contact in the integrated modality of lecture-lab and a minimum of 30 hours of academic, course related activities, which the student carries out outside the classroom; or their equivalent in academic, online activities
3. 30-45 hours in a presential or virtual, closed laboratory
4. 45-60 hours of supervised practice

## **Course Offerings and Scheduling**

This Catalog includes the courses that comprise the academic offerings authorized for Inter American University by the Council on Education of Puerto Rico. However, for reasons of enrollment, a course may not be offered in one campus, but offered in another. In this case, students have the option of taking it in 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 in order 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.

## **Responsible Conduct in Research Projects**

Any student registered in courses that require carrying out research projects or who works in a research project must comply with the laws, regulation and policies applicable to that activity. The student must take the training required by the Institution and by the applicable state and federal regulations, in harmony with the type of research project.

### **Institutional Review Board (IRB)**

The IRB is responsible for seeing to it that the University complies with the state and federal laws and regulations, as well as with the applicable institutional norms and procedures for the protection and rights of the human beings who participate in these projects.

Once a student completes the required training, and before beginning research activities with human beings, such as their identification, recruitment, or the acquisition of information about the participants, and before contacting them and requiring their participation in the project, the student must obtain the approval of the Institutional Review Board (IRB).

### **Responsible Conduct in Research Projects (RCR)**

Any student who works in research projects supported with external resources, or who collaborates as a research assistant to a professor in charge of a research project supported with external funds, must take the training related to responsible conduct in research required by the University and the applicable federal regulations. In addition, the student must provide evidence of having approved these trainings.

### **Other Research Projects**

Research projects that do not involve human beings must also present evidence of compliance with institutional norms and the applicable state and federal regulations.

## **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](http://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 Council on Education 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.

## Study 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 0160 and CBIL 0130 and/or CBIL 0230 (have approved one of the two).

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

#### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN ADMINISTRATION OF INFORMATION AND MEDICAL PLAN INVOICING

First Term			Hours*	Credits
CBIL	0120	Basic Medical Terminology	75	2
CBIL	0160	Invoicing of Medical Plans I	75	2
CBIL	0170	Codification of ICD 9CM Diagnosis	75	2
CBIL	0230	Codification of Out Patient Procedures with the CPT-4	75	2
CMED	0220	Basic Skills in English	75	2
CMED	0310	Business Communication in Spanish	75	2
CMED	0340	Introduction to Data Processing	75	2
<b>Sub-total</b>			<b>525*</b>	<b>14</b>
Second Term			Hours*	Credits
CBIL	0211	Invoicing of Medical Plans II	75	2
CBIL	0291	Internship in Administration of Information and Invoicing of Medical Plans	135	3
CBIL	0310	Auditing and Legal Concepts	75	2
CMED	0230	Mathematical Skills Applied to Businesses	75	2
CMED	0350	Human Relations	75	2
CMED	0360	Development of Entrepreneurship	75	2
<b>Sub-total</b>			<b>510*</b>	<b>13</b>
<b>Total</b>			<b>1,035</b>	<b>27</b>

\*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.

### 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 Bayamón, Ponce and San Germán campuses are authorized to offer this Program.

#### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN BARBER SHOP TECHNICIAN

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CBAR	0110	Introduction to Barber Shop	112.5	3
CBEU	0120	Conditioning of the Skin and Face Treatment for Men LAB	112.5	3
CBAR	0150	Hairdo Cortes, Styles, Makeup of Beard and Moustache I	112.5	3
CBAR	0250	Manicure and Nail Care for Men	112.5	3
CBEU	0140	Hair, its Damages and Conditioning	112.5	3
<b>Sub-total</b>			<b>562.5*</b>	<b>15</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CBAR	0260	Haircuts, Styles, Shaving of Beard and Moustache II	150	4
CBAR	0220	Chemical Processes and Color Techniques	150	4
CBEU	0320	Beauty Salon Administration	112.5	3
CBAR	0291	Barber Shop Practicum	225	5
<b>Sub-total</b>			<b>637.5*</b>	<b>16</b>
<b>Total</b>			<b>1,200</b>	<b>31</b>

\*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.

### Child Care Technician (CCHC - Code 048)

The certificate in Child Care Technician aims to train persons to be employed or for self employment in positions of child and infant care. It takes into account the physical, emotional, social, recreational the 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 0110, CCHC 0210 and CCHC 0296.

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

#### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN CHILD CARE TECHNICIAN

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CCHC	0110	Childhood Development	75	2
CCHC	0120	Literary Activities	75	2
CCHC	0130	Games for Children	75	2
CMED	0150	Health and First Aid	75	2
CMED	0210	Basic Skills in Spanish	75	2
CMED	0340	Introduction to Data Processing	75	2
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CCHC	0210	Baby and Infant Childcare	112.5	3
CCHC	0220	Crafts for Children	75	2
CCHC	0297	Seminar in Childcare	112.5	3
CCHC	0296	Early Intervention in Children with Special Needs	75	2
CMED	0350	Human Relations	75	2
<b>Sub-total</b>			<b>450*</b>	<b>12</b>

<b>Third Term</b>			<b>Hours*</b>	<b>Credits</b>
CCHC	0291	Internship in Childcare	270	6
CCHC	0310	Administration of Childcare Centers	75	2
CMED	0220	Basic Skills in English	75	2
CMED	0430	Basic Skills in Mathematics	75	2
<b>Sub-total</b>			<b>495*</b>	<b>12</b>
<b>Total</b>			<b>1,395</b>	<b>36</b>

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## 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 Aguadilla and Arecibo campuses are authorized to offer this Program.

### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN COMPUTER OPERATOR

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CCOP	0110	Application Programs in Microcomputers	112.5	3
CCOP	0120	Introduction to Computers	112.5	3
CCOP	0130	Microcomputer Keyboard	75	2
CMED	0320	Business Communication Skills in English	75	2
CMED	0230	Mathematical Skills Applied to Business	75	2
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CCOP	0210	Computer Programming	75	2
CCOP	0220	Physical and Operating Components of Computers	75	2
CCOP	0230	Database Administration	112.5	3
CCOP	0240	Telecommunications, Networks and Internet	75	2
CCOP	0297	Seminar in Computer Operator	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Total</b>			<b>900</b>	<b>24</b>

\*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.

## Computer Repair Technician (CARM - Code 040)

The technical certificate in Computer Repair Technician aims to develop a 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, Barranquitas and Ponce campuses are authorized to offer this Program.

**ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN COMPUTER REPAIR TECHNICIAN**

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CARM	0120	Introduction to Computers	75	2
CARM	0130	Introduction to Microprocessors	75	2
CARM	0140	Introduction to Operating Systems	112.5	3
CARM	0150	Mathematics Applied to Digital Electronics	75	2
CARM	0210	Introduction to Communication Networks	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CARM	0220	Small Business Administration	75	2
CARM	0230	Installation and Configuration of Operating Systems	75	2
CARM	0235	Data Administration and Retrieval	75	2
CARM	0240	Repair Techniques for PC Computers	112.5	3
CARM	0297	Computer Repair Seminar	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Total</b>			<b>900</b>	<b>24</b>

\*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.

**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 Fajardo and San Germán campuses are authorized to offer this Program.

**ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN COMPUTER TECHNICIAN**

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CCOM	0110	Computer Assembly, Repair and Maintenance	112.5	3
CMED	0110	Basic Business Spanish		
		or		
CMED	0210	Basic Skills in Spanish	75	2
CMED	0120	Basic Business English		
		or		
CMED	0220	Basic Skills in English	75	2
CMED	0130	Basic Business Mathematics		
		or		
CMED	0430	Basic Skills in Mathematics	75	2
CMED	0140	Computer Use and Administration	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>

<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CCOM	0220	Visual Basic	112.5	3
CCOM	0230	Applied Programs in Microcomputers I	112.5	3
CCOM	0240	Introduction to Networks	112.5	3
CWEB	0220	Codification HTML	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Third Term</b>			<b>Hours*</b>	<b>Credits</b>
CCOM	0291	Internship in Computers	135	3
CCOM	0310	Language C	112.5	3
CCOM	0331	Applied Programs in Microcomputers II	112.5	3
CWEB	0310	JAVA Script	112.5	3
<b>Sub-total</b>			<b>472.5*</b>	<b>12</b>
<b>Total</b>			<b>1,372.5</b>	<b>36</b>

\*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.

## Computer-assisted Draftsman (CDRA - Code 820)

The certificate in Computer-assisted Draftsman offers students training in the field of computer-assisted construction drawing. It aims to develop basic skills in the interpretation of ideas and designs through the use of technical and graphical language. Architectonic, plumbing, electrical, mechanical, civil and structural drawing projects will be delineated using as a tool the traditional manual system and the computer-assisted system. Upon completion of the program, students will have the academic requirements necessary to apply for the board examination required in Puerto Rico for the Draftsman profession.

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

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

### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN COMPUTER-ASSISTED DRAFTSMAN

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CDRA	0110	Introduction to Draft and Orthographic Views	75	2
CDRA	0120	Symbols, Laws and Regulations	75	2
CMED	0140	Computer Use and Administration	112.5	3
CMED	0210	Basic Skills in Spanish	75	2
CMED	0730	Technical Mathematics	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CDRA	0130	Sectional Views, Auxiliary and Construction Geometry	75	2
CDRA	0150	Distribution of Electricity, Plumbing and Details	75	2
CDRA	0160	Structural Drawing, Floor and Roof	75	2
CDRA	0180	CAD Applications (Autocad)	75	2
CDRA	0220	Architectonic Drawing	75	2
CMED	0220	Basic Skills in English	75	2
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Third Term</b>			<b>Hours*</b>	<b>Credits</b>
CDRA	0170	Accounts and Budget	75	2
CDRA	0181	CAD Applications (Autocad with TRI-D)	112.5	3
CDRA	0190	Civil Drawing and "As-Built" in Computers	112.5	3
CDRA	0210	Scale Model Design	112.5	3

CDRA	0297	Seminar in Computer-Assisted Draftsman	37.5	1
CDRA	0291	Internship in Computer-Assisted Draftsman	135	3
<b>Sub-total</b>			<b>585*</b>	<b>15</b>
<b>Total</b>			<b>1,485</b>	<b>39</b>

\*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.

## Confectioner's Shop and Commercial Bakery Technician (CBAK - Code 829B)

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, Metropolitan and Ponce campuses are authorized to offer this Program.

### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN CONFECTIONER'S SHOP AND COMMERCIAL BAKERY TECHNICIAN

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CBAK	0110	Bread Preparation I	112.5	3
CBAK	0111	Hygiene and Good Practices in Food Administration in the Confectioner's and Commercial Bakery	75	2
CBAK	0120	Basic Confectioner's Shop	112.5	3
CBAK	0130	Cake Preparation and Decoration	112.5	3
CMED	0230	Mathematical Skills Applied to Business	75	2
<b>Sub-total</b>			<b>487.5*</b>	<b>13</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CBAK	0210	Introduction to Business Administration	75	2
CBAK	0221	Bread Preparation II	112.5	3
CBAK	0231	Advanced Confectioner's Shop	112.5	3
CBAK	0240	Plated Desserts for Restaurants	112.5	3
CBAK	0291	Internship in Confectioner's and Commercial Bakery	225	5
<b>Sub-total</b>			<b>637.5*</b>	<b>16</b>
<b>Total</b>			<b>1,125</b>	<b>29</b>

\*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.

## 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, Bayamón, Ponce and San Germán and campuses are authorized to offer this Program.

#### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN COSMETOLOGY TECHNICIAN

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CBEU	0130	Principles of Esthetic Face with LAB	112.5	3
CBEU	0140	Hair, its Damages and Conditioning	112.5	3
CCOS	0110	Introduction to Cosmetology	112.5	3
CCOS	0210	Hairstyle Design for Women	112.5	3
CCOS	0240	Haircut Styles for Women	112.5	3
<b>Sub-total</b>			<b>562.5*</b>	<b>15</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CBEU	0220	Chemical Processes in the Hair	112.5	3
CBEU	0250	Color Techniques	112.5	3
CBEU	0320	Administration of Beauty Parlors	112.5	3
CCOS	0230	Make-up, Manicure and Pedicurist	112.5	3
CCOS	0291	Cosmetology Practicum	225	5
<b>Sub-total</b>			<b>675*</b>	<b>17</b>
<b>Total</b>			<b>1,237.5</b>	<b>32</b>

\*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.

### 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 and Ponce campuses are authorized to offer this Program.

#### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN CULINARY ARTS TECHNICIAN

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CCOO	0110	Food Services Hygiene, Health and Safety Practices	75	2
CCOO	0121	Meats, Poultry and Seafood Cuts	75	2
CCOO	0130	Breakfast, Soup, Sauce and Salad and Cereal Preparation	112.5	3
CCOO	0140	Menu Design and Preparation of Banquets (Buffets)	112.5	3
CCOO	0210	Puerto Rican Gastronomy	75	2
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CCOO	0150	Creole and International Plated Desserts	75	2
CCOO	0220	International Cuisine	75	2
CCOO	0291	Internship of Cuisine	225	5
CMED	0250	Principles of Management	112.5	3
<b>Sub-total</b>			<b>487.5*</b>	<b>12</b>

**Total** **937.5**      **24**

\*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.

## Eco-tourism Guide (CECT - Code 808B)

The technical certificate in Eco-tourism Guide aims to train students to be hired or to be self employed as guides in eco-tourism programs. This certificate aims to develop tour guides with the skills and qualities required by the tourism industry in Puerto Rico. Real experiences and external practice in diverse centers associated with tourism, and which welcome the development of eco-tourism, are included.

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

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

### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN ECO-TOURISTISM GUIDE

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CECT	0110	Foundation of Eco-tourism	75	2
CECT	0220	Geography and Tropical Ecosystems	75	2
CTOU	0110	Foundations in Tourism	75	2
CTOU	0140	Puerto Rican Personality and Culture	75	2
CTOU	0230	Human Relations in Tourism	37.5	1
CMED	0110	Basic Business Spanish or		
CMED	0210	Basic Skills in Spanish	75	2
CMED	0120	Basic Business English or		
CMED	0220	Basic Skills in English	75	2
<b>Sub-total</b>			<b>487.5*</b>	<b>13</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CECT	0240	Eco-tourism in Puerto Rico	37.5	1
CECT	0291	Internship of Ecotourism Guide	270	6
CTOU	0310	Administration of Small Businesses in the Eco-tourism	75	2
CMED	0310	Business Communication in Spanish	75	2
CMED	0720	Conversational English I	75	2
<b>Sub-total</b>			<b>532.5*</b>	<b>13</b>
<b>Total</b>			<b>1,020</b>	<b>26</b>

\*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.

## Electricity with PLC Technician (CELE - Code 003)

The certificate in Electricity with PLC Technician 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 San Germán Campus is authorized to offer this Program.

#### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN ELECTRICITY WITH PLC TECHNICIAN

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CELE	0110	Principles of Electricity	75	2
CMED	0140	Use and Administration of the Computer	112.5	3
CMED	0110	Basic Business Spanish		
		or		
CMED	0210	Basic Skills in Spanish	75	2
CMED	0120	Basic Business English		
		or		
CMED	0220	Basic Skills in English	75	2
CMED	0650	Security and Regulations	75	2
CMED	0730	Technical Mathematics	112.5	3
<b>Sub-total</b>			<b>525*</b>	<b>14</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CELE	0140	AC/DC Electricity	75	2
CELE	0150	Construction Electricity	75	2
CELE	0210	Magnetic and Motor Control Installation	75	2
CELE	0220	Lighting	75	2
CELE	0250	Principles of Electronics	75	2
CELE	0340	Introduction to Electrical Plans	75	2
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Third Term</b>			<b>Hours*</b>	<b>Credits</b>
CELE	0240	Fundamentals of Transformers	112.5	3
CELE	0291	Internship in Electricity with PLC	135	3
CELE	0297	Seminar of Electricity with PLC	37.5	1
CELE	0310	Electrical Appliances	75	2
CELE	0350	Programmable Logic Controllers PLC	112.5	3
<b>Sub-total</b>			<b>472.5*</b>	<b>12</b>
<b>Total</b>			<b>1,447.5</b>	<b>38</b>

\*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.

## Fashion Merchandising Technician (CFMA - Code 050)

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, its promotion and its importance in fashion merchandising. Use of research to integrate the fashion trends and their application in merchandising. Analysis of case studies and identification of opportunities of fashion merchandising.

The San Germán Campus is authorized to offer this Program.

ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN FASHION MERCHANDISING TECHNICIAN

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CFMA	0110	Introduction to the Fashion Industry	75	2
CFMA	0120	Introduction to Fashion Merchandising	75	2
CFMA	0130	Fashion Business Practices	75	2
CFMA	0140	Publicity and Promotion	75	2
CFMA	0150	Foundations of Textiles	75	2
CFMA	0160	Fashion Merchandising	75	2
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CFMA	0210	Product Development	75	2
CFMA	0230	Retail Management	75	2
CFMA	0240	Team Development Workshop	75	2
CARM	0220	Administration of Small Businesses	75	2
CMED	0130	Mathematical Commercial Basic	75	2
CFMA	0291	Internship in Fashions Merchandising	90	2
<b>Sub-total</b>			<b>465*</b>	<b>12</b>
<b>Total</b>			<b>915</b>	<b>24</b>

\*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.

## Gerontology (CGRO - Code 818)

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.

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

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

ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN GERONTOLOGY.

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CGRO	0100	Introduction to Gerontology	112.5	3
CGRO	0120	Institutional Care and Alternative Care	112.5	3
CGRO	0130	Primary Needs of the Elderly	112.5	3
CGRO	0140	Programs and Services for the Elderly	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CGRO	0230	Leisure, Free Time, Activities in the Elderly Stage	112.5	3
CGRO	0240	The Family and the Elderly	112.5	3
CGRO	0250	Assessment of the Elderly	112.5	3
CGRO	0291	Experience in the Gerontology Field	135	3
<b>Sub-total</b>			<b>472.5*</b>	<b>12</b>
<b>Total</b>			<b>922.5</b>	<b>24</b>

\*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.

## 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. Student 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, Bayamón, Fajardo, Guayama and San Germán campuses are authorized to offer this Program.

### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN HEALTH SERVICES INVOICING TECHNICIAN

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CMED	0110	Basic Business Spanish or		
CMED	0210	Basic Skills in Spanish	75	2
CMED	0120	Basic Business English	75	2
CMED	0130	Basic Business Mathematics	75	2
CMER	0110	Medical Terminology	112.5	3
CMER	0230	Diagnosis and Procedures Codification	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CMED	0140	Computer Use and Administration	112.5	3
CMER	0220	Administration and Control of the Medical Record	112.5	3
CMER	0240	Medical Invoicing	112.5	3
CMER	0310	Auditing and Legal Aspects	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Third Term</b>			<b>Hours*</b>	<b>Credits</b>
CACC	0110	Principles of Accounting	112.5	3
CMED	0210	Procedures in Service Bureaus of Health	112.5	3
CMER	0320	Electronic Invoicing	112.5	3
CMER	0291	Internship in Invoicing in Health Services	135	3
<b>Sub-total</b>			<b>472*</b>	<b>12</b>
<b>Total</b>			<b>1,372.5</b>	<b>36</b>

\*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.

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

#### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN HOTEL ADMINISTRATION

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CHMT	0110	Puerto Rican History and Culture	112.5	3
CHMT	0130	Foundations of the Hotel Industry	112.5	3
CMED	0110	Basic Business Spanish		
		or		
CMED	0210	Basic Skills in Spanish	75	2
CMED	0120	Basic Business English		
		or		
CMED	0220	Basic Skills in English	75	2
CMED	0130	Basic Business Mathematics		
		or		
CMED	0430	Basic Skills in Mathematics	75	2
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CACC	0110	Principles of Accounting	112.5	3
CMED	0140	Computer Use and Administration	112.5	3
CMED	0720	Conversational English I	112.5	3
CMED	0750	Human Resources and Legal Aspects	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Third Term</b>			<b>Hours*</b>	<b>Credits</b>
CHMT	0210	Reception and Reservations	112.5	3
CHMT	0220	Food and Beverage Management	112.5	3
CHMT	0230	Room and Conservation Management	112.5	3
CHMT	0291	Internship in Hotel Administration	90	2
CMED	0821	Conversational English II	112.5	3
<b>Sub-total</b>			<b>540</b>	<b>14</b>
<b>Total</b>			<b>1,440</b>	<b>38</b>

\*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.

## Integral Esthetics (CEST – Code 842)

This certificate prepares students in 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 minimum grade of C. Students will not be able to begin their internship if they have not approved the major courses.

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

ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN INTEGRAL ESTHETICS

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CEST	0110	Introduction to Esthetics	90	3
CEST	0120	Anatomy and Applied Physiology	90	3
CEST	0130	Foundations of Massage	90	3
CEST	0140	Hair Removal Techniques	90	3
CEST	0150	Professional Make-up	90	3
<b>Sub-total</b>			<b>450</b>	<b>15</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CEST	0210	Facial Treatments	150	5
CEST	0220	Body Treatments	150	5
CEST	0230	Aromatherapy and Environment Adjustment	90	3
CEST	0310	Practice	180	4
<b>Sub-total</b>			<b>570</b>	<b>17</b>
<b>Total</b>			<b>1,020</b>	<b>32</b>
			<b>1,230</b>	

\*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.

## 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.

ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN INVOICING AND COLLECTION SYSTEMS IN HEALTH SERVICES TECHNICIAN

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CADM	0220	Administration and Control of Medical Record	112.5	3
CMED	0340	Introduction to Data Processing	75	2
CMER	0110	Medical Terminology	112.5	3
CMER	0130	Health Services Invoicing	75	2
CMER	0140	Health Service Office Administration	75	2
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CMED	0130	Basic Business Mathematics	75	2
CMED	0120	Basic Business English	75	2
CMER	0230	Diagnoses and Procedures Codification	112.5	3
CMER	0320	Electronic Invoicing	112.5	3
CMER	0291	Internship in Invoicing in Health Services	135	3
<b>Sub-total</b>			<b>510*</b>	<b>13</b>
<b>Total</b>			<b>960</b>	<b>25</b>

\*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.

## 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 Arecibo Campus is authorized to offer this Program.

### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN LABORATORY ASSISTANT

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CLAB	0111	Basic Concepts of General Chemistry	112.5	3
CLAB	0121	Basic Concepts of Modern Biology	112.5	3
CMED	0140	Computer Use and Administration	112.5	3
CMED	0110	Basic Business Spanish		
		or		
CMED	0210	Basic Skills in Spanish	75	2
CMED	0130	Basic Business Mathematics		
		or		
CMED	0430	Basic Skills in Mathematics	75	2
<b>Sub-total</b>			<b>487.5*</b>	<b>13</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CLAB	0210	Basic Techniques of Chemical Analysis	112.5	3
CLAB	0220	Foundations of Industrial Microbiology	112.5	3
CLAB	0291	Internship in Laboratory Assistant	90	2
CLAB	0297	Seminar in Health and Occupational Security	75	2
CMED	0120	Basic Business English		
		or		
CMED	0220	Basic Skills in English	75	2
<b>Sub-total</b>			<b>465*</b>	<b>12</b>
<b>Total</b>			<b>952.5</b>	<b>25</b>

\*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.

## Medical-Paramedical Emergency Technician (CEME - Code 022)

The certificate in Medical-Paramedical Emergency Technician provides the opportunity for students to be trained in the technology phases of medical emergency including, but not limited to: communication, emergency medical care of patients, maintenance of the work team, emergency room techniques and procedures, handling and transportation of patients, knowledge on procedures used in obstetrics, and assistance in respiratory and cardiac emergencies Program content is designed to provide students the necessary competencies to apply for the board examination or certification as required in order to practice the profession in Puerto Rico.

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

**ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN MEDICAL-PARAMEDICAL EMERGENCY TECHNICIAN**

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CMEM	0111	Paramedics Role and Responsibilities	112.5	3
CMEM	0120	Respiratory System Emergencies	112.5	3
CMEM	0130	Patient Anatomy, Physiology and Evaluation	112.5	3
CMEM	0141	Gynecological, Obstetric, Newborn and Pediatric Emergencies	112.5	3
CMEM	0151	Human Relations in the Health Field	37.5	1
<b>Sub-total</b>			<b>487.5*</b>	<b>13</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CMEM	0160	Basic Foundations of Sign Language	37.5	1
CMEM	0210	General Pharmacology, Shock and Fluid Therapy	150	4
CMEM	0220	Cardiovascular System Emergencies	112.5	3
CMEM	0231	Trauma	112.5	3
CMEM	0241	Operation Techniques	75	2
<b>Sub-total</b>			<b>487.5*</b>	<b>13</b>
<b>Third Term</b>			<b>Hours*</b>	<b>Credits</b>
CMEM	0291	Internship in Medical Emergencies	405	9
CMEM	0311	Internal Medicine	112.5	3
<b>Sub-total</b>			<b>517.5*</b>	<b>12</b>
<b>Total</b>			<b>1,492.5</b>	<b>38</b>

\*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.

**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 Arecibo, Barranquitas, Bayamón, Fajardo, Metropolitan and Ponce campuses are authorized to offer this Program.

**ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN PERSONAL TRAINER**

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CPTR	0120	Health Hazards and Assessment of Physical Conditions	75	2
CPTR	0130	Flexibility Training	75	2
CPTR	0140	Training for Change of Lifestyle and Well-being	75	2
CPTR	0210	Anatomy, Kinesiology and Biomechanics	112.5	3
CPTR	0230	Prevention and Rehabilitation of Muscle and Skeletal Injuries	37.5	1

CPTR	0260	Program of Alternate Exercises for Personal Training	75	2
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CPTR	0110	First Aid and CPR (Lab)	37.5	1
CPTR	0150	Weightlifting Techniques	75	2
CPTR	0220	Concepts of Training and Cardiovascular Rehabilitation	75	2
CPTR	0240	Training for Special Populations I	75	2
CPTR	0250	Design of Programs for Strength Training	75	2
CPTR	0310	Physiology of Exercise	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Third Term</b>			<b>Hours*</b>	<b>Credits</b>
CPTR	0160	Nutrition Applied to Sports	112.5	3
CPTR	0297	Seminar for Trainers	37.5	1
CPTR	0320	Training for Special Populations II	112.5	3
CPTR	0340	Administration in Personal Training	112.5	3
CPTR	0350	Practice/Internship for Personal Trainer	100	2
<b>Sub-total</b>			<b>475*</b>	<b>12</b>
<b>Total</b>			<b>1,375</b>	<b>36</b>

\*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.

## 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 0130, CPHA 0110, CPHA 0221, CPHA 0220 and CPHA 0250.

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

### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN PHARMACY TECHNICIAN.

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CPHA	0110	Drug Therapy I	112.5	3
CPHA	0120	Pharmacognosy	75	2
CPHA	0130	Pharmaceutical Mathematics	112.5	3
CPHA	0150	Theoretical Aspects of Pharmacy	75	2
CMED	0340	Introduction to Data Processing	75	2
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>

CPHA	0220	Pharmacy Administration and Legal Aspects	75	2
CPHA	0221	Drug Therapy II	112.5	3
CPHA	0230	Pharmaceutical Chemistry	75	2
CPHA	0240	Dosage	75	2
CPHA	0250	Pharmaceutical Practices	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Third Term</b>			<b>Hours*</b>	<b>Credits</b>
CPHA	0291	Internship in Pharmacy Technician I	540	12
<b>Sub-total</b>			<b>540*</b>	<b>12</b>
<b>Fourth Term</b>			<b>Hours*</b>	<b>Credits</b>
CPHA	0292	Internship of Pharmacy Technician II	495	11
CPHA	0297	Pharmacy Technician Seminar	37.5	1
<b>Sub-total</b>			<b>532.5*</b>	<b>12</b>
<b>Total</b>			<b>1,972.5</b>	<b>48</b>

\*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 (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 Barranquitas campuses are authorized to offer this Program.

### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN PRACTICAL NURSING

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CNUR	0120	Introduction to Practical Nursing	75	2
CNUR	0160	Scientific Foundations of Practical Nursing	75	2
CNUR	0170	Foundations of Practical Nursing	75	2
CMED	0110	Basic Business Spanish		
		or		
CMED	0210	Basic Skills in Spanish	75	2
CMED	0120	Basic Business English		
		or		
CMED	0220	Basic Skills in English	75	2
CMED	0130	Basic Business Mathematics		
		or		
CMED	0430	Basic Skills in Mathematics	75	2
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CNUR	0180	Foundations of Pharmacology for Nursing	112.5	3
CNUR	0190	Care of Patients with Emotional Disturbances	75	2
CNUR	0240	Human Development throughout the Life Cycle	75	2

CNUR	0360	Promotion of Health throughout the Life Cycle	75	2
CMED	0140	Computer Use and Administration	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Third Term</b>			<b>Hours*</b>	<b>Credits</b>
CNUR	0250	Care of the Adult with Acute Medical-Surgical Conditions	112.5	3
CNUR	0260	Care of the Adult with Chronic Medical-Surgical Conditions	112.5	3
CNUR	0297	Seminar in Practical Nursing	37.5	1
CNUR	0340	Mother and Newborn Child Care	112.5	3
CNUR	0350	Child Care	75	2
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Total</b>			<b>1,350</b>	<b>36</b>

\*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.

## Production of Artistic Events Technician (CPAE - Code 843)

The certificate in Production of Artistic Events Technician aims to prepare students in the acquisition of general knowledge and skills to work in the support area for artistic presentations.

Students will develop skills that will benefit their entrance to the world of work in theaters, activity centers, coliseums and/or in any place where artistic acts are presented before an audience. The major courses must be approved with a minimum grade of C.

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

### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN PRODUCTION OF ARTISTIC EVENTS TECHNICIAN

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CPAE	0110	Representative Arts and their Events	112.5	3
CPAE	0120	Foundations of Set Design	112.5	3
CPAE	0130	Foundations of Illumination in Scenic and Theater Spaces	75	3
CPAE	0140	Sound as a Resource for the Arts	112.5	3
CPAE	0150	Construction of a Stage Scene	112.5	3
<b>Sub-total</b>			<b>525*</b>	<b>15</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CPAE	0210	Theater Illumination Assembly	112.5	3
CPAE	0220	Sound Assembly and Administration	112.5	3
CPAE	0230	Theater Set Assembly	112.5	3
CPAE	0240	The Technician in Aspects of Scene Direction	112.5	3
CPAE	0310	Practice	135	3
<b>Sub-total</b>			<b>585*</b>	<b>15</b>
<b>Total</b>			<b>1,110</b>	<b>30</b>

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## 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 in 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 in regard to 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.

#### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN REPAIR AND NETWORKS TECHNICIAN

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CADM	0231	Page Design I	112.5	3
CCOM	0110	Computer Assembly, Repair and Maintenance	112.5	3
CRNE	0150	Programming Logic	112.5	3
CMED	0140	Computer Use and Administration	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CRNE	0210	Operating Systems	112.5	3
CRNE	0220	Repair and Networks	112.5	3
CRNE	0310	Design and Network Management	112.5	3
CRNE	0320	Telecommunications and Network Security	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Total</b>			<b>900</b>	<b>24</b>

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## 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.

#### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN RESPIRATORY CARE TECHNICIAN

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CRES	0110	Human Biology	75	2
CRES	0130	Foundations of Respiratory Care	75	2
CPHA	0111	Basic Concepts of Chemistry	75	2
CMED	0110	Basic Business Spanish		
		or		
CMED	0210	Basic Skills in Spanish	75	2
CMED	0120	Basic Business English		
		or		
CMED	0220	Basic Skills in English	75	2
CMED	0130	Basic Business Mathematics		
		or		

CMED	0430	Basic Skills in Mathematics	75	2
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CRES	0210	Microbiology and Control of Infections	75	2
CRES	0320	Anatomy and Cardiopulmonary Physiology	75	2
CRES	0230	Electrocardiography (EKG)	75	2
CRES	0240	Tests of Pulmonary Function and Arterial Gases	112.5	3
CMED	0140	Computer Use and Administration	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Third Term</b>			<b>Hours*</b>	<b>Credits</b>
CRES	0310	Physics Applied to Health	75	2
CRES	0220	Pharmacology of Respiratory Care	75	2
CRES	0330	Cardiopulmonary Pathophysiology	75	2
CRES	0340	Diagnosis and Adult Advanced Cardiopulmonary Care	75	2
CRES	0350	Respiratory Care	165	4
<b>Sub-total</b>			<b>465*</b>	<b>12</b>
<b>Fourth Term</b>			<b>Hours*</b>	<b>Credits</b>
CRES	0291	Internship in Respiratory Care	225	5
CRES	0297	Seminar in Respiratory Care	37.5	1
CRES	0410	Neonatal and Pediatric Respiratory Care	112.5	3
CRES	0420	Mechanical Ventilation	112.5	3
<b>Sub-total</b>			<b>487.5*</b>	<b>12</b>
<b>Total</b>			<b>1,852.5</b>	<b>48</b>

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## Specialist in Computerized Systems and Networks (CNCS – Code 841)

The technical certificate in Specialist in Computerized Systems and Networks offers students a 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 minimum grade of C.

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

### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN SPECIALIST IN COMPUTERIZED SYSTEMS AND NETWORKS

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CARM	0120	Introduction to Computers	75	2
CNCS	0120	Installation and Repair of Computerized Systems	112.5	3
CNCS	0130	Installation of Programs and Operating Systems	75	2
CNCS	0140	Installation and Maintenance of Networks	112.5	3
CNCS	0150	Design of Pages for Internet	75	2
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Second Term</b>			<b>Hours</b>	<b>Credits</b>

CARM	0220	Small Business Administration	75	2
CCOM	0220	Visual Basic	112.5	3
CNCS	0210	Mathematical for Computers	75	2
CNCS	0220	Introduction to Electronics	75	2
CNCS	0290	Practice	135	3
<b>Sub-total</b>			<b>472.5*</b>	<b>12</b>
<b>Total</b>			<b>922.5</b>	<b>24</b>

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## Specialist in Technical Support of Networks and Systems (CNSS - Code 830)

The technical certificate of Specialist in Technical Support of Networks and Systems provides students the opportunity to train for employment in a technological area that is undergoing fast and constant changes, and to stay updated in technology. This certificate aims to prepare graduates to give aid to users that need it to solve problems that arise in relation to the use and administration of computers. Finally, it could be productive working in a company as an employee, with a contract for professional services or on one's own. The technical certificate of Specialist in Technical Support of Networks and Systems responds to the need to satisfy the demand for support services to the users who more and more are using computerized systems.

The Fajardo Campus is authorized to offer this Program.

### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE OF SPECIALIST IN TECHNICAL SUPPORT OF NETWORKS AND SYSTEMS

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CNSS	0110	Operating System Administrator Support I	112.5	3
CNSS	0120	Operating System Problem Diagnosis I	112.5	3
CCOM	0230	Applied Programs in Microcomputers I	112.5	3
CMED	0520	Technical English	75	2
CMED	0140	Computer Use and Administration	112.5	3
<b>Sub-total</b>			<b>525</b>	<b>14</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CNSS	0210	Operating System Operator Support II	112.5	3
CNSS	0220	Operating System Problem Diagnosis II	112.5	3
CARM	0140	Introduction to the Operating Systems	112.5	3
CARM	0150	Mathematics Applied to Digital Electronics	75	2
CCOM	0240	Telecommunications and Networks	112.5	3
<b>Sub-total</b>			<b>525</b>	<b>14</b>
<b>Total</b>			<b>1,050</b>	<b>28</b>

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## 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 Barranquitas Campus is authorized to offer this Program.

#### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN TOUR GUIDE

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CTOU	0110	Foundations in Tourism	75	2
CTOU	0120	Puerto Rican Historical Process	75	2
CTOU	0140	Puerto Rican Personality and Culture	75	2
CMED	0150	Health and First Aid	75	2
CMED	0110	Basic Business Spanish or		
CMED	0210	Basic Skills in Spanish	75	2
CMED	0120	Basic Business English or		
CMED	0220	Basic Skills in English	75	2
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CTOU	0220	Geography and Eco-tourism	75	2
CTOU	0240	Tourism in Puerto Rico	75	2
CTOU	0250	Museology	37.5	1
CTOU	0260	Excursion Planning	75	2
CMED	0350	Human Relations	75	2
CMED	0720	Conversational English I	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Third Term</b>			<b>Hours*</b>	<b>Credits</b>
CTOU	0291	Internship in Tour Guide	270	6
CTOU	0310	Administration of Small Businesses in Tourism	112.5	3
CMED	0821	Conversational English II	112.5	3
<b>Sub-total</b>			<b>495*</b>	<b>12</b>
<b>Total</b>			<b>1,395</b>	<b>24</b>

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### Webpage Design Technician (CWEB - Code 814)

The certificate in Webpage Design Technician offers students a 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 Barranquitas and Ponce campuses are authorized to offer this Program.

#### ACADEMIC REQUIREMENTS FOR THE CERTIFICATE IN WEBPAGE DESIGN TECHNICIAN

<b>First Term</b>			<b>Hours*</b>	<b>Credits</b>
CWEB	0210	Artistic Design (Photo Shop)	75	3
CMED	0110	Basic Commercial Spanish	75	2
CMED	0120	English Commercial Basic	75	2
CMED	0130	Mathematical Commercial Basic	112.5	2
CMED	0140	Use and Administration of the Computer	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Second Term</b>			<b>Hours*</b>	<b>Credits</b>
CWEB	0110	Internet Page Creation	112.5	3
CWEB	0220	Codification HTML	112.5	3
CWEB	0230	Electronic Page Design	112.5	3
CWEB	0240	Internet Databases	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Third Term</b>			<b>Hours*</b>	<b>Credits</b>
CWEB	0297	Seminar in Internet Page Design	112.5	3
CWEB	0310	JAVA Script	112.5	3
CWEB	0320	Integration of Media	112.5	3
CWEB	0330	Self-employment and Internet Page Design	112.5	3
<b>Sub-total</b>			<b>450*</b>	<b>12</b>
<b>Total</b>			<b>1,350</b>	<b>36</b>

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# Course Descriptions

## Core Courses

### **CMED 0110 BASIC BUSINESS SPANISH**

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.

2 credits

### **CMED 0120 BASIC BUSINESS ENGLISH**

Development of skills related to writing techniques of business communications in English. Emphasis on the correct use of grammar structures.

2 credits

### **CMED 0130 BASIC BUSINESS MATHEMATICS**

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.

2 credits

### **CMED 0140 COMPUTER USE Y ADMINISTRATION**

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.

3 credits

### **CMED 0150 HEALTH AND FIRST AID**

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.

2 credits

### **CMED 0210 BASIC SKILLS IN SPANISH**

Study of the basic concepts of Spanish, such as oral and written, communication, morphology, syntax and others.

2 credits

### **CMED 0220 BASIC SKILLS IN ENGLISH**

Study of the grammar structure of English sentences. Practice and development of skills of writing, reading and oral communication. Special attention to the pronunciation and writing of sentences.

2 credits

### **CMED 0230 MATHEMATICS SKILLS APPLIED TO BUSINESS**

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.

2 credits

### **CMED 0250 PRINCIPLES OF MANAGEMENT**

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.

3 credits

**CMED 0310 BUSINESS COMMUNICATION IN SPANISH**

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.

2 credits

**CMED 0320 BUSINESS COMMUNICATION SKILLS IN ENGLISH**

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.

2 credits

**CMED 0340 INTRODUCTION TO DATA PROCESSING**

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.

2 credits

**CMED 0350 HUMAN RELATIONS**

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.

2 credits

**CMED 0360 DEVELOPMENT OF ENTREPRENEURSHIP**

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.

2 credits

**CMED 0430 BASIC SKILLS IN MATHEMATICS**

Study of the basic concepts of arithmetic, such as simple operations of mathematics, decimals, percents, proportion and others.

2 credits

**CMED 0650 SECURITY AND REGULATIONS**

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.

3 credits

**CMED 0720 CONVERSATIONAL ENGLISH I**

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.

3 credits

**CMED 0730 TECHNICAL MATHEMATICS**

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.

3 credits

**CMED 0750 HUMAN RESOURCES AND LEGAL ASPECTS**

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.

3 credits

**CMED 0821 CONVERSATIONAL ENGLISH II**

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.

3 credits

## **Description of Programs Courses**

### **Courses in Administration of Information and Medical Plan Invoicing (CBIL)**

**CBIL 0120 BASIC MEDICAL TERMINOLOGY**

Study of medical terminology used by health service institutions. Identification and description of the clinical terminology by means of human anatomy and physiology. Emphasis on the etiology of the terms frequently used by professionals who work in health service institutions.

2 credits

**CBIL 0160 INVOICING OF MEDICAL PLANS I**

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.

2 credits

**CBIL 0170 CODIFICATION OF ICD-9CM DIAGNOSIS**

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.

2 credits

**CBIL 0211 INVOICING OF MEDICAL PLANS II**

Development of the invoicing skills of doctor-hospital services in an electronic manner. Requires 30 hours of lab. Prerequisite: CBIL 0160.

2 credits

**CBIL 0230 CODIFICATION OF OUTPATIENT PROCEDURES WITH CPT-4**

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 workshop.

2 credits

**CBIL 0291 INTERNSHIP IN ADMINISTRATION OF INFORMATION AND INVOICING OF MEDICAL PLANS**

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.

2 credits

#### **CBIL 0310 AUDITING AND LEGAL CONCEPTS**

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.

2 credits

### **Courses in Barber Shop Technician (CBAR and CBEU)**

#### **CBAR 0110 INTRODUCTION TO BARBER SHOP**

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.

3 credits

#### **CBAR 0150 HAIRCUTS, STYLES, SHAVING OF BEARD AND MOUSTACHE I**

Acquisition of knowledge and development of skills to perform basic techniques of cutting and design to 0 and 90 degrees. Study of the distribution of 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.

3 credits

#### **CBAR 0220 CHEMICAL PROCESSES AND COLOR TECHNIQUES**

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.

4 credits

#### **CBAR 0250 MANICURE AND NAIL CARE FOR MEN**

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, taking into account the time involved without neglecting hygiene and safety measures. Requires 60 hours of lab.

3 credits

#### **CBAR 0260 HAIRCUTS, STYLES, SHAVING OF BEARD AND MOUSTACHE II**

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.

4 credits

#### **CBAR 0291 BARBER SHOP PRACTICUM**

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.

5 credits

#### **CBEU 0120 CONDITIONING OF THE SKIN AND FACE TREATMENT FOR MEN - LAB**

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.

3 credits

#### **CBEU 0140 HAIR, ITS DAMAGES AND CONDITIONING**

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

3 credits

#### **CBEU 0320 BEAUTY SALON ADMINISTRATION**

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.

3 credits

### **Cursos de Child Care Technician (CCHC)**

#### **CCHC 0110 CHILDHOOD DEVELOPMENT**

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.

2 credits

#### **CCHC 0120 LITERARY ACTIVITIES**

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.

2 credits

#### **CCHC 0130 GAMES FOR CHILDREN**

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.

2 credits

#### **CCHC 0210 BABY AND INFANT CHILDCARE**

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 the 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.

3 credits

#### **CCHC 0220 CRAFTS FOR CHILDREN**

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.

2 credits

#### **CCHC 0291 INTERNSHIP IN CHILD CARE**

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 (275) hours of practice.

6 credits

**CCHC 0296 EARLY INTERVENTION IN CHILDREN WITH SPECIAL NEEDS**

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.

2 credits

**CCHC 0297 SEMINAR IN CHILDCARE**

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.

3 credits

**CCHC 0310 ADMINISTRATION OF CHILDCARE CENTERS**

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.

2 credits

**Courses in Computer Operator (CCOP)**

**CCOP 0110 APPLICATION PROGRAMS IN MICROCOMPUTERS**

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.

3 credits

**CCOP 0120 INTRODUCTION TO COMPUTERS**

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.

3 credits

**CCOP 0130 MICROCOMPUTER KEYBOARD**

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.

2 credits

**CCOP 0210 COMPUTER PROGRAMMING**

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.

2 credits

**CCOP 0220 PHYSICAL AND OPERATING COMPONENTS OF COMPUTERS**

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.

2 credits

**CCOP 0230 DATABASE ADMINISTRATION**

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.

3 credits

**CCOP 0240 TELECOMMUNICATIONS, NETWORKS AND INTERNET**

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.

2 credits

**CCOP 0297 SEMINAR IN COMPUTER OPERATOR**

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.

3 credits

**Courses in Computer Repair Technician (CARM)****CARM 0120 INTRODUCTION TO COMPUTERS**

Study of the basic computer fundamentals, and their role in today's society. 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. Requires 30 hours of lab.

2 credits

**CARM 0130 INTRODUCTION TO MICROPROCESSORS**

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.

2 credits

**CARM 0140 INTRODUCTION TO OPERATING SYSTEMS**

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.

3 credits

**CARM 0150 MATHEMATICS APPLIED TO DIGITAL ELECTRONICS**

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 for the information field. Presentation of symbolic characters by means of the use of the ASCII code.

2 credits

**CARM 0210 INTRODUCTION TO COMMUNICATIONS NETWORKS**

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.

3 credits

#### **CARM 0220 OF SMALL BUSINESS ADMINISTRATION**

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.

2 credits

#### **CARM 0230 INSTALLATION AND CONFIGURATION OF OPERATING SYSTEMS**

Installation of different operating systems and personal computer applications. Evaluation and diagnosis of problems related to the 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.

2 credits

#### **CARM 0235 DATA ADMINISTRATION AND RETRIEVAL**

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 virus 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.

2 credits

#### **CARM 0240 REPAIR TECHNIQUES FOR PC COMPUTERS**

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.

3 credits

#### **CARM 0297 COMPUTER REPAIR SEMINAR**

Practical experience in the classroom in the area of installation and diagnosis of operating systems and applications. 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 the area of Systems Analysis & Design of information systems. Use of students' knowledge and skills in the disassembly, assembly, diagnosis and repair of portable personal computers.

3 credits

### **Courses in Computer Technician (CCOM)**

#### **CCOM 0110 COMPUTER ASSEMBLY, REPAIR AND MAINTENANCE**

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

3 credits

#### **CCOM 0220 VISUAL BASIC**

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.

3 credits

#### **CCOM 0230 APPLIED PROGRAMS IN MICROCOMPUTERS I**

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.

3 credits

#### **CCOM 0240 INTRODUCTION TO NETWORKS**

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.

3 credits

#### **CCOM 0291 INTERNSHIP IN COMPUTERS**

Completion of a supervised experience of 135 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.

3 credits

#### **CCOM 0310 LANGUAGE C**

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

3 credits

#### **CCOM 0331 APPLIED PROGRAMS IN MICROCOMPUTERS II**

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.

3 credits

### **Courses in Computer Assisted Draftsman (CDRA)**

#### **CDRA 0110 INTRODUCTION TO DRAFT AND ORTHOGRAPHIC VIEWS**

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.

2 credits

#### **CDRA 0120 SYMBOLS, LAWS AND REGULATIONS**

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.

2 credits

#### **CDRA 0130 SECTIONAL VIEWS, AUXILIARY AND CONSTRUCTION GEOMETRY**

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.

2 credits

#### **CDRA 0150 DISTRIBUTION OF ELECTRICITY, PLUMBING AND DETAILS**

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.

2 credits

#### **CDRA 0160 STRUCTURAL DRAWING, FLOOR AND ROOF**

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.

2 credits

#### **CDRA 0170 ACCOUNTS AND BUDGET**

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.

2 credits

**CDRA 0180 CAD APPLICATIONS (Autocad)**

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.

2 credits

**CDRA 0181 CAD APPLICATION (AUTOCAD WITH TRI-D)**

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.

3 credits

**CDRA 0190 CIVIL DRAWING AND AS-BUILT IN COMPUTERS**

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.

3 credits

**CDRA 0210 SCALE DESIGN**

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.

3 credits

**CDRA 0220 ARCHITECTONIC DRAWING**

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.

2 credits

**CDRA 0291 INTERNSHIP IN COMPUTER-ASSISTED DRAFTSMAN**

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.

3 credits

**CDRA 0297 SEMINAR IN COMPUTER-ASSISTED DRAFTSMAN**

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

1 credit

**Cursos in Confectioner’s Shop and Commercial Bakery Technician (CBAK)**

**CBAK 0110 BREAD PREPARATION I**

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.

3 credits

**CBAK 0111 HYGIENE AND GOOD PRACTICES IN FOOD ADMINISTRATION IN THE CONFECTIONER'S AND COMMERCIAL BAKERY**

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.

2 credits

**CBAK 0120 BASIC CONFECTIONER SHOP**

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.

3 credits

**CBAK 0130 CAKE PREPARATION AND DECORATION**

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.

3 credits

**CBAK 0210 INTRODUCTION TO BUSINESS ADMINISTRATION**

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.

2 credits

**CBAK 0221 BREAD PREPARATION II**

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.

3 credits

**CBAK 0231 ADVANCED CONFECTIONER'S SHOP**

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 the conversion factor in recipes (RCF=N/O) in standardized recipes. Requires 60 hours of integrated laboratory. Prerequisite: CBAK 0120.

3 credits

**CBAK 0240 PLATED DESSERTS FOR RESTAURANTS**

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.

3 credits

**CBAK 0291 INTERNSHIP IN CONFECTIONER'S AND COMMERCIAL BAKERY**

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 225 hours. This internship course must be approved with minimum grade of B.

5 credits

## **Courses in Cosmetology Technician (CCOS)**

### **CCOS 0110 INTRODUCTION TO COSMETOLOGY**

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.

3 credits

### **CCOS 0210 HAIRSTYLE DESIGNS FOR WOMEN**

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.

3 credits

### **CCOS 0230 MAKE-UP, MANICURE AND PEDICURE**

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.

3 credits

### **CCOS 0240 HAIRCUT STYLES FOR WOMEN**

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.

3 credits

### **CCOS 0291 COSMETOLOGY PRACTICUM**

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.

5 credits

## **Courses in Culinary Arts Technician (CCOO)**

### **CCOO 0110 FOOD SERVICES HYGIENE, HEALTH AND SAFETY PRACTICES**

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.

2 credits

### **CCOO 0121 MEAT, POULTRY AND SEAFOOD CUTS**

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.

2 credits

#### **CCOO 0130 OF BREAKFAST, SOUP, SAUCE, SALAD AND CEREAL PREPARATION**

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.

3 credits

#### **CCOO 0140 MENU DESIGN AND PREPARATION OF BANQUETS (BUFFETS)**

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.

3 credits

#### **CCOO 0150 CREOLE AND INTERNATIONAL PLATED DESSERTS**

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.

2 credits

#### **CCOO 0210 PUERTO RICAN GASTRONOMY**

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.

2 credits

#### **CCOO 0220 INTERNATIONAL CUISINE**

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.

2 credits

#### **CCOO 0291 INTERNSHIP IN CUISINE**

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.

5 credits

### **Courses in Eco-touristic Guide (CECT)**

#### **CECT 0110 FOUNDATIONS OF ECO-TOURISM**

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.

2 credits

#### **CECT 0220 GEOGRAPHY AND TROPICAL ECOSYSTEMS**

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.

2 credits

#### **CECT 0291 INTERNSHIP IN ECOTOURISM GUIDE**

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.

6 credits

## **Courses in Electricity with PLC Technician (CELE)**

### **CELE 0110 PRINCIPLES OF ELECTRICITY**

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.

2 credits

### **CELE 0140 AC/DC ELECTRICITY**

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.

2 credits

### **CELE 0150 CONSTRUCTION ELECTRICITY**

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.

2 credits

### **CELE 0210 OF MAGNETIC AND MOTOR CONTROL INSTALLATION**

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.

2 credits

### **CELE 0220 LIGHTING**

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.

2 credits

### **CELE 0240 FUNDAMENTALS OF TRANSFORMERS**

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.

3 credits

### **CELE 0250 PRINCIPLES OF ELECTRONICS**

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.

2 credits

**CELE 0291 INTERNSHIP IN ELECTRICITY WITH PLC**

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.

3 credits

**ELE 0297 SEMINAR IN ELECTRICITY WITH PLC**

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

1 credit

**CELE 0310 ELECTRICAL APPLIANCES**

Acquisition of practical and theoretical knowledge of the basic operating systems of the different equipment found in the work of the electrician, which are fundamental for understanding much more complex industrial systems. Requires 30 hours of workshop.

2 credits

**CELE 0340 INTRODUCTION TO ELECTRICAL PLANS**

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.

2 credits

**CELE 0350 PROGRAMMABLE LOGIC CONTROLLERS PLC**

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.

3 credits

**Courses in Fashion Merchandising Technician (CFMA)****CFMA 0110 INTRODUCTION TO THE FASHION INDUSTRY**

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.

2 credits

**CFMA 0120 INTRODUCTION TO FASHION MERCHANDISING**

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.

2 credits

**CFMA 0130 FASHION BUSINESS PRACTICES**

This course includes an introduction to the fashion business environment. The structures, finances, management, organization and ethical responsibilities of the fashion related companies will be examined. They will be emphasized from a global and interactive point of view. Students will visit a clothing factory to study the creation process of a clothing item.

2 credits

**CFMA 0150 FOUNDATIONS OF TEXTILES**

The course studies the nature of the different types of textiles, both natural and man-made. Analysis of the origin of fibers, types of finishing and chemical processes until they reach their final use. By using tests, students should learn to distinguish the different types of fabric. Visits to fabric stores will be made so that the students may see the different types, close up, and will create a fabric sample book.

2 credits

#### **CFMA 0160 FASHION MERCHANDISING**

Fashion Merchandising is the union of the fashion with the businesses. This course deals with the merchandising of the fashion in retail stores, as well as in boutiques and wholesale stores. It is the connection in the cycle of the fashion from the prediction or anticipation of what the consumer is interested in buying. Beyond studying the fashion, the merchandising of this concentrates in the development of the vision of businesses together with the strategies and techniques to merchandise a fashionable product. Students will visit a store that sells a single brand and will make an analysis of this to learn of its strengths and weaknesses.

2 credits

#### **CFMA 0210 PRODUCT DEVELOPMENT**

The development of new products and innovation are key elements for the success of an organization. This course studies the relationship between the creativity, the merchandising, and the technical requirements at the moment of creating a product. The justification for the creation, competitive advantages and methods of funding are some of the topics studied. Students will visit stores to make a comparative study of a product.

2 credits

#### **CFMA 0230 RETAIL MANAGEMENT**

The success of retailers depends, in addition to the products or services they sell, on the administration of their work team, on the part of the manager. In this course the operational segments in retail sales, as well as the contribution of employees in the productivity in sales and in client satisfaction are studied. Evaluation of new technologies and the impact of these at the moment of the sale. Students will visit a department store to analyze its current situation and create a sales plan for it.

2 credits

#### **CFMA 0240 TEAM DEVELOPMENT WORKSHOP**

Group activities and workshops will help the student to learn the management skills necessary to be successful in the global labor environment. Communication skills, teamwork and process management will be put into practice. Students will design, outside of class, a teamwork session using a project administration tool on line, teamwork.net.

2 credits

#### **CFMA 0291 INTERNSHIP IN FASHION MERCHANDISING**

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.

2 credits

### **Courses in Gerontology (CGRO)**

#### **CGRO 0100 INTRODUCTION TO GERONTOLOGY**

Study of the field of Gerontology, including demographic trends and the process of aging from the biological, psychological and sociological points of view. Study of the aging process from a bio-psychosocial perspective. Study and analysis of the theories and changes in individuals as they age. Discussion of myths of elderliness, senility, sexuality, adjustments, learning, memory and personality.

3 credits

**CGRO 0120 INSTITUTIONAL CARE AND ALTERNATIVE CARE**

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.

3 credits

**CGRO 0130 PRIMARY NEEDS OF THE ELDERLY**

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.

3 credits

**CGRO 0140 PROGRAMS AND SERVICES FOR THE ELDERLY**

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.

3 credits

**CGRO 0230 LEISURE, FREE TIME, ACTIVITIES IN THE ELDERLY STAGE**

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.

3 credits

**CGRO 0240 THE FAMILY AND THE ELDERLY**

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.

3 credits

**CGRO 0250 ASSESSMENT OF THE ELDERLY**

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.

3 credits

**CGRO 0291 EXPERIENCE IN THE GERONTOLOGY FIELD**

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 135 hours of practice.

3 credits

**Courses in Invoicing and Collection Systems in Health Services (CMER)****CMER 0110 MEDICAL TERMINOLOGY**

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.

3 credits

**CMER 0130 HEALTH SERVICES INVOICING**

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.

2 credits

**CMER 0140 HEALTH SERVICE OFFICE ADMINISTRATION**

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.

2 credits

**CMER 0210 HEALTH SERVICE OFFICES PROCEDURES**

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.

3 credits

**CMER 0220 ADMINISTRATION AND CONTROL OF MEDICAL RECORDS**

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.

3 credits

**CMER 0230 DIAGNOSES AND PROCEDURES CODIFICATION**

Study of the classification systems of diseases, diagnoses and procedures using the guides established by the health insurances.

3 credits

**CMER 0240 MEDICAL INVOICING**

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.

3 credits

**CMER 0291 INTERNSHIP IN INVOICING IN HEALTH SERVICES**

Supervised practice in health service scenarios. Application of concepts to real situations related to the student's training program. Requires 135 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.

3 credits

**CMER 0310 AUDITING AND LEGAL ASPECTS**

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.

3 credits

**CMER 0320 ELECTRONIC INVOICING**

Development of the skills in the invoicing of doctor-hospital services in electronic form. Requires 60 hours of lab. Prerequisite: CMER 0240.

3 credits

**Courses in Hotel Administration (CHMT)****CHMT 0110 PUERTO RICAN HISTORY AND CULTURE**

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

3 credits

**CHMT 0130 FOUNDATIONS OF THE HOTEL INDUSTRY**

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.

3 credits

**CHMT 0210 RECEPTION AND RESERVATIONS**

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.

3 credits

**CHMT 0220 FOOD AND BEVERAGE MANAGEMENT**

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.

3 credits

**CHMT 0230 ROOM AND CONSERVATION MANAGEMENT**

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.

3 credits

**CHMT 0291 INTERNSHIP IN HOTEL ADMINISTRATION**

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.

2 credits

**Courses in Integral Esthetics (CEST)****CEST 0110 INTRODUCTION TO ESTHETICS**

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.

3 credits

**CEST 0120 ANATOMY AND APPLIED PHYSIOLOGY**

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

3 credits

**CEST 0130 FOUNDATIONS OF MASSAGE**

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

3 credits

**CEST 0140 HAIR REMOVAL TECHNIQUES**

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

3 credits

**CEST 0150 PROFESSIONAL MAKE-UP**

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.

3 credits

**CEST 0210 FACIAL TREATMENTS**

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

5 credits

**CEST 0220 BODILY TREATMENTS**

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.

5 credits

**CEST 0230 AROMATHERAPY AND ENVIRONMENT ADJUSTMENT**

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

3 credits

**CEST 0240 PRACTICE IN INTEGRAL ESTHETICS**

Application of the skills acquired in the real environment of an esthetics center or in a center for skin care. Requires 225 hours of supervised practice. Students will not be able to begin their internship if they have not approved the major courses.

5 credits

**Courses in Laboratory Assistant (CLAB)****CLAB 0111 BASIC CONCEPTS OF GENERAL CHEMISTRY**

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.

3 credits

**CLAB 0121 BASIC CONCEPTS OF MODERN BIOLOGY**

Study of the basic concepts of Biology including zoology, botany and microbiology. The use of common terms that apply to biological sciences is introduced.

3 credits

**CLAB 0210 BASIC TECHNIQUES OF CHEMICAL ANALYSIS**

Recognition of the basic techniques and procedures of chemical analyzes used in a chemistry laboratory. Includes the volumetric methods of chromatography and spectrophotometry. Requires 30 hours of lab. Prerequisite: CLAB 0111.

3 credits

**CLAB 0220 FOUNDATIONS OF INDUSTRIAL MICROBIOLOGY**

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.

3 credits

**CLAB 0291 INTERNSHIP IN LABORATORY ASSISTANT**

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.

3 credits

**CLAB 0297 SEMINAR IN HEALTH AND ORGANIZATIONAL SECURITY**

Analysis and discussion of situations related to the environmental laws and regulations that apply to laboratories. Application of the technical vocabulary learned.

2 credits

## **Courses in Medical-Paramedical Emergency Technician (CMEM)**

### **CMEM 0111 PARAMEDICS ROLE AND RESPONSIBILITIES**

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.

3 credits

### **CMEM 0120 RESPIRATORY SYSTEM EMERGENCIES**

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.

3 credits

### **CMEM 0131 ANATOMY, PHYSIOLOGY AND EVALUATION OF PATIENTS**

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.

3 credits

### **CMEM 0141 GYNECOLOGICAL, OBSTETRIC, NEWBORN AND PEDIATRIC EMERGENCIES**

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.

3 credits

### **CMEM 0151 HUMAN RELATIONS IN THE HEALTH FIELD**

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.

1 credit

### **CMEM 0160 BASIC FOUNDATIONS OF SIGN LANGUAGE**

This course includes the basic skills of sign language so that there may be interaction with the persons that have hearing problems.

1 credit

### **CMEM 0210 GENERAL PHARMACOLOGY, SHOCK AND FLUID THERAPY**

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.

4 credits

### **CMEM 0220 CARDIOVASCULAR SYSTEM EMERGENCIES**

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.

3 credits

### **CMEM 0231 TRAUMA**

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.

3 credits

### **CMEM 0241 OPERATION TECHNIQUES**

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.

2 credits

### **CMEM 0291 INTERNSHIP IN MEDICAL EMERGENCIES**

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.

9 credits

### **CMEM 0311 INTERNAL MEDICINE**

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.

3 credits

## **Courses in Personal Trainer (CPTR)**

### **CPTR 0110 FIRST AID AND CPR (LAB)**

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.

1 credit

### **CPTR 0120 HEALTH HAZARDS AND ASSESSMENT OF PHYSICAL CONDITIONS**

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.

2 credits

### **CPTR 0130 FLEXIBILITY TRAINING**

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.

2 credits

### **CPTR 0140 TRAINING FOR CHANGE OF LIFESTYLE AND WELL-BEING**

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 life styles. 2 credits

**CPTR 0150 WEIGHTLIFTING TECHNIQUES**

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. 2 credits

**CPTR 0160 NUTRITION APPLIED TO SPORTS**

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. 3 credits

**CPTR 0210 ANATOMY, KINESIOLOGY AND BIOMECHANICS**

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. 3 credits

**CPTR 0220 CONCEPTS OF TRAINING AND CARDIOVASCULAR REHABILITATION**

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. 2 credits

**CPTR 0230 PREVENTION AND REHABILITATION OF MUSCLE AND SKELETAL INJURIES**

Study of the most frequent injuries associated with training programs. Knowledge of the sport bandage. Description of muscular flexibility, identification of injuries, rehabilitation programs and how to refer clients so they receive medical assistance. 1 credit

**CPTR 0240 TRAINING FOR SPECIAL POPULATIONS I**

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. 2 credits

**CPTR 0250 DESIGN OF PROGRAMS FOR STRENGTH TRAINING**

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. 2 credits

**CPTR 0260 PROGRAM OF ALTERNATE EXERCISES FOR PERSONAL TRAINING**

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. 2 credits

**CPTR 0297 SEMINAR FOR TRAINERS**

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. 1 credit

**CPTR 0310 PHYSIOLOGY OF EXERCISE**

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.  
3 credits

#### **CPTR 0320 TRAINING FOR SPECIAL POPULATIONS II**

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.

3 credits

#### **CPTR 0330 ADMINISTRATION IN PERSONAL TRAINING**

Knowledge on information related to administration of businesses, personnel supervision, safety, legal concepts and negligence. Design of a proposal on the administration and organization of one's own business.

3 credits

#### **CPTR 0350 PRÁCTICE/INTERNSHIP FOR PERSONAL TRAINER**

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.

2 credits

### **Courses in Pharmacy Technician (CPHA)**

#### **CPHA 0110 DRUG THERAPY I**

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.

3 credits

#### **CPHA 0120 PHARMACOGNOSY**

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.

2 credits

#### **CPHA 0130 PHARMACEUTICAL MATHEMATICS**

Identification of the operations of the pharmaceutical mathematics. Use of the calculations of rate and proportion, the metric systems in medical prescriptions, apothecary, avoirdupois, dilution, concentration and intravenous solutions.

3 credits

#### **CPHA 0150 THEORETICAL ASPECTS OF PHARMACY**

Study of the historical development of the pharmacy from its beginnings to modern time. 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.

2 credits

#### **CPHA 0220 PHARMACY ADMINISTRATION AND LEGAL ASPECTS**

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.

2 credits

#### **CPHA 0221 DRUG THERAPY II**

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.

3 credits

#### **CPHA 0230 PHARMACEUTICAL CHEMISTRY**

Identification of the biochemistry and the processes by which the drugs act.

2 credits

#### **CPHA 0240 DOSAGE**

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.

2 credits

#### **CPHA 0250 PHARMACEUTICAL PRACTICES**

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.

3 credits

#### **CPHA 0291 INTERNSHIP IN PHARMACY TECHNICIAN I**

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 minimum grade of B.

12 credits

#### **CPHA 0292 INTERNSHIP IN PHARMACY TECHNICIAN II**

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 minimum grade of B.

11 credits

#### **CPHA 0297 PHARMACY TECHNICIAN SEMINAR**

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.

1 credit

### **Courses in Practical Nursing (CNUR)**

#### **CNUR 0120 INTRODUCTION TO PRACTICAL NURSING**

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.

2 credits

**CNUR 0160 SCIENTIFIC FOUNDATION OF PRACTICAL NURSING**

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.

2 credits

**CNUR 0170 FOUNDATIONS OF PRACTICAL NURSING**

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.

2 credits

**CNUR 0180 FOUNDATION OF PHARMACOLOGY FOR NURSING**

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.

3 credits

**CNUR 0190 CARE OF PATIENTS WITH EMOTIONAL DISTURBANCES**

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.

2 credits

**CNUR 0240 HUMAN DEVELOPMENT THROUGHOUT THE LIFE CYCLE**

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.

2 credits

**CNUR 0250 CARE OF THE ADULT WITH ACUTE MEDICAL-SURGICAL CONDITIONS**

Review of the stages of growth and development of the adult with emphasis on the elderly. Application of knowledge in the care of adults with severe health conditions. Continuation of the development of assessment skills, procedures, communication, documentation and professional conduct. Requires 30 hours of clinical practice.

3 credits

**CNUR 0260 CARE OF THE ADULT WITH CHRONIC MEDICAL-SURGICAL CONDITIONS**

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.

3 credits

**CNUR 0297 SEMINAR IN PRACTICAL NURSING**

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.

1 credits

**CNUR 0340 MOTHER AND NEWBORN CHILD CARE**

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.

3 credits

**CNUR 0350 CHILD CARE**

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.

2 credits

**CNUR 0360 PROMOTION OF HEALTH THROUGHOUT THE LIFE CYCLE**

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.

2 credits

**Courses in Production of Artistic Events Technician (CPAE)**

**CPAE 0110 REPRESENTATIVE ARTS AND THEIR EVENTS**

Study of the arts of representation in their different forms and styles, from the point of view of the resources of the techniques involved. Study to identify the resources necessary for each event.

3 credits

**CPAE 0120 FOUNDATIONS OF SET DESIGN**

Study of the relevance of the stage scenario art and its context of representation, and identification of the different areas that make up the scenic box and the ways to operate them.

3 credits

**CPAE 0130 FOUNDATIONS OF LIGHTING IN SCENIC AND THEATER SPACES**

Recognition of the importance of scenic lighting, the styles of illumination and their application to the different proposals and the handling of the instruments involved in theater illumination.

3 credits

**CPAE 0140 SOUND AS A RESOURCE FOR THE ARTS**

Acquisition of knowledge on the importance of electronic sound for different events and the technical vocabulary related to this discipline, and knowledge of sound equipment and the classes and uses of the microphones.

3 credits

**CPAE 0150 CONSTRUCTION OF A STAGE SCENE**

Study of the forms and processes to construct stage scenes and to handle the necessary manual construction equipment for wood, in the creation of scenes. Requires 60 hours of lab.

3 credits

**CPAE 0210 THEATER ILLUMINATION ASSEMBLY**

Learning to place, connect and focus instruments of theater illumination. Participation in the programming of lights, learning to observe safety norms when handling electrical energy. Requires 60 hours of lab.

3 credits

**CPAE 0220 SOUND ASSEMBLY AND ADMINISTRATION**

Study of the importance of electronic sound for assembling theater sound, and being able to explain the function performed by each piece of equipment. Participation in experiences of sound assembly during the course. Requires 60 hours of lab.

3 credits

**CPAE 0230 THEATER SET ASSEMBLY**

Study of the resources that serve as support to scene assembly, identification of areas for the assembly of scenes and how to observe safety norms in the assemblies. Requires 60 hours of lab.

3 credits

**CPAE 0240 THE TECHNICIAN IN ASPECTS OF SCENE DIRECTION**

Study of the duties of the production technician and how to identify times and processes in the production, besides demonstrating mastery in the work performed.

3 credits

**CPAE 0310 PRACTICE**

Application of knowledge and refinement of the skills acquired during the study program. Participation in an assertive manner as part of a technical component. Requires 135 hours of practice.

3 credits

## **Courses in Repair and Networks Technician (CRNE)**

**CRNE 0150 PROGRAMMING LOGIC**

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.

3 credits

**CRNE 0210 OPERATING SYSTEMS**

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.

3 credits

**CRNE 0220 REPAIR AND NETWORKS**

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.

3 credits

**CRNE 0310 DESIGN AND NETWORK MANAGEMENT**

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.

3 credits

**CRNE 0320 TELECOMMUNICATIONS AND NETWORK SECURITY**

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.

3 credits

## **Courses in Respiratory Care Technician (CRES)**

### **CRES 0110 HUMAN BIOLOGY**

Study of the basic concepts of human biology and the natural sciences. Emphasis on the knowledge of vocabulary related to the health field.

2 credits

### **CRES 0130 FOUNDATIONS OF RESPIRATORY CARE**

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.

2 credits

### **CRES 0210 MICROBIOLOGY AND CONTROL OF INFECTIONS**

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.

2 credits

### **CRES 0220 PHARMACOLOGY OF RESPIRATORY CARE**

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.

2 credits

### **CRES 0230 ELECTROCARDIOGRAPHY (EKG)**

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 o 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.

2 credits

### **CRES 0240 TESTS OF PULMONARY FUNCTION AND ARTERIAL GASES**

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.

3 credits

### **CRES 0291 INTERNSHIP IN RESPIRATORY CARE**

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.

5 credits

### **CRES 0297 SEMINAR IN RESPIRATORY CARE**

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.

1 credit

### **CRES 0310 PHYSICS APPLIED TO HEALTH**

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.

2 credits

### **CRES 0320 ANATOMY AND CARDIOPULMONARY PHYSIOLOGY**

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.

2 credits

### **CRES 0330 CARDIOPULMONARY PATHOPHYSIOLOGY**

Recognition of the signs, history, diagnosis and treatment of the most common cardiopulmonary conditions. Development of recognition skills and therapeutic applications in the different conditions. Emphasis on the comparison of the acute pulmonary disease versus the chronic ones, and restrictive problems versus obstructive problems.

2 credits

### **CRES 0340 DIAGNOSIS AND ADULT ADVANCED CARDIOPULMONARY CARE**

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.

2 credits

### **CRES 0350 RESPIRATORY CARE**

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.

4 credits

### **CRES 0410 NEONATAL AND PEDIATRIC RESPIRATORY CARE**

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.

3 credits

### **CRES 0420 MECHANICAL VENTILATION**

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.

3 credits

## **Courses in Specialist in Computerized Systems and Networks (CNCS)**

**CNCS 0120 INSTALLATION AND REPAIR OF COMPUTERIZED SYSTEMS**

Inspection, identification and problem solving in computerized systems. Assembly, preventive maintenance, and repair of computerized equipment. Requires 60 hours of lab.

3 credits

**CNCS 0130 INSTALLATION OF PROGRAMS AND OPERATING SYSTEMS**

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.

2 credits

**CNCS 0140 INSTALLATION AND MAINTENANCE OF NETWORKS**

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.

3 credits

**CNCS 0150 DESIGN OF PAGES FOR INTERNET**

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.

2 credits

**CNCS 0210 MATHEMATICS FOR COMPUTER**

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.

2 credits

**CNCS 0220 INTRODUCTION TO ELECTRONICS**

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.

2 credits

**CNCS 0290 PRACTICE**

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.

3 credits

**Courses in Tour Guide (CTOU)****CTOU 0110 FOUNDATIONS IN TOURISM**

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 tourist industry.

2 credit

**CTOU 0120 PUERTO RICAN HISTORICAL PROCESS**

Panoramic view of the historical processes in the development of Puerto Rican people. Includes social, cultural, political and economic topics.

2 credits

**CTOU 0140 PUERTO RICAN PERSONALITY AND CULTURE**

Study of the origin and cultural characteristics of Puerto Ricans. Analysis of Puerto Rican customs and traditions developed throughout the centuries.

2 credits

#### **CTOU 0220 GEOGRAPHY AND ECO-TOURISM**

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.

2 credits

#### **CTOU 0240 TOURISM IN PUERTO RICO**

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.

3 credits

#### **CTOU 0250 MUSEOLOGY**

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.

1 credit

#### **CTOU 0260 EXCURSION PLANNING**

Knowledge on the planning and development of excursions. Training on how to guide, escort and plan excursions.

3 credits

#### **CTOU 0291 INTERNSHIP IN TOUR GUIDE**

Completion of one hundred eighty (180) 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.

6 credits

#### **CTOU 0310 ADMINISTRATION OF SMALL BUSINESSES IN TOURISM**

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.

3 credits

## **Courses in Specialist in Technical Support of Networks and Systems (CNSS)**

#### **CNSS 0110 OPERATING SYSTEM ADMINISTOR SUPPORT I**

This introductory course is designed to provide students with the knowledge and the skills necessary to give support to the user who has problems with the use and administration of the operating system Windows. Students will learn to speak with the user about the problems, to isolate and to diagnose problems, to propose and document solutions. Includes time in a laboratory.

3 credits

#### **CNSS 0120 OPERATING SYSTEM PROBLEM DIAGNOSIS I**

The course will allow students to develop the knowledge and skills necessary to give support to users of the operating system Windows. Also, it allows them to put into practice the knowledge for the diagnosis of the problems that come up with the use of the operating system. This introductory course is a complement to course CNSS 0110. Includes time in a laboratory.

3 credits

### **CNSS 0210 OPERATING SYSTEM ADMINISTOR SUPPORT II**

This introductory course is designed to provide students with the knowledge and skills necessary to give support to users who have problems with the use and administration of the operating system Windows. Students will learn to speak with the users about problems, to isolate and diagnose problems, to offer and document solutions. Includes time in a laboratory.

3 credits

### **CNSS 0220 OPERATING SYSTEM PROBLEM DIAGNOSIS II**

The course will allow students to develop the knowledge and skills necessary to give support to users of the operating system Windows. Also, it allows them to put in practice the knowledge for the diagnosis of the problems that come up in the use of the operating system. This introductory course is a complement to course CNSS 0110. Includes time in a laboratory.

3 credits

## **Courses in Webpage Design Technician (CWEB)**

### **CWEB 0110 INTERNET PAGE CREATION**

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.

3 credits

### **CWEB 0210 ARTISTIC DESIGN (PHOTO SHOP)**

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.

3 credits

### **CWEB 0220 CODIFICATION HTML**

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.

3 credits

### **CWEB 0230 OF ELECTRONIC PAGE DESIGN**

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

3 credits

### **CWEB 0240 INTERNET DATABASES**

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.

3 credits

### **CWEB 0297 SEMINAR IN INTERNET PAGE DESIGN**

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.

3 credits

### **CWEB 0310 JAVA SCRIPT**

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.  
3 credits

**CWEB 0320 INTEGRATION OF MEDIA**

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.  
3 credits

**CWEB 0330 SELF-EMPLOYMENT AND INTERNET PAGE DESIGN**

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.  
3 credits

